Final Environmental Impact Report
for the

Village 7 Specific Plan Project

State Clearinghouse No. 2005062001

Prepared for:

City of Lincoln

Community Development Department
600 Sixth Street, Lincoln, CA 95648

Prepared by:

PBS&J

1200 2nd Street
Sacramento, CA 95814

April **2010**

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1. INTRODUCTION

INTRODUCTION

This Final Environmental Impact Report (Final EIR) contains the public and agency comments received during the public review period on the Village 7 Specific Plan Project Draft Environmental Impact Report (Draft EIR).

This Final EIR is an informational document intended to disclose to the City of Lincoln and the public the environmental consequences of approving and implementing the Village 7 Specific Plan project. All written comments received during the public review period (June 17, 2009 through July 27, 2009) are addressed in this Final EIR.

The Village 7 Specific Plan project site is located in an unincorporated area of Placer County, southwest of the City of Lincoln (Figure 1-1). It is included in the City's recently adopted 2050 General Plan and has a specific land use designation (V-7). The project site is generally bounded by Auburn Ravine on the north, the City's wastewater treatment and reclamation facility (WWTRF) and undeveloped land on the west, the developing Lincoln Crossing project and Aitken Ranch residential project on the east, and the Orchard Creek Wetlands Preserve area on the south.

The Village 7 Specific Plan project that is evaluated in this EIR identifies four planning areas for future development: the Lewis Property (516 acres), the Aitken Ranch II Property (121 acres), the Scheiber Property (26 acres), and the Remainder Area (40 acres). The development plan for Village 7 includes the creation of a distinctive residential community consisting of a variety of housing types, a school, a community park, public facility – fire station, a recreation center, neighborhood-serving retail uses, and extensive park and open space amenities on approximately 703 acres. A detailed project description is provided in Chapter 2, Project Description, and the environmental impact analyses are in each of the technical sections in Chapter 4. This EIR will be used for the requested approvals identified in Chapter 2.

As used in this EIR, the "Proposed Project" refers to the entirety of the Village 7 Specific Plan. The Lewis Property portion of the Proposed Project is analyzed at a project level, while the balance of the Village 7 Specific Plan (Aitken Ranch II, Scheiber, and the Remainder Area) is analyzed on a program level. Throughout this EIR, these three areas of the Specific Plan that are analyzed at the program level are collectively referred to as the "Village 7 Programmatic Portion."

This DEIR evaluates the existing environmental resources within the project site, analyzes potential impacts on those resources due to implementation of the Proposed Project, and identifies mitigation measures to reduce significant impacts. The analysis covers several subject areas, including land use; population, employment and housing; transportation and circulation; air quality; noise; hazards and hazardous materials; hydrology and water quality; biological resources; public services and utilities; visual resources; and climate change. The evaluation of these subject areas is presented on a resource-by-resource basis in Chapter 4, Environmental Analysis, in Sections 4.1 through 4.11. Each section is divided into three parts: Environmental Setting, Regulatory Setting, and Impacts and Mitigation Measures.

SUMMARY OF TEXT CHANGES

The text changes to the Draft EIR, Chapter 2 in this Final EIR, identify all changes made to the document by subject matter section. These text changes provide additional clarity and do not change the significance conclusions presented in the Draft EIR.

Revisions to the Summary of Impacts and Mitigation Measures (Table 2-1 in the Draft EIR) are included at the end of Chapter 2 in this Final EIR.

RESPONSES TO COMMENTS

A list of agencies, organizations, and individuals commenting on the Draft EIR is included in Chapter 3 in this Final EIR. Responses to comments appear in Chapter 4 of this Final EIR. Each comment letter is presented with brackets indicating how the letter has been divided into individual comments. Each comment is given a binomial with the number of the comment letter appearing first, followed by the comment number. For example, comments in Letter 1 are numbered 1-1, 1-2, 1-3, and so on. Immediately following the letter are responses, each with binomials that correspond to the bracketed comments.

MITIGATION MONITORING AND REPORTING PROGRAM

The Mitigation Monitoring Program (MMP) for the Proposed Project, presented in Chapter 5, reflects changes made to the mitigation measures made in response to comments received on the Draft EIR.

2. TEXT CHANGES TO THE DRAFT EIR

INTRODUCTION

This chapter presents minor corrections and revisions made to the Draft EIR initiated by staff, based on their on-going review, and changes initiated in response to comments received on the Draft EIR. Added text is underlined and deleted text is struck through. Text changes are presented in the page order in which they appear in the Draft EIR.

These text changes provide additional clarity and do not change the significance conclusions presented in the Draft EIR.

Where changes were made to mitigation measures in the Draft EIR, the MMP (Chapter 5) contains the revised mitigation measures.

CHAPTER 2, PROJECT DESCRIPTION

Page 2-12, "Drainage" subheading, second paragraph revised as follows:

> ~~As part of the project's drainage plan, Ingram Slough has been enhanced to meet the drainage and water quality needs of the development, as well as the adjacent Lincoln Crossing development. These enhancements include the deepening and widening of the existing slough as it passes through the property.~~ <u>The channel of Ingram Slough was previously enhanced by the developers of the Lincoln Crossing project. The modifications to Ingram Slough consisted of deepening and widening the existing north and south sloughs where they pass through the project area. The work included increasing the capacity of Ingram Slough so it would also accommodate the future drainage requirements for the Village 7 Specific Plan area when the Village 7 Specific Plan area was developed. Developers of the Village 7 Specific Plan area will construct water quality drainage swales outside of the existing channel of Ingram Slough to treat the project's stormwater run-off. The Village 7 project will also be constructing two stormwater detention basins in upland areas.</u> The proposed drainage improvements for the Proposed Project are shown in Figure 2-7.

CHAPTER 3, SUMMARY OF ENVIRONMENTAL EFFECTS

Revisions to the Summary of Impacts and Mitigation Measures (Table 3-1 in the Draft EIR) are shown in Table 2-1 at the end of Chapter 2 in this Final EIR.

SECTION 4.1 (LAND USE)

Page 4.1-6, the following paragraph is added following the "Placer County General Plan" subheading.

Sunset Area Industrial Plan

<u>A portion of the southern boundary of project site is contiguous with a portion of the northern boundary of the Sunset Area Industrial Plan (see Figure 4.1-2). The Sunset Area industrial</u>

Plan was adopted by Placer County in 1997 for the purpose of refining and implementing the goals and policies of the Placer County General Plan for the Sunset Industrial Area.

The "Agriculture/Fairgrounds Relocation Area" and the "Athens Avenue Industrial Reserve Area" are individual planning subareas shown in Placer County's Sunset Area Industrial Plan. A portion of the "Agriculture/Fairgrounds Relocation Area" is immediately south of the southwestern half of the Village 7 Specific Plan project boundary. That portion has been zoned by Placer County as Open Space in the Sunset Area Industrial Plan. As stated in the Sunset Industrial Area Plan, the "Agriculture/Fairgrounds Relocation Planning Area" is to be "dominated by agricultural lands and open space.

Within the "Agriculture/Fairgrounds Relocation Planning Area" the County is considering the construction of a new Placer County Fairgrounds facility in an unspecified location. When it adopted the Sunset Industrial Area Plan, the County stated "[the Fairgrounds Facility is a proposed land use that may or may not be constructed within the Sunset Industrial Area."

Pages 4.1-19 and 4.1-20, Mitigation Measures 4.1-1(A)(a) and 4.1-1(B)(a) revised as follows:

Lewis Property Mitigation Measure 4.1-1(A)(a)

4.4-1(A)(a)   *The applicant shall construct fencing and/or post signs that incorporate Section 12.20.80 of the Lincoln Municipal Code and Section 602.8 of the California Penal Code to inform the public of sensitive wetland/wildlife areas within the open space areas near in the Orchard Creek Wetlands Preserve that borders the Lewis Property on the south and at the other wetland/wildlife areas within the open space areas at the Lewis Property.*

Village 7 Programmatic Portion Mitigation Measure 4.1-1(B)(a)

4.2-1(B)(a)   *The applicant shall construct fencing and/or post signs that incorporate Section 12.20.80 of the Lincoln Municipal Code and Section 602.8 of the California Penal Code to inform the public of sensitive wetland/wildlife areas within the open space areas.*

Pages 4.1-22 and 4.1-23, Mitigation Measures 4.1-2(A)(c) and (B)(c) revised as follows:

Lewis Property Mitigation Measure 4.1-2(A)(c)

4.1-2(A)(c)   *Record disclosures concerning all residential properties Notify home buyers within the C1 Zone and D Zone regarding noise and safety issues as required by Placer County ALUCP and California Business and Professions Code section 11010 and California Civil Code sections 1102.6, 1103.4, and 1353.*

Village 7 Programmatic Portion Mitigation Measure 4.1-2(B)(c)

4.1-2(B)(c)   *Record disclosures concerning all residential properties Notify home buyers within the C1 Zone and D Zone regarding noise and safety issues as required by Placer County ALUCP and California Business and Professions Code section 11010 and California Civil Code sections 1102.6, 1103.4, and 1353.*

SECTION 4.4 (AIR QUALITY)

Page 4.4-7, fourth paragraph revised as follows to change name from Material Recovery Facility to Materials Recovery Facility and locational identifier from Athens Road to Athens Avenue. These changes apply globally throughout the Draft EIR.

> The Western Placer Waste Management Authority's (WPWMA) 315.9-acre Western Regional Sanitary Landfill (WRSL) at the intersection of Athens Avenue and Fiddyment Roads is southwest of the project site. The WRSL includes a sanitary landfill and a Materials Recovery Facility (MRF) which separates and recovers waste products for recycling, reuse, or conversion to energy sources. The MRF also includes a composting operation.

Page 4.4-7, fourth paragraph, 8th sentence revised as follows:

> The WPWMA prepares odor complaint updates on a quarterly basis. In the fourth quarter 2007, 24 odor complaints were received.

Page 4.4-7, revised to include the following before the last paragraph:

> Another odor source in the vicinity of the project site is a privately owned septage dewatering facility (Inviro-Tech). This facility is north of Athens Avenue and east of the WRSL, approximately one mile south of the project site. The dewatering system uses enclosed tanks and a small concrete containment structure to separate solids from septage. The process uses chemical treatment to control odor generation, and odor from the facility is neglible.[7a]

Add footnote reference 7a:

> United Auburn Indian Community and County of Placer Planning Department, Auburn Rancheria Gaming and Entertainment Facility [Thunder Valley Casino] Draft Environmental Impact Report, prepared by Analytical Environmental Services, June 2002, p.4.9-6.

Pages 4.4-20 and 4.4-22, Mitigation Measures 4.4-1(A) and (B), first bullet revised as follows:

Lewis Property Mitigation Measure 4.4-1(A)

- *The applicant shall submit to the City of Lincoln, as the lead agency, and receive approval of a Construction Emission/Dust Control Plan prior to ~~groundbreaking~~ issuance of a grading permit.*

Village 7 Programmatic Portion Mitigation Measure 4.4-1(B)

- *The applicant shall submit to the City of Lincoln, as the lead agency, and receive approval of a Construction Emission/Dust Control Plan prior to ~~groundbreaking~~ issuance of a grading permit.*

Pages 4.4-22 and 4.4-25, Mitigation Measures 4.4-1(A) and (B), sixth bullet revised as follows:

Lewis Property Mitigation Measure 4.4-1(A)

- *Vegetation materials removed from the site during construction shall not be burned in the open. Vegetative material should be ~~chipped or delivered to waste-to-energy facilities~~ delivered to a green waste recycling facility.*

Village 7 Programmatic Portion Mitigation Measure 4.4-1(B)

- *Vegetation materials removed from the site during construction shall not be burned in the open. Vegetative material should be ~~chipped or delivered to waste-to-energy facilities~~ <u>delivered to a green waste recycling facility</u>.*

Pages 4.4-26 and 4.4-27, Mitigation Measures 4.4-2(A) and (B), second bullet revised as follows:

Lewis Property Mitigation Measure 4.4-2(A)

- *Construction equipment operators shall shut off equipment when not in use to avoid unnecessary idling. Vehicle idling shall be kept below ~~10 minutes~~ <u>five consecutive minutes in accordance with Lincoln Municipal Code Section 10.14 requirements</u>.*

Village 7 Programmatic Portion Mitigation Measure 4.4-2(B)

- *Construction equipment operators shall shut off equipment when not in use to avoid unnecessary idling. Vehicle idling shall be kept below ~~10 minutes~~ <u>five consecutive minutes in accordance with Lincoln Municipal Code Section 10.14 requirements</u>.*

Pages 4.4-26, 4.4-27, 4.4-28, Mitigation Measures 4.4-2(A) and (B), fifth bullet revised as follows:

Lewis Property Mitigation Measure 4.4-2(A)

- *The following measure shall be incorporated into construction bid documents: All applicable pieces (at a minimum three pieces) of diesel equipment used on the site during the demolition, earthmoving and clearing stages of construction shall be fitted with a level 3 California Air Resources Board verified diesel emission control system. <u>All off-road and on-road construction equipment shall use a B20 biodiesel blend.</u> Prior to the issuance of a demolition or grading permit, the construction contractor and/or applicant shall submit to the PCAPCD and the City a certified list of the non-road diesel powered construction equipment that will be retrofitted with emission control devices or that will use Clean Fuels. The Clean Fuels shall consist of low NO_x and PM_{10} emission diesel fuel that (1) can be used without engine modification, (2) is certified to provide a minimum emissions reduction of 30 percent PM10 and 10 percent NO_x when compared to No. 2 Diesel Fuel, and (3) is included on the CARB Verification List. ~~For each non-road diesel powered construction equipment that will not be retrofitted or use Clean Fuels, the project applicant shall provide an explanation detailing why such measures are not employed.~~ The list shall include (1) the equipment number, type, make, and contractor/sub-contractor name; (2) the emission control device make, model and EPA or CARB verification number; and/or (3) the type and source of fuel to be used. If any diesel powered non-road construction equipment is found to be in non-compliance with this specification, the contractor will be issued a Notice of Non-Compliance and given a 24 hour period in which to bring the equipment into compliance or remove it from the project. <u>For each piece of non-road diesel powered construction equipment that will not be retrofitted or use Clean Fuels, the project applicant shall provide an explanation detailing why such measures are not employed.</u>*

Village 7 Programmatic Portion Mitigation Measure 4.4-2(B)

- *The following measure shall be incorporated into construction bid documents: All applicable pieces (at a minimum three pieces) of diesel equipment used on the site during the demolition, earthmoving and clearing stages of construction shall be fitted*

with a level 3 California Air Resources Board verified diesel emission control system. All off-road and on-road construction equipment shall use a B20 biodiesel blend. Prior to the issuance of a demolition or grading permit, the construction contractor and/or applicant shall submit to the PCAPCD and the City a certified list of the non-road diesel powered construction equipment that will be retrofitted with emission control devices or that will use Clean Fuels. The Clean Fuels shall consist of low NO_x and PM_{10} emission diesel fuel that (1) can be used without engine modification, (2) is certified to provide a minimum emissions reduction of 30 percent PM10 and 10 percent NO_x when compared to No. 2 Diesel Fuel, and (3) is included on the CARB Verification List. ~~For each non-road diesel powered construction equipment that will not be retrofitted or use Clean Fuels, the project applicant shall provide an explanation detailing why such measures are not employed.~~ The list shall include (1) the equipment number, type, make, and contractor/sub-contractor name; (2) the emission control device make, model and EPA or CARB verification number; and/or (3) the type and source of fuel to be used. If any diesel powered non-road construction equipment is found to be in non-compliance with this specification, the contractor will be issued a Notice of Non-Compliance and given a 24 hour period in which to bring the equipment into compliance or remove it from the project. For each piece of non-road diesel powered construction equipment that will not be retrofitted or use Clean Fuels, the project applicant shall provide an explanation detailing why such measures are not employed.

Pages 4.4-30 and 4.4-32, Mitigation Measures 4.4-3(A) and (B), first and second bullets revised as follows:

Lewis Property Mitigation Measure 4.4-3(A)

4.4-3(A)   *The project applicant shall implement the following mitigation measures: ~~prior to issuance of building permits~~:*

- *~~Only low-emission, EPA-certified fireplace shall be installed in residential units containing open hearth fireplaces.~~ The conditions of approval and the covenants, conditions, and restrictions (CC&Rs) for the project shall explicitly prohibit the installation of wood-burning stoves and wood-burning fireplaces within the Lewis Property portion of the Specific Plan area. Only natural gas or propane fireplace stoves and fireplaces are permitted in single-family units. No natural gas or propane fireplace stoves or fireplaces shall be installed in multi-family residential units.   Prior to the issuance of occupancy permits, the applicant must provide written proof of compliance with this measure to the City and PCAPCD.*

- *Only Energy Star-labeled (or equivalent) ~~appliances~~ refrigerators, clothes washers, and dishwashers shall be installed in multi-family dwelling units, and Energy Star-labeled (or equivalent) dishwashers shall be installed in single-family dwelling units.*

Village 7 Programmatic Portion Mitigation Measure 4.4-3(B)

4.4-3(B)   *The project applicant shall implement the following mitigation measures: ~~prior to issuance of building permits~~:*

- *~~Only low-emission, EPA-certified fireplace shall be installed in residential units containing open hearth fireplaces.~~ The conditions of approval and the covenants, conditions, and restrictions (CC&Rs) for the project shall explicitly*

prohibit the installation of wood-burning stoves and wood-burning fireplaces within the Programmatic Portion of the Specific Plan area. Only natural gas or propane fireplace stoves and fireplaces are permitted.   Prior to the issuance of occupancy permits, the applicant must provide written proof of compliance with this measure to the City and PCAPCD.

- *Only Energy Star-labeled (or equivalent) ~~appliances~~ dishwashers shall be installed in single-family dwelling units.*

SECTION 4.5 (NOISE)

Page 4.5-14, last sentence of first paragraph under "Village 7 Programmatic Portion" subheading revised as follows:

Impacts could also occur for sensitive receptors within the Project Site as the Project includes a phase construction plan, and there is the potential for residential or other sensitive land uses to be occupied during construction of another <u>phase</u>.

Pages 4.5-14 and 4.5-15, Mitigation Measures 4.5-1(A) and (B) revised as follows:

Lewis Property Mitigation Measure 4.5-1(A)

4.5-1(A)   *The City shall ensure construction contractors comply with the following:*

- *Construction hours shall be limited to 7am to ~~7pm~~ 5pm Monday through Friday and on Saturdays from 8am to 4pm, with no construction on Sundays and holidays (unless extended by a special permit).*

- *All heavy construction equipment and all stationary noise sources (such as diesel generators) shall have manufacturer-installed mufflers.*

- *Equipment warm up areas, water tanks, and equipment storage areas shall be located in an area as far away from existing residences as is feasible.*

- *Construction equipment operators shall shut off equipment when not in use to avoid unnecessary idling. Vehicle idling shall be kept below five consecutive minutes in accordance with Lincoln Municipal Code Section 10.14 requirements.*

Village 7 Programmatic Portion Mitigation Measure 4.5-1(B)

4.5-1(B)   *The City shall ensure construction contractors comply with the following:*

- *Construction hours shall be limited to 7am to ~~7pm~~ 5pm Monday through Friday and on Saturdays from 8am to 4pm, with no construction on Sundays and holidays (unless extended by a special permit).*

- *All heavy construction equipment and all stationary noise sources (such as diesel generators) shall have manufacturer-installed mufflers.*

- *Equipment warm up areas, water tanks, and equipment storage areas shall be located in an area as far away from existing residences as is feasible.*

- *Construction equipment operators shall shut off equipment when not in use to avoid unnecessary idling. Vehicle idling shall be kept below five consecutive minutes in accordance with Lincoln Municipal Code Section 10.14 requirements.*

SECTION 4.6 (HAZARDOUS MATERIALS AND PUBLIC SAFETY)

Page 4.6-15, Mitigation Measure 4.6-1(B)(b) for the Village 7 Programmatic Portion revised as follows:

4.6-1(B)(b)   *For the Aitken Ranch II area, the applicant shall have a qualified professional review the results of the Phase 1 ESA and develop specific recommendations for removal of potentially contaminated items, soil and/or groundwater testing, as needed, and any subsequent remedial actions associated with the former turkey farming operations to ensure that development of the project site will not result in adverse human health or environmental risks during construction or occupancy. Soil and groundwater testing shall be performed prior to any site development activities that would disturb surface soils at the location of the former turkey farming operations. If chemicals are present in soils that would present a human health or environmental risk, a soil management plan shall be prepared by the qualified professional prior to approval of Final Grading or Improvement Plans. The soil management plan shall specify how affected soils will be tested, removed, stockpiled, or otherwise handled prior to and during soil-disturbing activities.*

SECTION 4.7 (HYDROLOGY AND WATER QUALITY)

Page 4.7-2, the following paragraph has been added between the third and fourth paragraphs under the "Project Site Characteristics and Hydrology" subheading:

The Proposed Project site is non-irrigated grazing land. The existing terrain is generally level, with natural drainage patterns within the Lewis Property running in a southwesterly direction along Ingram Slough, a major tributary of Orchard Creek and within the Village 7 project area running in a northwesterly direction towards and along Auburn Ravine. Small ephemeral drainages and swales also traverse the project site. Vegetation on the project site consists of native and non-native annual grasslands, a limited number of oak trees, in addition to riparian vegetation located along Ingram Slough. The site is dotted with seasonal depressions containing seasonal wetlands and vernal pools.

The channel of Ingram Slough was previously enhanced by the developers of the Lincoln Crossing project. The modifications to Ingram Slough consisted of deepening and widening the existing north and south sloughs where they pass through the project area. The work included increasing the capacity of Ingram Slough so it would also accommodate the future drainage requirements for the Village 7 Specific Plan area when the Village 7 Specific Plan area was developed.

The analysis of existing conditions in these drainages at the project site indicates that shallow overbank flow (flooding) occurs throughout the southern and eastern portions of the project site along areas of Ingram Slough.

Page 4.7-5, Figure 4.7-2 has been revised to remove references to "proposed" improvements.

Figure caption / labels on map:

AUBURN RAVINE
(ZONE A DELINIATION)

SCHEIBER PROPERTY

HIGHWAY 65 BYPASS

3D SOUTH

SHED F

PROPOSED DETENTION BASIN

AITKEN RANCH 2

SHED A

MOORE ROAD

PROPOSED DETENTION BASIN

SHED B

SORRENTO

REMAINDER PROPERTY

FERRARI RANCH ROAD

Ferrari Ranch Rd.

SHED E

LEWIS PROPERTY

NORTH BRANCH

LINCOLN CROSSING

SHED C

EXISTING EFFLUENT POND

EXISTING EFFLUENT POND

SOUTH BRANCH

SHED C

INGRAM SLOUGH

SHED C

SHED C

EXISTING FLOODPLAIN FILL LIMITS

ORCHARD CREEK

SHED D

NORTH
NOT TO SCALE

Source: Wood Rodgers 2010.

FIGURE **4.7-2**
Post-Project Drainage and Floodplain (Revised)

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Village 7 Specific Plan

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Pages 4.7-21 and 4.7-23, Mitigation Measures 4.7-4(A)(f) and (B)(f) revised as follows:

Lewis Property Mitigation Measure 4.7-4(A)(f)

f) *Stormwater runoff from the Proposed Project's impervious surfaces (including roads) shall be collected and routed through specially designed water quality treatment facilities (BMPs) for removal of pollutants of concern (i.e. sediment, oil/grease, etc.), as approved by the City. The applicant shall verify that proposed BMPs are appropriate to treat the pollutants of concern from the Proposed Project and shall provide for the establishment of vegetation, where specified, by means of proper irrigation, for effective performance of BMPs. Maintenance of these facilities shall be provided by the City. Prior to project approval or Final Map approval, easements shall be created and offered for dedication to the City for maintenance and access to these facilities in anticipation of possible City maintenance. No water quality facility construction shall be permitted within any identified wetlands area, floodplain, or right-of-way, except as authorized by project approvals.*

Village 7 Programmatic Portion Mitigation Measure 4.7-4(B)(f)

f) *Stormwater runoff from the Proposed Project's impervious surfaces (including roads) shall be collected and routed through specially designed water quality treatment facilities (BMPs) for removal of pollutants of concern (i.e. sediment, oil/grease, etc.), as approved by the City. The applicant shall verify that proposed BMPs are appropriate to treat the pollutants of concern from the Proposed Project and shall provide for the establishment of vegetation, where specified, by means of proper irrigation, for effective performance of BMPs. Maintenance of these facilities shall be provided by the City. Prior to project approval or Final Map approval, easements shall be created and offered for dedication to the City for maintenance and access to these facilities in anticipation of possible City maintenance. No water quality facility construction shall be permitted within any identified wetlands area, floodplain, or right-of-way, except as authorized by project approvals.*

SECTION 4.8 (BIOLOGICAL RESOURCES)

Page 4.8-17, the following text is added after the first full paragraph, an additional line added to the bottom of Table 4.8-1 "Special-Status Species Potentially Occurring Within the Proposed Project Site" to include California black rail:

California black rail (*Laterallus jamaicensis coturniculus*) is listed as a threatened species and protected pursuant to the California Endangered Species Act, is fully protected pursuant to California Fish and Game Code Section 3511, and is a USFWS bird of conservation concern. Typical habitat for black rails includes coastal saltmarsh, delta emergent marsh, and interior freshwater emergent marsh. California black rails are a year-round resident in the San Francisco Bay region and at inland locations within Placer, Yuba, Butte, and Nevada counties. Nesting typically occurs during March through July. The nearest documented occurrence is located approximately one mile southeast of the Lincoln SOI boundary, and potentially suitable habitat within the Lincoln Planning Area includes freshwater emergent wetlands. This species has not been observed at the project site.

Row inserted at the end of the "Birds" category on Table 4.8-1:

Common Name	Scientific Name	Status Fed/CA/other	Habitat and Seasonal Distribution in California	Likelihood of Occurrence Within the project site/Possible Mitigation
Birds				
California black rail	*Laterallus jamaicensis coturniculus*	None/ST/CDFG fully protected	Typically occurs in coastal saltmarsh, delta emergent marsh, and interior freshwater emergent marsh	**Moderate.** Marsh vegetation along Ingram Slough could provide potential nesting and foraging habitat for this species, but California black rail have not been observed at the site.

Pages 4.8-27 and 4.8-28, Mitigation Measures 4.8-3(A)(b) and (c) and 4.8-3(B)(b) and (c) revised as follows:

Lewis Property Mitigation Measure 4.8-3(A)(b) and (c)

4.8-3(A)(b)   *If Boggs Lake hedge-hyssop or Sacramento orcutt grass is located during the surveys in areas that cannot be avoided, the project applicant shall consult with CDFG to obtain an incidental take a management permit, under Section 2081 of the CESA California Fish and Game Code. Mitigation can be accomplished either in the onsite mitigation preserve area, or at an approved offsite mitigation bank. The ratio of mitigation credits will be determined during this consultation, and can be conducted concurrently with Mitigation Measure 4.8-2(B) subsections (c), (d), and (e).*

c)   *If any other special-status vernal pool plant species, including, but not limited to dwarf downingia and legenere are located during the surveys in areas that cannot be avoided, the project applicant shall implement Mitigation Measure 4.8-2(B) subsections (c), (d), and (e), with the addition of soil/seed bank salvage, for use in created wetlands in mitigation areas.*

Village 7 Programmatic Portion Mitigation Measure 4.8-3(B)(b) and (c)

4.8-3(B)(b)   *If Boggs Lake hedge-hyssop or Sacramento orcutt grass is located during the surveys in areas that cannot be avoided, the project applicant shall consult with CDFG to obtain an incidental take a management permit, under Section 2081 of the CESA California Fish and Game Code. Mitigation can be accomplished either in the onsite mitigation preserve area, or at an approved offsite mitigation bank. The ratio of mitigation credits will be determined during this consultation, and can be conducted concurrently with Mitigation Measure 4.8-2(B) subsections (c), (d), and (e).*

c)   *If any other special-status vernal pool plant species, including, but not limited to dwarf downingia and legenere are located during the surveys in areas that cannot be avoided, the project applicant shall implement Mitigation Measure 4.8-2(B) subsections (c), (d), and (e), with the addition of soil/seed bank salvage, for use in created wetlands in mitigation areas.*

Pages 4.8-30 and 4.8-31, Mitigation Measures 4.8-5(A)(a), (b), and (c) and 4.8-5(B)(a), (b), and (c) revised as follows:

Lewis Property Mitigation Measure 4.8-5(A)(a)-(c)

4.8-5(A)(a)   *If construction is to occur between March 15 through August 30, the project applicant, in consultation with the City of Lincoln and CDFG, shall conduct a preconstruction breeding-season survey of the project site within 30 days of when construction is planned to begin. The survey shall be conducted by a qualified biologist (who is also knowledgeable about the California black rail) to determine if any protected raptors or migratory birds (including, but not limited to the California black rail) are nesting on or directly adjacent to the project site.*

b)   *A description of methodology including dates of field visits, the names of survey personnel with resumes, and a list of references cited and persons contacted shall be provided to the City.*

c)   *A map showing the location(s) of any protected raptor or migratory bird nests observed on the project site shall be provided to the City.*

Village 7 Programmatic Portion Mitigation Measure 4.8-5(B)(a)-(c)

4.8-5(B)(a)   *If construction is to occur between March 15 through August 30, the project applicant, in consultation with the City of Lincoln and CDFG, shall conduct a preconstruction breeding-season survey of the project site within 30 days of when construction is planned to begin. The survey shall be conducted by a qualified biologist (who is also knowledgeable about the California black rail) to determine if any protected raptors or migratory birds (including, but not limited to the California black rail) are nesting on or directly adjacent to the project site.*

b)   *A description of methodology including dates of field visits, the names of survey personnel with resumes, and a list of references cited and persons contacted shall be provided to the City.*

c)   *A map showing the location(s) of any protected raptor or migratory bird nests observed on the project site shall be provided to the City.*

SECTION 4.9 (PUBLIC UTILITIES AND SERVICES)

Page 4.9-8 revised as follows:

The City of Lincoln provides solid waste collection and disposal services. The solid waste is collected at curbside, typically in 90-gallon cans supplied by the City. The waste is then transported to the Western Placer Waste Management Authority's (WPWMA) 315.9-acre Western Regional Sanitary Landfill (WRSL) adjacent to the intersection of Athens Avenue and Fiddyment Roads, west of SR 65. The WRSL includes a sanitary landfill and a Material Recovery Facility (MRF) which separates and recovers waste products for recycling, reuse, or conversion to energy sources. The WPWMA is a joint powers authority comprised of the cities of Rocklin, Roseville, and Lincoln, and Placer County.   The WRSL and the MRF operate under permits issued by the California Integrated Waste Management Board (CIWMB). The current permits (31-AA-0201 31-AA-0210 and 31-AA-0001, respectively) were issued in 2003 2008.

In May 2003, the WPWMA approved a Capacity Enhancement Project, enabling staff to pursue revisions to existing permits to increase the landfill and MRF capacity. The CIWMB approved the WWPMA's request to increase the landfill and MRF capacity in August 2003.

The landfill has Class III and Class II modules. The permitted acreage of the landfill is 291 acres; the disposal footprint is 231 acres. The current permitted maximum allowable daily tonnage at the landfill is ~~currently~~ 1,900 tons per day. ~~The Class III non-hazardous landfill is permitted for 281 acres.~~ The WRSL's maximum permitted capacity is 36,350,000 cubic yards. ~~According to the current permit, the anticipated closure date is 2036. However, based on currently permitted fill grades and waste disposal rates, the~~ The results of a 2007 capacity study completed by the WPWMA show a remaining capacity of approximately 23,800,000 cubic yards (approximately 65 percent). ~~Under current land use and development conditions, the WPWMA anticipates the landfill will reach capacity by 2042 (six years later than projected in the permit).~~ The permitted closure date for the landfill is 2042. The WRSL receives, on average, approximately 824 tons per day.

The California Integrated Waste Management Act of 1989 (AB 939) mandates that cities and counties develop source reduction and recycling plans. The goal of AB 939 is to divert 50 percent of the waste stream from going to landfills. The MRF was opened in 1996 to facilitate recycling per the new legislative requirement. MRF operations include receiving, separating, processing, and marketing recyclable materials. ~~The current permitted capacity of the MRF is 1,900 tons per day, and the maximum permitted daily throughput is 1,750 tons per day.~~ The MRF's current processing capacity is 2,000 tons per day; the permitted maximum tonnage is 1,750 tons per day. There is also a permitted composting operation at the MRF. The maximum capacity and throughput for the composting facility is 75,000 cubic yards.

The City of Lincoln ~~generated approximately 42,600 tons of solid waste in 2007~~.disposed of approximately 25,780 tons of solid waste in 2008. In 2006 (the latest year for which CIWMB-reviewed ~~preliminary~~ data are available), the City had a diversion rate of ~~59~~ 60 percent. Diversion rates for previous years (200~~1~~3-2005) ranged from ~~55 to 74~~ 57 to 64 percent…

Page 4.9-9, under subheading "State – Assembly Bill 939" revised as follows:

In 1989, the California Legislature passed a law requiring California cities to implement plans designed to reduce waste deposited in landfills by 50 percent per person by December 31, 2000 (AB 939). As part of AB 939, cities and counties were required to develop a Source Reduction and Recycling Element (SRRE). ~~Due to the solid waste diversion and recycling requirements of AB 939, future solid waste levels are not anticipated to increase dramatically in the future.~~ As stated above, the City had a diversion rate of ~~59~~ 60 percent in 2006. Diversion rates for previous years (200~~1~~3-2005) ranged from ~~55 to 74~~ 57 to 64 percent, which exceeds State requirements.

Page 4.9-11, second paragraph revised as follows:

The WRSL, under its current permit, has the capacity to accept waste generated by the Lewis Property. The landfill has 65 percent of its capacity remaining (approximately 23,800,000 cubic yards, ~~and is projected to remain operational until 2042,~~ based on estimates prepared by the WPWMA, and has a permitted closure date of 2042. The additional solid waste from the Lewis Property would require some of the WRSL remaining capacity. Assuming the Lewis Property is occupied by 2017 (Table 2-2), a conversion factor of 500 pounds per cubic yard[12], and 60 percent average diversion, it would deliver approximately 108,505 cubic yards of solid waste over the remaining ~~19~~ 25 years of

permitted disposal capacity through ~~2036~~ 2042. This would represent approximately 0.45 percent of remaining capacity and would not cause an exceedance of landfill capacity. ~~Moreover, based on current projections by WPWMA, the landfill is expected to be able to receive waste until 2042, six years longer than projected in the current permit.~~ Therefore, the contribution of solid waste from buildout of the Lewis Property would not substantially shorten the life of the landfill. This would be a ***less-than-significant impact.***

Page 4.9-12, first paragraph revised as follows:

The additional solid waste from the Village 7 Programmatic Portion would require some of the WRSL remaining capacity. Assuming buildout of the Programmatic Portion by 2020 (Table 2-2), a conversion factor of 500 pounds per cubic yard,[13] and 60 percent average diversion, it would deliver approximately 27,500 cubic yards of solid waste over the remaining ~~16~~ 22 years of permitted disposal capacity through ~~2036~~ 2042. This would represent approximately 0.11 percent of remaining capacity and would not cause an exceedance of landfill capacity. ~~Moreover, based on current projections by WPWMA, the landfill is expected to be able to receive waste until 2042, six years longer than projected in the current permit.~~ Therefore, the contribution of solid waste from buildout of the Village 7 Programmatic Portion would not substantially shorten the life of the landfill. This would be a ***less-than-significant impact.***

Page 4.9-61, Mitigation Measure "4.9-18" inadvertently numbered. Correct mitigation number is Mitigation Measure 4.9-19, revised as follows:

      Lewis Property Mitigation Measure 4.9-19(A)

      4.9-~~18~~19(A)   *Implement Mitigation Measure 4.9-17 (obtain entitlements prior to ~~Tentative Map approval~~ Final Map recordation).*

      Village 7 Programmatic Portion

      4.9-~~18~~19(B)   *Implement Mitigation Measure 4.9-17 (obtain entitlements prior to ~~Tentative Map approval~~ Final Map recordation).*

SECTION 4.11 (CLIMATE CHANGE)

Page 4.11-10, first paragraph, footnote 12 revised as follows:

      Energy Conservation Standards for new residential and non-residential buildings were adopted by California Energy Resources Conservation and Development Commission in June 1977 and most recently revised in 2008 (Title 24, Part 6 of the California Code of Regulations [CCF]).[12] [Footnote 12 revised: ~~Although new building energy efficiency standards were adopted in April 2008, t~~ These standards ~~do not~~ go into effect ~~until~~ in 2009. ~~Thus, the 2005 standards that went into effect on October 1, 2005 remain the current Title 24 standards.~~

Page 4.11-20, last two paragraphs under the subheading "Mitigation Measures" revised as follows:

      Other energy conservation programs are available to the project applicant that will reduce the project's impact on climate change. As part of its Residential New Construction Program, PG&E offers builders of single-family homes within its service area financial incentives based on the energy efficiency of their homes. There are three programs offered by PG&E: energy efficient features may be individually added to homes through the PG&E Prescriptive Option; builders can upgrade to the California Energy Star New Homes Program

by meeting the specifications of the US EPA; or builders may choose to participate in the New Solar Homes Partnership (NSHP) Performance Method. ~~In addition to energy efficiency incentives builders may qualify for incremental incentives from the CEC's NSHP by adding photovoltaic solar systems to their homes.[18]~~ Participation in the Build It Green Program also provides incentives to home builders for including energy conservation measures in projects. ~~While not required of the applicant, i~~Implementation of <u>one or more of</u> these voluntary programs<u>, which are listed in Mitigation Measure 4.11-1(a), would</u> ~~could~~ help further reduce emissions.

Implementation of the following mitigation measures would help contribute to the reduction of global climate change impacts by reducing energy consumption and lowering the amount of GHG production resulting from operation of the proposed project. For those mitigation measures with reductions that can be quantified <u>for the Lewis Property portion of the Specific Plan (which is evaluated at a project level)</u>, implementation of the mitigation measures listed in Mitigation Measure 4.11-1 would achieve an approximately 22 percent reduction in GHG emissions.[19] <u>While the GHG reductions achieved by the Proposed Project can be quantified for the Lewis Property</u>, ~~However, there is no way to quantify~~ <u>in combination with the anticipated emissions and possible mitigation strategies for the Village 7 Programmatic Portion, this would not achieve</u> the <u>necessary</u> level of reduction ~~associated with the listed mitigation measures~~ <u>that would be required to reduce the Proposed Project's contribution to GHG emissions</u> within the cumulative context <u>to a less-than-significant level</u>; therefore, the impact would remain ***cumulatively significant and unavoidable***.

Page 4.11-20, add new footnote 19. Note: a copy of the report cited in the new footnote is included in this Final EIR as Appendix K.

> 19   Environ, *Climate Change Technical Report: The Lewis Property at Village 7*, Prepared for Lewis Planned Communities, Sacramento, California, March 2010.

Page 4.11-21, Mitigation Measure 4.11-1.

Mitigation Measure 4.11-1 has been divided into two separate mitigation measures, one for the Lewis Property, numbered 4.11-1(A), and one for the Village 7 Programmatic Portion, numbered 4.11-1(B). The mitigation measure is further revised as follows:

> Lewis Property, Mitigation Measure 4.11-1(A)

> 4.11-1<u>(A)</u>(a)   *~~At the time of application for design review for a project of more than 10 units or a commercial development of over 50,000 square feet, the City shall require the project applicant to submit an Energy Conservation Plan.~~ <u>An Energy Conservation Plan for all commercial and residential development shall be required prior to recordation of the first small lot Final Map.</u> The plan shall describe the techniques and programs to be employed in the development of the project to achieve ~~energy conservation~~ <u>(1) a minimum 15 percent energy efficiency above that required by the 2008 Title 24 energy efficiency regulations, or (2) compliance with the then-current Title 24 energy efficiency regulations.</u> These programs shall include, but shall not be limited to, either:*

>> *<u>(i)</u> Participation in the PG&E Energy Star Performance Method. This method is available to builders of single-family <u>and multi-family</u> homes that are at least 15 percent more energy efficient than required by the ~~2005~~ <u>2008</u> Title 24 ~~Energy Code~~ <u>energy efficiency regulations</u> and meet*

all US EPA specifications.   Participating builders become part of the California Energy Star New Homes Program, and their homes earn the Energy Star label. Incremental incentives can also be earned by adding energy efficient appliances and/or lighting to homes.

OR

(ii) Participation in the New Solar Homes Partnership (NSHP) Performance Method. This method is available to builders of single-family and multi-family homes that are at least 15 percent more efficient than required by the ~~2005~~ 2008 Title 24 ~~Energy Code~~ energy efficiency regulations and meet all US EPA specifications. ~~A second tier of participation is available to single-family homes that exceed Title 24 by 35 percent, demonstrate a 40 percent reduction in cooling load, and include solar generation as an option for buyers. Both tiers require that all appliances provided by the builder must be Energy Star qualified. Builders may also qualify for additional solar incentives through the CEC's NSHP.~~

OR

(iii) Participation in the Build It Green Program, which was created by Build It Green, a non-profit organization whose mission is to promote health, durable energy and resource efficient buildings throughout California. Using the Green Point Checklist, a home can be considered green if it fulfills the prerequisites and earns at least 50 points and meets the minimum points per category: Energy (30 points); Indoor Air Quality (5 points); Resources (6 points); and Water (9 points). Build It Green uses certified Green Point Raters to measure success with the program and verification of the measures employed to meet the requirements of the checklist.

b) *The project applicant shall be responsible for having prepared, by an experienced and qualified firm, an Energy Resource Conservation Guide that will provide educational information on how homeowners can increase energy efficiency and conservation in their new homes. The information will be delivered to each original homeowner as part of the move-in package. The information packet shall be reviewed by, and be subject to approval of, City of Lincoln staff. ~~The City and the project applicant shall work together to publish and distribute an Energy Resource Conservation Guide describing measures individuals can take to increase energy efficiency and conservation prior to the occupation of the first residential unit. The applicant shall be responsible for funding the preparation of the Guide. The City will be responsible for the distribution of the guide.   The Energy Resource Conservation Guide shall be updated every 5 years and distributed at the public permit counter.~~*

c) *Installation of Light Emitting Diode (LED) traffic signals and LED street lights shall be required at the Lewis Property and be constructed in accordance with City improvement standards or as otherwise approved by the Development Services Director. ~~The project applicant shall pay for an initial installment of Light Emitting Diode (LED) traffic lights in all Specific Plan area traffic lights.~~*

d) *The project applicant shall ensure that a tree planting program at the Lewis Property, approved by the City of Lincoln staff, provides the following:*

Streets:

Residential collector streets:	*1 tree per 35 linear ft*
Primary residential street:	*1 tree per 35 linear ft*
Major and minor paseos:	*1 tree per 25 ft.*
Ferrari Ranch Road:	*551 trees within the Lewis Property boundaries*
Moore Road:	*928 trees within the Lewis Property boundaries*
Central Blvd:	*1,471 trees within the Lewis Property boundaries*

Residential Units:

LDR units:	*1 front yard tree*
Village Country Estate(VCE) units:	*2 front yard trees*
MDR units:	*1 front yard tree.*

Some MDR units may not have front yards; however, where the front of an MDR lot is on a paseo, trees will be spaced 25 ft on center along the paseo. The exact number of trees to be planted in MDR developments will be determined during the City's design review process by the City and project applicant with the goal of having one front yard or back yard tree for each residential unit.

HDR units:	*Average of 40 trees per acre*

Open Space Areas:

Mini parks	*27 trees per acre*
Community parks	*27 trees per acre*
Neighborhood parks	*27 trees per acre*

School & VMU:

VMU:	*10 trees per acre*
School:	*15 trees per acre*
Commercial:	*Sufficient trees to provide 50% tree shading within 15 years in commercial and retail parking lots, consistent with General Plan policy OSC-3.10.*

NOTE: The number of trees specified above is an approximate number and will be subject to adjustment for physical constraints resulting from the actual location of physical improvements (both above ground and underground) and public safety considerations, such as the need to preserve vehicle operator sight distances at all roadway intersections.

~~The project applicant shall ensure the tree planting program provides 50% tree shading within 15 years in commercial and retail lots to reduce radiation and encourage the reduction of greenhouse gases, consistent with General Plan policy OSC-3.10.~~

e) *Pursuant to the City's new 2050 General Plan, and specifically under the Energy Resources section, Goal OSC-3, "Encourage energy conservation in new and existing developments throughout the City," to address Policy OSC 3.9, "Shade Tree Planting," the project applicant shall be responsible for having prepared, by an experienced and qualified firm, or by an organization*

such as the Sacramento Tree Foundation, a tree information planting and care guide. The planting and care guide will be delivered to each original homeowner as a part of the move in package. The planting and care guide shall be reviewed by, and be subject to the approval of, City of Lincoln staff. ~~The applicant shall develop a tree planting packet for distribution in the Village 7 Specific Plan to help future residents understand their options for planting trees that can absorb carbon dioxide, consistent with General Plan policy HS-3.21.~~

f) *The City shall require that energy efficient lighting fixtures, including fluorescent lights, be* ~~used in~~ *installed as part of the original construction of residential and commercial structures within the plan area.*

g) *The City shall require light-colored roofing materials with a solar reflective value and thermal emittance value of 0.25 or better on all residential and commercial buildings.* ~~The project applicant shall include light-colored roofing materials and road materials to address "urban heat island" effect.~~

h) *Pursuant to the City's new 2050 General Plan, and specifically under the Energy Resources section, Goal OSC-3, "Encourage energy conservation in new and existing developments throughout the City," the City shall be responsible pursuant to Policy OSC 3.14, "Early Planning for Energy Efficiency," for developing a program whereby energy planners and energy efficiency specialists will be included in pre-application discussions with a developer or builder to help identify the potential for inclusion of solar orientation and other energy efficient systems into the land plan and building practices.* ~~The City shall ensure recommendations from energy planners and energy efficiency specialists in the building permit review process are incorporated to ensure building and site design takes into account solar orientation, energy-efficient systems, building practices, and materials, consistent with General Plan policies OSC-3.8 and OSC-3.14.~~

i) *Implement all mitigation measures identified in Section 4.4, Air Quality.*

j) *Implement Mitigation Measure 4.7-4 (Urban Stormwater Pollutants) in Section 4.7, Hydrology and Water Quality.*

k) *New commercial buildings (except schools) shall be 15 % more energy efficient than the 2008 Title 24 building standards based on annual energy usage.*

l) *The roadway system shall be designed to accommodate the usage of neighborhood electric vehicles (NEVs).*

m) *Provide bus turnouts and transit shelters on roadways that are to be served by bus transit in the future in accordance with City improvement standards and as otherwise directed by City's Development Services Director.*

n) *Water used during construction shall be reclaimed water*

Village 7 Programmatic Portion Mitigation Measure 4.11-1(B)

4.11-1(B)(a)   *At the time of application for design review for a project of more than 10 units or a commercial development of over 50,000 square feet, the City shall require the project applicant to submit an Energy Conservation Plan.* *An Energy Conservation Plan for all residential development shall be required prior to recordation of the first small lot Final Map.* *The plan shall describe the techniques and programs to be employed in the development of the project to achieve energy conservation (1) a minimum 15 percent energy efficiency above that required by the 2008 Title 24 energy efficiency regulations, or (2) compliance with the then-current Title 24 energy efficiency regulations. These programs shall include, but shall not be limited to, either:*

(i)   *Participation in the PG&E Energy Star Performance Method. This method is available to builders of single-family homes that are at least 15 percent more energy efficient than required by the 2005 2008 Title 24 Energy Code energy efficiency regulations and meet all US EPA specifications. Participating builders become part of the California Energy Star New Homes Program, and their homes earn the Energy Star label. Incremental incentives can also be earned by adding energy efficient appliances and/or lighting to homes.*

OR

(ii)   *Participation in the New Solar Homes Partnership (NSHP) Performance Method. This method is available to builders of single-family homes that are at least 15 percent more efficient than required by the 2005 2008 Title 24 Energy Code energy efficiency regulations and meet all US EPA specifications. A second tier of participation is available to single-family homes that exceed Title 24 by 35 percent, demonstrate a 40 percent reduction in cooling load, and include solar generation as an option for buyers. Both tiers require that all appliances provided by the builder must be Energy Star qualified. Builders may also qualify for additional solar incentives through the CEC's NSHP.*

OR

(iii)   *Participation in the Build It Green Program, which was created by Build It Green, a non-profit organization whose mission is to promote health, durable energy and resource efficient buildings throughout California. Using the Green Point Checklist, a home can be considered green if it fulfills the prerequisites and earns at least 50 points and meets the minimum points per category: Energy (30 points); Indoor Air Quality (5 points); Resources (6 points); and Water (9 points). Build It Green uses certified Green Point Raters to measure success with the program and verification of the measures employed to meet the requirements of the checklist.*

b)   *The project applicant shall be responsible for having prepared, by an experienced and qualified firm, an Energy Resource Conservation Guide that will provide educational information on how homeowners can increase energy efficiency and conservation in their new homes. The information will be delivered to each original homeowner as part of the move-in package.*

The information packet shall be reviewed by, and be subject to approval of, City of Lincoln staff. ~~The City and the project applicant shall work together to publish and distribute an Energy Resource Conservation Guide describing measures individuals can take to increase energy efficiency and conservation prior to the occupation of the first residential unit. The applicant shall be responsible for funding the preparation of the Guide. The City will be responsible for the distribution of the guide.   The Energy Resource Conservation Guide shall be updated every 5 years and distributed at the public permit counter.~~

c) *Installation of Light Emitting Diode (LED) traffic signals and LED street lights shall be required at the Village 7 Programmatic Portion and be constructed in accordance with City improvement standards or as otherwise approved by the Development Services Director. ~~The project applicant shall pay for an initial installment of Light Emitting Diode (LED) traffic lights in all Specific Plan area traffic lights.~~*

d) *The project applicants for projects within the Village 7 Programmatic Portion of the Specific Plan shall ensure that a tree planting program, approved by the City of Lincoln staff, provides the following:*

Streets:

Residential collector streets:	*1 tree per 35 linear ft*
Primary residential street:	*1 tree per 35 linear ft*
Major and minor paseos:	*1 tree per 25 ft*

Residential Units:

LDR units:	*1 front yard tree*
MDR units:	*1 front yard tree. Some MDR units may not have front yards; however, where the front of an MDR lot is on a paseo, trees will be spaced 25 ft on center along the paseo. The exact number of trees to be planted in MDR developments will be determined during the City's design review process by the City and project applicant(s) with the goal of having one front yard or back yard tree for each residential unit.*

Open Space Areas:

Mini parks	*27 trees per acre*
Community parks	*27 trees per acre*
Neighborhood parks	*27 trees per acre*

NOTE: The number of trees specified above is an approximate number and will be subject to adjustment for physical constraints resulting from the actual location of physical improvements (both above ground and underground) and public safety considerations, such as the need to preserve vehicle operator sight distances at all roadway intersections.
~~*The project applicant shall ensure the tree planting program provides 50% tree shading within 15 years in commercial and retail lots to reduce radiation and encourage the reduction of greenhouse gases, consistent with General Plan policy OSC-3.10.*~~

e) *Pursuant to the City's new 2050 General Plan, and specifically under the Energy Resources section, Goal OSC-3, "Encourage energy conservation in*

new and existing developments throughout the City," to address Policy OSC 3.9, "Shade Tree Planting," the project applicant shall be responsible for having prepared, by an experienced and qualified firm, or by an organization such as the Sacramento Tree Foundation, a tree information planting and care guide. The planting and care guide will be delivered to each original homeowner as a part of the move in package. The planting and care guide shall be reviewed by, and be subject to the approval of, City of Lincoln staff. The applicant shall develop a tree planting packet for distribution in the Village 7 Specific Plan to help future residents understand their options for planting trees that can absorb carbon dioxide, consistent with General Plan policy HS-3.21.

f) *The City shall require that energy efficient lighting fixtures, including fluorescent lights, be used in installed as part of the original construction of residential and commercial structures within the plan area.*

g) *The City shall require light-colored roofing materials with a solar reflective value and thermal emittance value of 0.25 or better on all residential buildings. The project applicant shall include light-colored roofing materials and road materials to address "urban heat island" effect.*

h) *Pursuant to the City's new 2050 General Plan, and specifically under the Energy Resources section, Goal OSC-3, "Encourage energy conservation in new and existing developments throughout the City," the City shall be responsible pursuant to Policy OSC 3.14, "Early Planning for Energy Efficiency," for developing a program whereby energy planners and energy efficiency specialists will be included in pre-application discussions with a developer or builder to help identify the potential for inclusion of solar orientation and other energy efficient systems into the land plan and building practices. The City shall ensure recommendations from energy planners and energy efficiency specialists in the building permit review process are incorporated to ensure building and site design takes into account solar orientation, energy-efficient systems, building practices, and materials, consistent with General Plan policies OSC-3.8 and OSC-3.14.*

i) *Implement all mitigation measures identified in Section 4.4, Air Quality.*

j) *Implement Mitigation Measure 4.7-4 (Urban Stormwater Pollutants) in Section 4.7, Hydrology and Water Quality.*

k) *The roadway system shall be designed to accommodate the usage of neighborhood electric vehicles (NEVs).*

l) *Provide bus turnouts and transit shelters on roadways that are to be served by bus transit in the future in accordance with City improvement standards and as otherwise directed by City's Development Services Director.*

m) *Water used during construction shall be reclaimed water*

TABLE 2-1

REVISED SUMMARY OF IMPACTS AND MITIGATION MEASURES (DRAFT EIR TABLE 3-1)

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
4.1 Land Use			
4.1-1 **The Proposed Project could result in internal land use incompatibilities.**	PS (Lewis)	**Lewis Property** 4.1-1(A) a) The applicant shall construct fencing and~~/or~~ post signs that incorporate Section 12.20.80 of the Lincoln Municipal Code and Section 602.8 of the California Penal Code to inform the public of sensitive wetland/wildlife areas within the open space areas <u>near</u> ~~in~~ the Orchard Creek Wetlands Preserve that borders the Lewis Property on the south <u>and at the other wetland/wildlife areas within the open space areas at the Lewis Property.</u> b) The applicant shall design its specific project to comply with all setback and buffer requirements required by any Clean Water Act Section 404 permits, incidental take permits and Streambed Alteration Agreements. c) Notify home buyers of the presence of sensitive wetland/wildlife areas within the open space areas.	LS
	PS (Village 7 PP)	**Village 7 Programmatic Portion** 4.1-1(B) a) The applicant shall construct fencing and~~/or~~ post signs that incorporate Section 12.20.80 of the Lincoln Municipal Code and Section 602.8 of the California Penal Code to inform the public of sensitive wetland/wildlife areas within the open space areas. b) The applicant shall design its specific project to comply with all setback and buffer requirements required by any Clean Water Act Section 404 permits, incidental take permits and Streambed Alteration Agreements.	LS

LS = Less than Significant   S = Significant   STSU = Short-term Significant and Unavoidable   PS = Potentially Significant
SU = Significant and Unavoidable   STS = Short-term Significant   PSU = Potentially Significant and Unavoidable   NI = No Impact

		TABLE 2-1	
		REVISED SUMMARY OF IMPACTS AND MITIGATION MEASURES (DRAFT EIR TABLE 3-1)	
Impact	**Level of Significance Prior to Mitigation**	**Mitigation Measure(s)**	**Level of Significance After Mitigation**
		c) The applicant shall provide to home buyers within the Proposed Project information about agricultural operations and potential nuisance activities occurring on lands adjacent to the project site, including a copy of Placer County's Right-to-Farm Ordinance. Residential development located next to active agricultural areas shall have a notice included in the deed notifying buyers of the agricultural use.	
4.1-2 The Proposed Project could result in land use incompatibilities with adjacent land uses.	PS (Lewis)	**Lewis Property** 4.1-2(A) a) Implement Mitigation Measures 4.1-1(A). b) The applicant shall provide to home buyers within the Proposed Project information about agricultural operations and potential nuisance activities occurring on lands adjacent to the project site, including a copy of Placer County's Right-to-Farm Ordinance. Residential development located next to active agricultural areas shall have a notice included in the deed notifying buyers of the agricultural use. c) Record disclosures concerning all residential properties ~~Notify home buyers~~ within the C1 Zone and D Zone regarding noise and safety issues as required by <u>Placer County</u> ALUCP <u>and California Business and Professions Code section 11010 and California Civil Code section 1102.6, 1103.4, and 1353</u>.	LS
	PS (Village 7 PP)	**Village 7 Programmatic Portion** 4.1-2(B) a) Implement Mitigation Measures 4.1-1(B).	LS

LS = Less than Significant   S = Significant   STSU = Short-term Significant and Unavoidable   PS = Potentially Significant
SU = Significant and Unavoidable   STS = Short-term Significant   PSU = Potentially Significant and Unavoidable   NI = No Impact

		TABLE 2-1	
		REVISED SUMMARY OF IMPACTS AND MITIGATION MEASURES (DRAFT EIR TABLE 3-1)	
Impact	**Level of Significance Prior to Mitigation**	**Mitigation Measure(s)**	**Level of Significance After Mitigation**
		b) The applicant shall provide to home buyers within the Proposed Project information about agricultural operations and potential nuisance activities occurring on lands adjacent to the project site, including a copy of Placer County's Right-to-Farm Ordinance. Residential development located next to active agricultural areas shall have a notice included in the deed notifying buyers of the agricultural use. Record disclosures concerning all residential properties ~~Notify home buyers~~ within the C1 Zone and D Zone regarding noise and safety issues as required by Placer County ALUCP and California Business and Professions Code section 11010 and California Civil Code section 1102.6, 1103.4, and 1353.	
4.1-3 The Proposed Project would not conflict with the City of Lincoln 2050 General Plan policies.	LS (Lewis)	**Lewis Property** 4.1-3(A) None required.	LS
	LS (Village 7 PP)	**Village 7 Programmatic Portion** 4.1-3(B) None required.	LS
4.1-4 The Proposed Project would not conflict with the Placer County LAFCO policies pertaining to annexations.	LS (Lewis)	**Lewis Property** 4.1-4(A) None required.	LS
	LS (Village 7 PP)	**Village 7 Programmatic Portion** 4.1-4(B) None required.	LS
4.1-5 The Proposed Project would convert Prime Farmland, Farmland of Statewide Importance, and Farmland of Local Importance to non-agricultural uses.	SU (Lewis)	**Lewis Property** 4.1-5(A) None available.	SU
	SU (Village 7 PP)	**Village 7 Programmatic Portion**	SU

LS = Less than Significant   S = Significant   STSU = Short-term Significant and Unavoidable   PS = Potentially Significant
SU = Significant and Unavoidable   STS = Short-term Significant   PSU = Potentially Significant and Unavoidable   NI = No Impact

	Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
	TABLE 2-1			
	REVISED SUMMARY OF IMPACTS AND MITIGATION MEASURES (DRAFT EIR TABLE 3-1)			
			4.1-5(B) None available.	
4.1-6	**The Proposed Project could conflict with an existing Williamson Act contract.**	NI (Lewis)	**Lewis Property** 4.1-6(A) None required.	NI
		SU (Village 7 PP)	**Village 7 Programmatic Portion** 4.1-6(B) No land under Williamson Act contract will be rezoned until the contract has expired or been cancelled.	SU
4.1-7	**The Proposed Project could conflict with the Placer County LAFCO policies pertaining to annexations of agricultural areas.**	LS (Lewis)	**Lewis Property** 4.1-7(A) None required.	LS
		LS (Village 7 PP)	**Village 7 Programmatic Portion** 4.1-7(B) None required.	LS
4.1-8	**The Proposed Project, in combination with future development in western Placer County, would convert agricultural resources, including Prime Farmland, Farmland of Statewide Importance, Farmland of Local Importance, and agricultural land under Williamson Act contract to non-agricultural uses.**	SU (Lewis)	**Lewis Property** 4.1-8(A) None available.	SU
		SU (Village 7 PP)	**Village 7 Programmatic Portion** 4.1-8(B) None available.	SU
	4.2 Population, Employment, and Housing			
4.2-1	**The Proposed Project would not adversely affect the jobs-to-housing ratio in the City of Lincoln.**	LS (Lewis)	**Lewis Property** 4.2-1(A) None required.	LS
		LS (Village 7 PP)	**Village 7 Programmatic Portion** 4.2-1(B) None required.	LS

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	Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
	TABLE 2-1 **REVISED SUMMARY OF IMPACTS AND MITIGATION MEASURES (DRAFT EIR TABLE 3-1)**			
4.2-2	**The Proposed Project, in combination with future development in the City of Lincoln, could change the City's jobs-housing balance.**	LS (Lewis)	**Lewis Property** 4.2-2(A) None required.	LS
		LS (Village 7 PP)	**Village 7 Programmatic Portion** 4.2-2(B) None required.	LS
4.2-3	**The Proposed Project, in combination with other development in the City of Lincoln and in the region, would not exceed official regional and local population projections.**	LS (Lewis)	**Lewis Property** 4.2-3(A) None required.	LS
		LS (Village 7 PP)	**Village 7 Programmatic Portion** 4.2-3(B) None required.	LS
	4.3 Transportation and Circulation			
4.3-1	**The Proposed Project would not worsen (to a significant level) unacceptable operations at City of Lincoln intersections (excluding those in downtown on SR 65 which are described separately) under existing plus project conditions.**	LS	4.3-1 None required.	LS
4.3-2	**The Proposed Project could temporarily worsen unacceptable operations on State Route 65 in downtown Lincoln under existing plus project conditions if occupancy of the Proposed Project occurs prior to the completion of the SR 65 Bypass.**	STS	4.3-2 No additional mitigation is feasible or required.	STSU
4.3-3	**The Proposed Project would not cause operations at any intersections in Roseville to worsen to an unacceptable level under existing plus project conditions.**	LS	4.3-3 None required.	LS

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		REVISED SUMMARY OF IMPACTS AND MITIGATION MEASURES (DRAFT EIR TABLE 3-1)		
Impact	**Level of Significance Prior to Mitigation**	**Mitigation Measure(s)**		**Level of Significance After Mitigation**
4.3-4 **The Proposed Project would not result in unacceptable levels of service at any intersections in Placer County under existing plus project conditions.**	LS	4.3-4	None required.	LS
4.3-5 **The Proposed Project would worsen to an unacceptable level or further worsen already unacceptable operations at three locations on SR 65 south of Lincoln under existing plus project conditions.**	S	4.3-5	Prior to the issuance of Building Permits for the Proposed Project, the project applicants or their successors shall pay the applicable South Placer Regional Transportation Authority Fee, which will help fund the widening of SR 65 to six lanes.	SU
4.3-6 **The Proposed Project would add significant levels of traffic to Moore Road between the project site and Fiddyment Road, and to Fiddyment Road from Moore Road to the south City limits, which are not constructed to current design standards.**	S	4.3-6	The project applicants or their successors shall pay a fair share of the cost to upgrade Moore Road between Fiddyment Road and the western project boundary, and Fiddyment Road from Moore Road to the south City limits, to current City of Lincoln design standards for a two-lane arterial. The City may add this road improvement to the Public Facilities Element (PFE), with PFE credits being given to the constructing party. Alternatively, the City may require the project applicants or their successors to construct the improvements and provide them with a right of reimbursement from third parties who also benefit from the improvements. The timing of the fair share payment or construction shall be as specified in the development agreement(s) between City and project applicants, but the required timing will be concurrent with the development of the threshold triggering use.	LS
4.3-7 **The Proposed Project would add significant levels of traffic to portions of Nelson Lane, which is not constructed to current design standards.**	S	4.3-7	None feasible.	SU

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REVISED SUMMARY OF IMPACTS AND MITIGATION MEASURES (DRAFT EIR TABLE 3-1)

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)		Level of Significance After Mitigation
4.3-8 **The Proposed Project would provide adequate facilities to accommodate its planned transit demand.**	LS	4.3-8	None required.	LS
4.3-9 **The Proposed Project would provide adequate on-site facilities to support walking and bicycling.**	LS	4.3-9	None required.	LS
4.3-10 **The Proposed Project would not conflict with planned transportation improvements.**	LS	4.3-10	None required.	LS
4.3-11 **The Proposed Project would cause temporary impacts along Moore Road during construction-related activities.**	STS	4.3-11	None feasible.	STSU
4.3-12 **The Proposed Project would not cause any cumulative impacts on the City of Lincoln roadway system.**	LS	4.3-12	None required.	LS
4.3-13 **The Proposed Project would worsen to an unacceptable level or further worsen cumulatively unacceptable operations (to a significant degree) on roadway segments within Placer County.**	S	4.3-13	Prior to the issuance of Building Permits at the Proposed Project, the project applicants or their successors shall pay a fair-share of the cost to improve the five Placer County roadway segments significantly impacted by the Proposed Project, provided that either the Placer County Traffic Mitigation fee program is modified and/or a regional funding mechanism is in place to include improvements to these roadways.	SU
4.3-14 **The Proposed Project would worsen cumulatively unacceptable operations (to a significant degree) on State Route 193 and State Route 65 through Placer County, Rocklin, and Roseville.**	S	4.3-14	The project applicants or their successors shall pay SPRTA Fees to help widen SR 65 to six lanes, and pay a fair-share of the cost to make improvements to segments of SR 193 significantly impacted by the Proposed Project if a regional funding mechanism and roadway improvement plan for SR 193 are adopted prior to issuance of Building Permits at the Proposed Project.	SU

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4.3-15 The Proposed Project would cause a significant cumulative impact at one intersection located in the City of Roseville.	S	4.3-15 None feasible.	SU
		4.4 Air Quality	
4.4-1 Grading and other earth-disturbing activities associated with the Proposed Project would generate emissions of PM$_{10}$ and PM$_{2.5}$.	S (Lewis)	<u>**Lewis Property**</u> 4.4-1(A) The following mitigation measures shall be implemented by the applicant during all grading activities: · The applicant shall submit to the City of Lincoln, as the lead agency, and receive approval of a Construction Emission/Dust Control Plan prior to ~~groundbreaking~~ <u>issuance of a grading permit.</u> This plan must address the minimum Administrative Requirements found in section 300 and 400 of District Rule 228, Fugitive Dust. The applicant shall have a pre-construction meeting for grading activities for 20 or more acres to discuss the construction emission/dust control plan with employees and/or contractors and the District is to be invited. The applicant shall suspend all grading operations when fugitive dusts exceed District Rule 228 Fugitive Dust limitations. An applicant representative, certified by CARB to perform Visible Emissions Evaluations (VEE), shall routinely evaluate compliance to Rule 228, Fugitive Dust. This requirement for a VEE is for projects grading 20 or more acres regardless of how many acres are to be disturbed daily. It is to be noted that fugitive dust is not to exceed 40% opacity and not go beyond property boundary at any time. If lime or other drying agents are utilized to dry out wet grading areas they shall be controlled as to not exceed District Rule 228 Fugitive Dust limitations.	STSU

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Impact	**Level of Significance Prior to Mitigation**	**Mitigation Measure(s)**	**Level of Significance After Mitigation**
		· Apply water to control dust as needed to prevent dust impacts offsite. Operational water truck(s) shall be onsite, as required, to control fugitive dust. Construction vehicles leaving the site shall be cleaned to prevent dust, silt, mud, and dirt from being released or tracked off-site.	
		· Apply approved chemical soil stabilizers, vegetative mats, or other appropriate best management practices to manufacturers specifications, to all-inactive construction areas (previously graded areas which remain inactive for 96 hours).	
		· Spread soil binders on unpaved roads and employee/equipment parking areas and wet broom or wash streets if silt is carried over to adjacent public thoroughfares.	
		· Install wheel washers or wash all trucks and equipment leaving the site.	
		· Vegetation materials removed from the site during construction shall not be burned in the open. Vegetative material should be ~~chipped or delivered to waste to energy facilities~~ <u>delivered to a green waste recycling facility</u>.	
		· Active grading sites shall be watered at least twice daily.	
		· A traffic speed limit of 15 miles per hours shall be posted and enforced on all unpaved construction roads.	
		· All excavating and grading activities shall be suspended when wind speeds (as instantaneous gusts) exceed 25 miles per hour and dust is transported onto adjacent developed properties.	

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	S (Village 7 PP)	**Village 7 Programmatic Portion** 4.4-1(B) The following mitigation measures shall be implemented by the applicant during all grading activities: · The applicant shall submit to the City of Lincoln, as the lead agency, and receive approval of a Construction Emission/Dust Control Plan prior to ~~groundbreaking~~ <u>issuance of a grading permit</u>. This plan must address the minimum Administrative Requirements found in section 300 and 400 of District Rule 228, Fugitive Dust. The applicant shall have a pre-construction meeting for grading activities for 20 or more acres to discuss the construction emission/dust control plan with employees and/or contractors and the District is to be invited. The applicant shall suspend all grading operations when fugitive dusts exceed District Rule 228 Fugitive Dust limitations. An applicant representative, certified by CARB to perform Visible Emissions Evaluations (VEE), shall routinely evaluate compliance to Rule 228, Fugitive Dust. This requirement for a VEE is for projects grading 20 or more acres regardless of how many acres are to be disturbed daily. It is to be noted that fugitive dust is not to exceed 40% opacity and not go beyond property boundary at any time. If lime or other drying agents are utilized to dry out wet grading areas they shall be controlled as to not exceed District Rule 228 Fugitive Dust limitations. · Apply water to control dust as needed to prevent dust impacts offsite. Operational water truck(s) shall be onsite, as required, to control fugitive dust. Construction vehicles leaving the site shall be cleaned to prevent dust, silt, mud, and dirt from being released or tracked off-site.	STSU

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		· Apply approved chemical soil stabilizers, vegetative mats, or other appropriate best management practices to manufacturers specifications, to all-inactive construction areas (previously graded areas which remain inactive for 96 hours). · Spread soil binders on unpaved roads and employee/equipment parking areas and wet broom or wash streets if silt is carried over to adjacent public thoroughfares. · Install wheel washers or wash all trucks and equipment leaving the site. · Vegetation materials removed from the site during construction shall not be burned in the open. Vegetative material should be ~~chipped or delivered to waste to energy facilities.~~ delivered to a green waste recycling facility. · Active grading sites shall be watered at least twice daily. · A traffic speed limit of 15 miles per hours shall be posted and enforced on all unpaved construction roads. · All excavating and grading activities shall be suspended when wind speeds (as instantaneous gusts) exceed 25 miles per hour and dust is transported onto adjacent developed properties.	
4.4-2 Construction activities associated with the Proposed Project would generate emissions of criteria air pollutants ROG and NO$_x$ that would exceed PCAPCD thresholds.	S<u>T</u>S (Lewis)	**Lewis Property** 4.4-2(A) During all phases of construction, the project applicant shall ensure that the following mitigation measures are implemented:	STSU

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Impact	**Level of Significance Prior to Mitigation**	**Mitigation Measure(s)**	**Level of Significance After Mitigation**
		· During second stage smog alerts (0.350 ppm of ozone), the construction day shall be shortened and the number of vehicles and equipment operating at the same time shall be reduced. · Construction equipment operators shall shut off equipment when not in use to avoid unnecessary idling. Vehicle idling shall be kept below ~~10 minutes~~ five consecutive minutes in accordance with Lincoln Municipal Code Section 10.14 requirements. · Construction equipment exhaust emissions shall not exceed District Rule 202 Visible Emission limitations. Operators of vehicles and equipment found to exceed opacity limits are to be immediately notified and the equipment must be repaired within 72 hours. An applicant representative, certified to perform Visible Emissions Evaluations (VEE), shall routinely evaluate project related off-road and heavy-duty on-road equipment emissions for compliance with this requirement for projects grading more than 20 acres in size regardless in how many acres are to be disturbed daily. · The prime contractor shall submit to the District a comprehensive inventory (i.e. make, model, year, emission rating) of all the heavy-duty off-road equipment (50 horsepower of greater) that will be used an aggregate of 40 or more hours for the construction project. The project representative shall provide the District with the anticipated construction timeline including start date, and name and phone number of the project manager and on-site foreman. The project shall provide a plan for approval by the District demonstrating that the heavy-duty (> 50 horsepower) off-road vehicles	

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		to be used in the construction project, including owned, leased and subcontractor vehicles, will achieve a project wide fleet-average up to 20 percent NO$_x$ reduction and 45 percent particulate reduction compared to the most recent CARB fleet average. The District should be contacted for average fleet emission data. Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available.	
		Contractors can access the PCAPCD or Sacramento Metropolitan Air Quality Management District's web site to determine if their off-road fleet meets the requirements listed in this measure.	
		· The following measure shall be incorporated into construction bid documents: All applicable pieces (at a minimum three pieces) of diesel equipment used on the site during the demolition, earthmoving and clearing stages of construction shall be fitted with a level 3 California Air Resources Board verified diesel emission control system. <u>All off-road and on-road construction equipment shall use a B20 biodiesel blend.</u> Prior to the issuance of a demolition or grading permit, the construction contractor and/or applicant shall submit to the PCAPCD and the City a certified list of the non-road diesel powered construction equipment that will be retrofitted with emission control devices or that will use Clean Fuels. The Clean Fuels shall consist of low NOx and PM10 emission diesel fuel that (1) can be used without engine modification, (2) is certified to provide a minimum emissions reduction of 30 percent PM10 and 10 percent NOx when compared to No. 2 Diesel Fuel, and (3) is included on the CARB Verification List. ~~For~~	

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	S (Village 7 PP)	~~each non-road diesel powered construction equipment that will not be retrofitted or use Clean Fuels, the project applicant shall provide an explanation detailing why such measures are not employed.~~ The list shall include (1) the equipment number, type, make, and contractor/sub-contractor name; (2) the emission control device make, model and EPA or CARB verification number; and/or (3) the type and source of fuel to be used. If any diesel powered non-road construction equipment is found to be in non-compliance with this specification, the contractor will be issued a Notice of Non-Compliance and given a 24 hour period in which to bring the equipment into compliance or remove it from the project. <u>For each piece of non-road diesel powered construction equipment that will not be retrofitted or use Clean Fuels, the project applicant shall provide an explanation detailing why such measures are not employed.</u> **Village 7 Programmatic Portion** 4.4-2(B) During all phases of construction, the project applicant shall ensure that the following mitigation measures are implemented: · During second stage smog alerts (0.350 ppm of ozone), the construction day shall be shortened and the number of vehicles and equipment operating at the same time shall be reduced. · Construction equipment operators shall shut off equipment when not in use to avoid unnecessary idling. Vehicle idling shall be kept below ~~10 minutes~~ <u>five consecutive minutes in accordance with Lincoln Municipal Code Section 10.14 requirements</u>.	STSU

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		· Construction equipment exhaust emissions shall not exceed District Rule 202 Visible Emission limitations. Operators of vehicles and equipment found to exceed opacity limits are to be immediately notified and the equipment must be repaired within 72 hours. An applicant representative, certified to perform Visible Emissions Evaluations (VEE), shall routinely evaluate project related off-road and heavy-duty on-road equipment emissions for compliance with this requirement for projects grading more than 20 acres in size regardless in how many acres are to be disturbed daily. · The prime contractor shall submit to the District comprehensive inventory (i.e. make, model, year, emission rating) of all the heavy-duty off-road equipment (50 horsepower of greater) that will be used an aggregate of 40 or more hours for the construction project. The project representative shall provide the District with the anticipated construction timeline including start date, and name and phone number of the project manager and on-site foreman. The project shall provide a plan for approval by the District demonstrating that the heavy-duty (> 50 horsepower) off-road vehicles to be used in the construction project, including owned, leased and subcontractor vehicles, will achieve a project wide fleet-average up to 20 percent NO_x reduction and 45 percent particulate reduction compared to the most recent CARB fleet average. The District should be contacted for average fleet emission data. Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available.	

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		Contractors can access the PCAPCD or Sacramento Metropolitan Air Quality Management District's web site to determine if their off-road fleet meets the requirements listed in this measure. · The following measure shall be incorporated into construction bid documents: All applicable pieces (at a minimum three pieces) of diesel equipment used on the site during the demolition, earthmoving and clearing stages of construction shall be fitted with a level 3 California Air Resources Board verified diesel emission control system. <u>All off-road and on-road construction equipment shall use a B20 biodiesel blend.</u> Prior to the issuance of a demolition or grading permit, the construction contractor and/or applicant shall submit to the PCAPCD and the City a certified list of the non-road diesel powered construction equipment that will be retrofitted with emission control devices or that will use Clean Fuels. The Clean Fuels shall consist of low NOx and PM10 emission diesel fuel that (1) can be used without engine modification, (2) is certified to provide a minimum emissions reduction of 30 percent PM10 and 10 percent NOx when compared to No. 2 Diesel Fuel, and (3) is included on the CARB Verification List. ~~For each non-road diesel powered construction equipment that will not be retrofitted or use Clean Fuels, the project applicant shall provide an explanation detailing why such measures are not employed.~~ The list shall include (1) the equipment number, type, make, and contractor/sub-contractor name; (2) the emission control device make, model and EPA or CARB verification number; and/or (3) the type and source of fuel to be used. If any diesel powered non-road construction equipment is found to be in non-compliance with this specification, the contractor	

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		will be issued a Notice of Non-Compliance and given a 24 hour period in which to bring the equipment into compliance or remove it from the project. <u>For each piece of non-road diesel powered construction equipment that will not be retrofitted or use Clean Fuels, the project applicant shall provide an explanation detailing why such measures are not employed.</u>	
4.4-3 Operation of the Proposed Project would generate emissions of criteria pollutants.	S (Lewis)	**<u>Lewis Property</u>** 4.4-3(A) The project applicant shall implement the following mitigation measures prior to issuance of building permits: · ~~Only low-emission, EPA-certified fireplace shall be installed in residential units containing open hearth fireplaces~~. The conditions of approval and the covenants, conditions, and restrictions (CC&Rs) for the project shall explicitly prohibit the installation of wood-burning stoves and wood-burning fireplaces within the <u>Lewis Property portion of the</u> Specific Plan area. Only natural gas or propane fireplace stoves and fireplaces are permitted <u>in single-family residential units</u>. No natural gas or propane fireplace stoves or fireplaces <u>shall be installed in multi-family residential units</u>. Prior to the issuance of occupancy permits, the applicant must provide written proof of compliance with this measure to the City and PCAPCD. · Only Energy Star-labeled (or equivalent) ~~appliances~~ <u>refrigerators, clothes washers, and dishwashers</u> shall be installed <u>in multi-family dwelling units, and Energy Star-labeled (or equivalent) dishwashers shall be installed in single-family dwelling units.</u>	SU

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	S (Village 7 PP)	· The project applicant shall participate in the PCAPCD off-site mitigation program for post-mitigated emissions that exceed PCAPCD thresholds. Off-site mitigation strategies include retrofitting existing on-road heavy-duty vehicles/equipment with cleaner burning engines, retrofitting or purchasing new low emission agriculture pumps, transit vehicles, and CNG fueling infrastructure. To participate in the off-site mitigation program, the applicant shall pay into the PCAPCD off-site mitigation program, included in Appendix D in this Draft EIR, in consultation with PCAPCD. **Village 7 Programmatic Portion** 4.4-3(B) The project applicant shall implement the following mitigation measures prior to issuance of building permits: · ~~Only low emission, EPA certified fireplace shall be installed in residential units containing open hearth fireplaces~~. The conditions of approval and the covenants, conditions, and restrictions (CC&Rs) for the project shall explicitly prohibit the installation of wood-burning stoves and wood-burning fireplaces within the <u>Programmatic Portion of the</u> Specific Plan area. Only natural gas or propane fireplace stoves and fireplaces are permitted. Prior to the issuance of occupancy permits, the applicant must provide written proof of compliance with this measure to the City and PCAPCD. · Only Energy Star-labeled (or equivalent) ~~appliances~~ <u>dishwashers shall be installed in single-family dwelling units.</u> · The project applicant shall participate in the PCAPCD off-site mitigation program for post-mitigated emissions that exceed PCAPCD thresholds. Off-site mitigation strategies include retrofitting existing on-road heavy-duty	SU

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		vehicles/equipment with cleaner burning engines, retrofitting or purchasing new low emission agriculture pumps, transit vehicles, and CNG fueling infrastructure. To participate in the off-site mitigation program, the applicant shall pay into the PCAPCD off-site mitigation program, included in Appendix D in this Draft EIR, in consultation with PCAPCD.		
4.4-4 Operation of the Proposed Project would increase CO levels at nearby intersections, but not to levels that would exceed established thresholds.	LS (Lewis)	**Lewis Property** 4.4-4(A) None required.		LS
	LS (Village 7 PP)	**Village 7 Programmatic Portion** 4.4-4(B) None required.		LS
4.4-5 Project occupants could be exposed to intermittent odors from the City of Lincoln Wastewater Treatment and Reclamation Facility (WWTRF), Western Regional Sanitary Landfill (WRSL) Material Recovery Facility (MRF), or nearby agricultural operations.	LS (Lewis)	**Lewis Property** 4.4-5(A) Record perpetual notices for all lots within the Village 7 Specific Plan indicating that odors from the Lincoln WWTRF, WRSL, and agricultural operations could occur, and provide copies of this notice to all buyers of these properties.		LS
	LS (Village 7 PP)	**Village 7 Programmatic Portion** 4.4-5(B) Record perpetual notices for all lots within the Village 7 Specific Plan indicating that odors from the Lincoln WWTRF, WRSL, and agricultural operations could occur, and provide copies of this notice to all buyers of these properties.		LS
4.4-6 The Proposed Project would expose new sensitive receptors to TACs or create sources of TACs that could affect existing or future sensitive receptors, but not at levels that would be considered substantial.	LS (Lewis)	**Lewis Property** 4.4-6(A) None required.		LS
	LS (Village 7 PP)	**Village 7 Programmatic Portion** 4.4-6(B) None required.		LS

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4.4-7 **Construction of the Proposed Project would add to cumulative emissions of PM$_{10}$ and PM$_{2.5}$.**	S (Lewis)	**Lewis Property** 4.4-7(A) Implement Mitigation Measure 4.4-1.	SU	
	S (Village 7 PP)	**Village 7 Programmatic Portion** 4.4-7(B) Implement Mitigation Measure 4.4-1.	SU	
4.4-8 **Construction of the Proposed Project would generate emissions of ozone precursors that could combine with other precursor emissions and temporarily increase ozone levels in the region.**	S (Lewis)	**Lewis Property** 4.4-8(A) Implement Mitigation Measure 4.4-2.	SU	
	S (Village 7 PP)	**Village 7 Programmatic Portion** 4.4-8(B) Implement Mitigation Measure 4.4-2.	SU	
4.4-9 **The Proposed Project's operational emissions of criteria air pollutants would add to cumulative emissions, which would result in a net increase of ozone precursor emissions that could obstruct implementation of the local air quality plan.**	S (Lewis)	**Lewis Property** 4.4-9(A) Implement Mitigation Measure 4.4-3.	SU	
	S (Village 7 PP)	**Village 7 Programmatic Portion** 4.4-9(B) Implement Mitigation Measure 4.4-3.	SU	
4.4-10 **The Proposed Project would contribute to cumulative levels of CO, but this would not result in a significant cumulative impact.**	LS (Lewis)	**Lewis Property** 4.4-10(A) None required.	LS	
	LS (Village 7 PP)	**Village 7 Programmatic Portion** 4.4-10(B) None required.	LS	
4.4-11 **The Proposed Project, in addition to other area odor sources, would not expose sensitive receptors to odors that could be cumulatively considerable.**	NI (Lewis)	**Lewis Property** 4.4-11(A) Implement Mitigation Measure 4.4-5.	NI	
	LS (Village 7 PP)	**Village 7 Programmatic Portion** 4.4-11(B) Implement Mitigation Measure 4.4-5.	LS	

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	TABLE 2-1		
REVISED SUMMARY OF IMPACTS AND MITIGATION MEASURES (DRAFT EIR TABLE 3-1)			
Impact	**Level of Significance Prior to Mitigation**	**Mitigation Measure(s)**	**Level of Significance After Mitigation**
4.4-12 The Proposed Project would contribute to and expose receptors to cumulative ambient levels of TAC, but this would not represent a substantial, adverse health risk.	LS (Lewis) LS (Village 7 PP)	**Lewis Property** 4.4-12(A) None required. **Village 7 Programmatic Portion** 4.4-12(B) None required.	LS LS
4.5 Noise			
4.5-1 Construction of the Proposed Project would temporarily increase ambient noise levels.	STPS (Lewis) STPS (Village 7 PP)	**Lewis Property** 4.5-1(A) The City shall ensure construction contractors comply with the following: · Construction hours shall be limited to 7am to ~~7pm~~ 5pm Monday through Friday and on Saturdays from 8am to 4pm, with no construction on Sundays and holidays (unless extended by a special permit). · All heavy construction equipment and all stationary noise sources (such as diesel generators) shall have manufacturer-installed mufflers. · Equipment warm up areas, water tanks, and equipment storage areas shall be located in an area as far away from existing residences as is feasible. · Construction equipment operators shall shut off equipment when not in use to avoid unnecessary idling. Vehicle idling shall be kept below five consecutive minutes in accordance with Lincoln Municipal Code Section 10.14 requirements. **Village 7 Programmatic Portion** 4.5-1(B) The City shall ensure construction contractors comply with the following:	LS LS

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		· Construction hours shall be limited to 7am to ~~7pm~~ 5pm Monday through Friday <u>and on Saturdays from 8am to 4pm, with no construction on Sundays and holidays</u> (unless extended by a special permit).		
		· All heavy construction equipment and all stationary noise sources (such as diesel generators) shall have manufacturer-installed mufflers.		
		· Equipment warm up areas, water tanks, and equipment storage areas shall be located in an area as far away from existing residences as is feasible.		
		· <u>Construction equipment operators shall shut off equipment when not in use to avoid unnecessary idling. Vehicle idling shall be kept below five consecutive minutes in accordance with Lincoln Municipal Code Section 10.14 requirements.</u>		
4.5-2 Construction of the Proposed Project would temporarily increase levels of groundborne vibration.	LS (Lewis)	**Lewis Property** 4.5-2(A) None required.		LS
	LS (Village 7 PP)	**Village 7 Programmatic Portion** 4.5-2(B) None required.		LS
4.5-3 Operational activities associated with the Proposed Project would expose new sensitive receptors within the Proposed Project to increased ambient noise levels.	LS (Lewis)	**Lewis Property** 4.5-3(A) None required.		LS
	LS (Village 7 PP)	**Village 7 Programmatic Portion** 4.5-3(B) None required.		LS
4.5-4 Traffic-generated noise associated with the Proposed Project would expose existing off-site sensitive receptors to permanent	LS (Lewis)	**Lewis Property** 4.5-4(A) None required.		LS

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	TABLE 2-1			
	REVISED SUMMARY OF IMPACTS AND MITIGATION MEASURES (DRAFT EIR TABLE 3-1)			
		LS (Village 7PP)	**Village 7 Programmatic Portion** 4.5-4(B) None required.	LS
4.5-5	Construction of the Proposed Project would temporarily add to cumulative noise levels in the vicinity of the Proposed Project site.	S (Lewis)	**Lewis Property** 4.5-5(A) Implement Mitigation Measure 4.5-1.	SU
		S (Village 7 PP)	**Village 7 Programmatic Portion** 4.5-5(B) Implement Mitigation Measure 4.5-1.	SU
4.5-6	Construction of the Proposed Project would temporarily add to cumulative groundborne vibration levels in the vicinity of the Proposed Project site.	LS (Lewis)	**Lewis Property** 4.5-6(A) None required.	LS
		LS (Village 7PP)	**Village 7 Programmatic Portion** 4.5-6(B) None required.	LS
4.5-7	Increases in traffic associated with the Proposed Project would create noise that could combine with other roadway noise and affect sensitive receptors.	S (Lewis)	**Lewis Property** 4.5-7(A) None available.	SU
		S (Village 7 PP)	**Village 7 Programmatic Portion** 4.5-7(B) None available.	SU
	4.6 Hazardous Materials and Public Safety			
4.6-1	Construction of the Proposed Project could result in the generation or exposure of hazardous materials that could create a health or safety hazard to workers, the public, or the environment.	PS (Lewis)	**Lewis Property** Hazardous Materials Contamination 4.6-1(A) a) Prior to demolition of existing on-site structures and/or development of the Lewis Property, the project applicant shall implement all recommendations from the Phase I EA completed by GeoTrans, Inc. Specifically, the project applicant shall:	LS

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Impact	**Level of Significance Prior to Mitigation**	**Mitigation Measure(s)**	**Level of Significance After Mitigation**
		· Contact and coordinate with the PCDEHS and/or the local air management district to determine if asbestos sampling and abatement is required prior to demolition of the on-site structures. If such a survey is required, all soils surrounding the existing and former structures shall be sampled for residual fragments of lead-based paint, as well. · Prior to the development of the property, the project applicant shall abandon all domestic and irrigation wells in accordance with state and local requirements. · The project applicant shall remove and properly dispose of, or recycle, all petroleum chemicals and hazardous materials from the property. · The project applicant shall remove the concrete, tires, and wood debris from the on-site dumping areas. The soils beneath the debris shall be observed for stains or discoloration. b) If evidence of contamination is found, construction activities shall cease and an environmental professional shall assess the situation. If necessary, the environmental professional shall prepare a sampling plan to collect soil and/or groundwater samples to determine whether or not the site has been adversely affected by past activities. The samples shall be analyzed for the contaminants determined to be a potential health concern by the environmental professional. Depending on the nature of the contamination (if any), the PCDEHS shall be contacted for further direction, which could include further investigation or remediation.	

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	PS (Village 7 PP)	**Village 7 Programmatic Portion** Hazardous Materials Contamination 4.6-1(B) a) Prior to demolition of existing on-site structures and/or development of the Village 7 Programmatic Portion, the project applicants shall contact and coordinate with the PCDEHS and/or the local air management district to determine if asbestos sampling and abatement is required prior to demolition of the on-site structures. If such a survey is required, all soils surrounding the existing and former structures shall be sampled for residual fragments of lead-based paint, as well. b) For the Aitken Ranch II area, the applicant shall have a qualified professional review the results of the Phase 1 ESA and develop specific recommendations for removal of potentially contaminated items, soil and/or groundwater testing, ~~as needed,~~ and any subsequent remedial actions <u>associated with the former turkey farming operations</u> to ensure that development of the project site will not result in adverse human health or environmental risks during construction or occupancy. <u>Soil and groundwater testing shall be performed prior to any site development activities that would disturb surface soils at the location of the former turkey farming operations. If chemicals are present in soils that would present a human health or environmental risk, a soil management plan shall be prepared by the qualified professional prior to approval of Final Grading or Improvement Plans. The soil management plan shall specify how affected soils will be tested, removed, stockpiled, or otherwise handled prior to and during soil-disturbing activities.</u>	LS

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REVISED SUMMARY OF IMPACTS AND MITIGATION MEASURES (DRAFT EIR TABLE 3-1)

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		c) The project applicant shall hire a certified hazardous material specialist to prepare a formal Phase I EA to analyze the potential for hazardous materials within the Remainder Area. The project applicant shall incorporate all applicable and feasible recommendations in order to reduce the risk of hazardous material release during construction to a less-than-significant level.	
4.6-2 Construction of the Proposed Project could create a health hazard to workers, the public, and the environment due to previously unidentified contaminated soil and groundwater.	PS (Lewis)	**Lewis Property** 4.6-2(A) If, during construction activities, evidence of hazardous materials contamination is observed or suspected (i.e., stained or odorous soil, or oily or discolored water), construction activities shall cease and an environmental professional shall assess the situation. If necessary, the environmental professional shall prepare a sampling plan to collect soil and/or groundwater samples to determine whether or not the site has been adversely affected by past activities. The samples shall be analyzed for the contaminants determined to be a potential health concern by the environmental professional. Depending on the nature of the contamination (if any), the PCDEHS shall be contacted for further direction, which could include further investigation or remediation.	LS
	PS (Village 7 PP)	**Village 7 Programmatic Portion** 4.6-2(B) If, during construction activities, evidence of hazardous materials contamination is observed or suspected (i.e., stained or odorous soil, or oily or discolored water), construction activities shall cease and an environmental professional shall assess the situation. If necessary, the environmental professional shall prepare a sampling plan to collect soil and/or groundwater samples to determine whether or not the site has been adversely affected by past activities.	LS

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		The samples shall be analyzed for the contaminants determined to be a potential health concern by the environmental professional. Depending on the nature of the contamination (if any), the PCDEHS shall be contacted for further direction, which could include further investigation or remediation.	
4.6-3 **Operation of the Proposed Project would not result in the generation or exposure of hazardous materials which could create a health hazard to sensitive receptors and the environment.**	LS (Lewis) LS (Village 7PP)	**Lewis Property** 4.6-3(A) None required. **Village 7 Programmatic Portion** 4.6-3(B) None required.	LS LS
4.6-4 **The Proposed Project, in combination with the buildout of the City of Lincoln General Plan could result in hazardous material release impacts associated with construction and/or operation.**	LS (Lewis) LS (Village 7 PP)	**Lewis Property** 4.6-4(A) None required. **Village 7 Programmatic Portion** 4.6-4(B) None required.	LS LS
4.6-5 **The Proposed Project, in combination with the buildout of the City of Lincoln General Plan, could result in construction projects at locations where soil or groundwater contamination may be present.**	LS (Lewis) LS (Village 7 PP)	**Lewis Property** 4.6-5(A) None required. **Village 7 Programmatic Portion** 4.6-5(B) None required.	LS LS
4.6-6 **The Proposed Project, in combination with the buildout of the City of Lincoln General Plan, could result in the routine transport, use, or disposal of hazardous materials, which could, through reasonably foreseeable upset and accident conditions, result in the release of hazardous materials into the environment.**	LS (Lewis) LS (Village 7 PP)	**Lewis Property** 4.6-6(A) None required. **Village 7 Programmatic Portion** 4.6-6(B) None required.	LS LS

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Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		4.7 Hydrology and Water Quality	
4.7-1 **Development of the Proposed Project would increase the amount of impervious surfaces and alter drainage patterns, compared to existing conditions, which would increase the potential for localized and downstream flooding as a result of project stormwater runoff peak flows.**	LS (Lewis) LS (Village 7 PP)	**Lewis Property** 4.7-1(A) None required. **Village 7 Programmatic Portion** 4.7-1(B) None required.	LS LS
4.7-2 **Development of the Proposed Project would increase the amount (volume) of stormwater runoff discharged to Ingram Slough and Orchard Creek.**	PS (Lewis)	4.7-2(A) Prior to final map approval, the Applicant shall identify 78.0 acre-feet of storage capacity in the watershed to accommodate increased stormwater runoff volumes associated with the Lewis Property. Storage capacity shall be obtained at the existing Stormwater Retention Facility (SWRF) and/or the approved Lakeview Farms Volumetric Mitigation Facility. AND The Applicant shall be required to cover its fair share of costs associated with construction, operation, and maintenance, and management of the regional retention facilities to offset increased stormwater volume generated by the Lewis Property. Assuming the regional facility has been constructed, Applicant shall pay the appropriate fees prior to final map approval. If at the time the final map is approved, the regional facilities are not available or operational, or if additional capacity is required, the Applicant shall create on-site storage capacity, or through a combination of on-site and off-site capacity to fully mitigate the 78.0 acre-feet. If off-site facilities are used, The Applicant shall be required to cover its fair share of costs associated with construction, operation, and maintenance,	LS

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Impact	**Level of Significance Prior to Mitigation**	**Mitigation Measure(s)**	**Level of Significance After Mitigation**
		and management of the regional retention facilities to offset increased stormwater volume generated by the Lewis Property. Assuming the regional facility has been constructed, Applicant shall pay the appropriate fees prior to final map approval.	
	PS (Village 7 PP)	**Village 7 Programmatic Portion** 4.7-2(B) a) The Applicant(s) shall develop an additional 23 acre-feet of storage capacity in the watershed to accommodate increased stormwater runoff volumes associated with the Village 7 programmatic portion of the Proposed Project (Aitken Ranch II, Scheiber, Remainder Area). The applicant(s) shall use one of the following options, or a combination thereof, presented in the *Lincoln Nader/Aitken Ranch II/Sundance and the Remainder Properties Tentative Map, Master Drainage Study* for volumetric mitigation: · Participate in the City's Proposed Phase 2 Regional Retention Basin: Phase 1 of the City's Regional Retention Basin project was constructed to accommodate up to 315 acre-feet from the Del Webb development. Additional phased expansions (Phases 2 and 3) are planned to accommodate up to approximately 800 acre-feet of additional retention volume. The Village 7 Programmatic Portion could participate in the construction of Phase 2 of the existing City of Lincoln retention basin to mitigate the Proposed Project's runoff volumes. · Utilize excess capacity in the City's Proposed Phase 1 Regional Retention Basin: Phase 1 of the City's Regional Retention Basin project has a 315 acre-foot retention storage capacity and was	SU

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TABLE 2-1			
REVISED SUMMARY OF IMPACTS AND MITIGATION MEASURES (DRAFT EIR TABLE 3-1)			
Impact			
		constructed by Del Webb to mitigate their project impacts. Based on the SLMDP, the retention volume required to mitigate impacts for the Del Webb project totaled 286 acre-feet. The Phase 1 basin therefore has approximately 29 acre-feet of available storage that could be used by the Village 7 Programmatic Portion. This mitigation option would not entirely reduce the retention volume required for the Village 7 Programmatic Portion, but could be combined with one or more of the other options presented herein. · Create a New Retention Basin: The project applicant could participate in the City's future retention basin within the Cross Canal watershed. OR	
		· Create a new on-site retention basin within the Village 7 Programmatic Portion. b) If one or more of the off-site mitigation options listed in (a) are used, prior to final map approval, the project applicant(s) shall pay PFE fees to cover its fair share of costs associated with construction, operation, and maintenance, and management of off-site regional retention facilities to offset increased stormwater volume generated by the Village 7 Programmatic Portion.	
4.7-3 **Implementation of the Proposed Project would include placement of fill in the 100-year floodplain (overbank area) to accommodate proposed residential development, but this would not cause or increase flood hazard risk.**	LS (Lewis) NI (Village 7 PP)	**Lewis Property** 4.7-3(A) None required. **Village 7 Programmatic Portion** 4.7-3(B) None required.	LS NI

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4.7-4 **Implementation of the Proposed Project would increase the types and amounts of pollutants in stormwater runoff that could be discharged to Ingram Slough, which could affect water quality.**	PS (Lewis)	**Lewis Property** 4.7-4(A) a) Project Conditions of Approval shall specify that appropriate Best Management Practices (BMPs) be incorporated into project design to reduce urban pollutants in runoff, consistent with goals and standards established under federal and State non-point source discharge NPDES regulations and Basin Plan water quality objectives, the City's Post-Construction Stormwater Runoff Control Ordinance No. 826B, and Low-Impact Development (LID) alternatives for stormwater quality control per Public Facilities and Services Implementation Measure 3.0 of the adopted 2050 General Plan. b) The proposed water quality facilities shall be identified and designed in a Stormwater Management Plan prepared in accordance with Section 8.60.40 of the City's Municipal Code for City review and approval. All water quality facilities identified in the Stormwater Management Plan shall be constructed with the installation of the infrastructure. c) The Stormwater Management Plan shall also include the method or methods for funding the long-term maintenance of the proposed water quality facilities. The City shall formally adopt and implement a funding mechanism specifically to fund the long-term maintenance of the proposed water quality facilities as proposed by the Stormwater Management Plan.	LS	

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Impact	**Level of Significance Prior to Mitigation**	**Mitigation Measure(s)**	**Level of Significance After Mitigation**
		d) The project applicant shall submit a site-specific BMP plan showing the on-site locations and effectiveness of the BMP facilities proposed for long-term water quality impact reduction prior to project approval. The plan shall include a method or methods for financing the long-term maintenance of the proposed site-specific facilities. e) All BMPs for water quality protection, source control, and treatment control shall be developed in accordance with the California Stormwater Quality Association Stormwater Best Management Practice Handbook for Construction and New Development/Redevelopment (or other similar source approved by the CVRWQCB, County, and City) for the project. The BMPs shall be designed to mitigate (minimize, infiltrate, filter, or treat) stormwater runoff. Flow or volume based post-construction BMPs shall be designed at a minimum in accordance with the PCFCWCD and City standards and shall be included for long-term maintenance of BMPs. All BMPs shall reflect the Best Available Technologies (BAT) available at the time of implementation and shall reflect site-specific limitations. The City shall make the final determinations as to the appropriateness of the BMPs proposed for the Proposed Project and the City shall ensure future implementation, operation, and maintenance of the BMPs. f) Stormwater runoff from the Proposed Project's impervious surfaces (including roads) shall be collected and routed through specially designed water quality treatment facilities (BMPs) for removal of pollutants of concern (i.e. sediment, oil/grease, etc.), as approved by the City. The applicant shall verify that proposed BMPs are appropriate to treat the pollutants of concern from the Proposed Project and shall provide for the establishment	

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Impact	**Level of Significance Prior to Mitigation**	**Mitigation Measure(s)**	**Level of Significance After Mitigation**
	PS (Village 7 PP)	of vegetation, where specified, by means of proper irrigation, for effective performance of BMPs. ~~Maintenance of these facilities shall be provided by the City.~~ Prior to ~~project approval or~~ Final Map approval, easements shall be created and offered for dedication to the City for maintenance and access to these facilities in anticipation of possible City maintenance. No water quality facility construction shall be permitted within any identified wetlands area, floodplain, or right-of-way, except as authorized by project approvals. **Village 7 Programmatic Portion** 4.7-4(B) a) Project Conditions of Approval shall specify that appropriate Best Management Practices (BMPs) be incorporated into project design to reduce urban pollutants in runoff, consistent with goals and standards established under federal and State non-point source discharge NPDES regulations and Basin Plan water quality objectives and the City's Post-Construction Stormwater Runoff Control Ordinance No. 826B, and Low-Impact Development (LID) alternatives for stormwater quality control per Public Facilities and Services Implementation Measure 3.0 of the adopted 2050 General Plan. b) The proposed water quality facilities shall be identified and designed in a Stormwater Management Plan prepared in accordance with Section 8.60.40 of the City's Municipal Code for City review and approval. All water quality facilities identified in the Stormwater Management Plan shall be constructed with the installation of the infrastructure.	LS

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		c) The Stormwater Management Plan shall also include the method or methods for funding the long-term maintenance of the proposed water quality facilities. The City shall formally adopt and implement a funding mechanism specifically to fund the long-term maintenance of the proposed water quality facilities as proposed by the Stormwater Management Plan.	
		d) The project applicant shall submit a site-specific BMP plan showing the on-site locations and effectiveness of the BMP facilities proposed for long-term water quality impact reduction prior to project approval. The plan shall include a method or methods for financing the long-term maintenance of the proposed site-specific facilities.	
		e) All BMPs for water quality protection, source control, and treatment control shall be developed in accordance with the California Stormwater Quality Association Stormwater Best Management Practice Handbook for Construction and New Development/Redevelopment (or other similar source approved by the CVRWQCB, County, and City), or as deemed acceptable to the City for the project. The BMPs shall be designed to mitigate (minimize, infiltrate, filter, or treat) stormwater runoff. Flow or volume based post-construction BMPs shall be designed at a minimum in accordance with the PCFCWCD and City standards and shall be included for long-term maintenance of BMPs. All BMPs shall reflect the Best Available Technologies (BAT) available at the time of implementation and shall reflect site-specific limitations. The City shall make the final determinations as to the appropriateness of the BMPs proposed for the Proposed Project and the City shall ensure future implementation, operation, and maintenance of the BMPs.	

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		f) Stormwater runoff from the Proposed Project's impervious surfaces (including roads) shall be collected and routed through specially designed water quality treatment facilities (BMPs) for removal of pollutants of concern (i.e. sediment, oil/grease, etc.), as approved by the City. The applicant shall verify that proposed BMPs are appropriate to treat the pollutants of concern from the Proposed Project and shall provide for the establishment of vegetation, where specified, by means of proper irrigation, for effective performance of BMPs. ~~Maintenance of these facilities shall be provided by the City.~~ Prior to ~~project approval or~~ Final Map approval, easements shall be created and offered for dedication to the City for maintenance and access to these facilities in anticipation of possible City maintenance. No water quality facility construction shall be permitted within any identified wetlands area, floodplain, or right-of-way, except as authorized by project approvals.	
4.7-5 Development of the Proposed Project would result in the conversion of undeveloped land to urban uses, which could affect groundwater recharge potential.	LS (Lewis)	**Lewis Property** 4.7-5(A) None required.	LS
	LS (Village 7 PP)	**Village 7 Programmatic Portion** 4.7-5(B) None required.	LS
4.7-6 The Proposed Project, in combination with other development within the watershed, could contribute to an increase in stormwater peak flows and volumes.	PS (Lewis)	**Lewis Property** 4.7-6(A) Implement Mitigation Measure 4.7-2.	PSU
	PS (Village 7 PP)	**Village 7 Programmatic Portion** 4.7-6(B) Implement Mitigation Measure 4.7-2.	PSU

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4.7-7	**The Proposed Project, in combination with other development in the watershed, would not contribute to a reduction in groundwater recharge.**	LS (Lewis) LS (Village 7 PP)	**Lewis Property** 4.7-7(A) None required. **Village 7 Programmatic Portion** 4.7-7(B) None required.	LS LS
4.7-8	**The Proposed Project, in combination with other development within the watershed, would contribute urban pollutants to receiving waters, which could adversely affect water quality.**	S (Lewis) S (Village 7 PP)	**Lewis Property** 4.7-8(A) Implement Mitigation Measures 4.7-4(a) through (f). **Village 7 Programmatic Portion** 4.7-8(B) Implement Mitigation Measures 4.7-4(a) through (f).	LS LS
	4.8 Biological Resources			
4.8-1	**The Proposed Project would result in the filling or adverse modification of jurisdictional wetland/ other "waters of the U.S."**	LS (Lewis) S (Village 7 PP)	**Lewis Property** 4.8-1(A) None required. **Village 7 Programmatic Portion** 4.8-1(B) a) The project applicant shall retain a qualified biologist to conduct a wetland delineation of the remaining properties in the Village 7 Programmatic portion of the project site. This delineation shall be submitted to the Corps for verification prior to the issuance of any grading permits for the Village 7 Programmatic portion of the project site. b) The project applicant shall prepare a wetland mitigation plan that ensures no net loss of wetlands, consistent with Lincoln Public Facilities Element (PFE) Policy 9-13. The wetland mitigation plan shall be based on the wetland delineation verified by the Corps. This measure may be implemented through the 404 permit and/or Streambed Alteration Agreement processes. The plan shall include the following or equally effective components.	LS LS

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		TABLE 2-1	
		REVISED SUMMARY OF IMPACTS AND MITIGATION MEASURES (DRAFT EIR TABLE 3-1)	
Impact	**Level of Significance Prior to Mitigation**	**Mitigation Measure(s)**	**Level of Significance After Mitigation**
		Compensation	
		c) The project proponent shall compensate for the loss of wetland habitat through a combination of preservation of vernal pools and seasonal wetlands in open space preserves, on-site restoration/enhancement along Ingram Slough, and the purchase of mitigation credits at an approved mitigation bank. The ratio of compensation will be determined in consultation with the Corps and U.S. Fish and Wildlife Service, as part of the 404-permit process.	
		Reduction/Avoidance	
		d) Prior to any construction activities on the site, a protective fence shall be erected at the boundaries of the wetland preserves in the areas of construction. This fence shall remain in place until all construction activity in the immediate area is completed. No activity shall be permitted within the wetlands preserve except for those expressly permitted by the US Fish and Wildlife Service.	
		e) A buffer shall be provided along all preserved wetlands. Only those uses allowed in the 404 Permit and/or the Streambed Alteration Agreements shall be permitted in the wetlands preserve and its buffer.	
		f) Water quality in the wetlands preserve shall be protected using erosion control techniques including (as appropriate), but not necessarily limited to, preservation of existing vegetation, mulches (e.g., hydraulic, straw, wood, etc.), geotextiles and mats, during construction in the watershed. Additionally, urban runoff shall be managed to protect water quality in the wetlands preserve using techniques such as velocity dissipation devices, sediment basins and pollution collection devices.	

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		g) Landscape irrigation runoff shall only be permitted to directly enter the wetlands preserve according to the provisions of the 404 Permit and/or the Streambed Alteration Agreement. h) Mowing and other maintenance activities shall be limited to those detailed in the 404 Permit and/or the Streambed Alteration Agreement.	
4.8-2 Development of the Proposed Project could result in the loss of special-status vernal pool crustacean and amphibian species and degradation and/or loss of their habitat.	LS (Lewis) S (Village 7 PP)	**Lewis Property** 4.8-2(A) None required. **Village 7 Programmatic Portion** 4.8-2(B) a) The project applicant shall retain a qualified biologist to conduct a vernal pool crustacean survey following current USFWS protocol within the Village 7 Programmatic portion of the project site. Alternatively, the project applicant could forgo the surveys and assume presence of vernal pool crustaceans in all appropriate habitat within the Village 7 Programmatic portion of the project site. The survey, or assumption of presence shall occur prior to the issuance of any grading permits for the Village 7 Programmatic portion of the project site. b) Surveys have determined that at least one of the federally-listed vernal pool crustacean species occurs on some properties at the project site. Other federally-listed vernal pool crustaceans and/or western spadefoot may also occur in affected pools within the project site. As development of the project site could result in the loss of these species, the following or equally effective measures (as approved by the City and USFWS) shall be required. The selected measures may be part of the permitting process.	LS LS

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		Compensation	
		c) The project proponents shall obtain biological opinions from the U.S. Fish and Wildlife Service (and if necessary, the National Marine Fisheries Service) and are further required to comply with the conditions and mitigation requirements of those agencies. Mitigation may include, but is not limited to, both onsite and offsite preservation and creation of wetlands, purchase of credits at mitigation banks, payment of in lieu fees approved by the agencies, or other agency approved and required mitigation measures.	
		d) Orange exclusionary fencing shall be placed and maintained around any avoided (preserved) vernal pool crustacean habitat during construction to prevent impacts from construction vehicles and equipment. This fencing shall be inspected by a qualified biologist throughout the construction period to ensure that it is in good functional condition. After construction, fencing around open space areas containing wetlands or other sensitive habitats shall be replaced by permanent fencing that will be maintained by the City, and/or the local home owners association.	
		e) Prior to beginning work in the project site, all on-site construction personnel shall receive instruction regarding the presence of listed species and the importance of avoiding impacts on these species and their habitat.	
		f) The project proponent shall ensure that activities that are inconsistent with the maintenance of the suitability of remaining vernal pool habitat and associated watershed on-site is prohibited as required by the USFWS and Corps.	

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4.8-3 **The Proposed Project could result in the loss and/or degradation of rare plant populations.**	PS (Lewis)	**Lewis Property** 4.8-3(A) a) The project applicant shall retain a qualified biologist to conduct focused surveys within the project site for special-status plant species including but not limited to big-scale balsamroot, Boggs Lake hedge-hyssop, dwarf downingia, legenere, Sacramento orcutt grass, and Sanford's arrowhead during the appropriate time of year (March through June). If no special-status plants are located during the surveys, no further mitigation would be required. b) If Boggs Lake hedge-hyssop or Sacramento orcutt grass is located during the surveys in areas that cannot be avoided, the project applicant shall consult with CDFG to obtain ~~an incidental take~~ a management permit, under Section 2081 of the ~~CESA~~ California Fish and Game Code. Mitigation can be accomplished either in the onsite mitigation preserve area, or at an approved offsite mitigation bank. The ratio of mitigation credits will be determined during this consultation, and can be conducted concurrently with Mitigation Measure 4.8-2 (B) subsections (c), (d), and (e). c) If any other special-status vernal pool plant species, including, but not limited to dwarf downingia and legenere are located during the surveys in areas that cannot be avoided, the project applicant shall implement Mitigation Measure 4.8-2(B) subsections (c), (d), and (e), with the addition of soil/seed bank salvage, for use in created wetlands in mitigation areas.	LS

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	PS (Village 7 PP)	d) If any special-status upland plant species including, but not limited to big-scale balsamroot, or wetland species such as Sanford's arrowhead are located during the surveys, the project applicant shall comply with adopted CDFG Guidelines. **Village 7 Programmatic Portion** 4.8-3(B) a) The project applicant shall retain a qualified biologist to conduct focused surveys within the project site for special-status plant species including but not limited to big-scale balsamroot, Boggs Lake hedge-hyssop, dwarf downingia, legenere, Sacramento orcutt grass, and Sanford's arrowhead during the appropriate time of year (March through June). If no special-status plants are located during the surveys, no further mitigation would be required. b) If Boggs Lake hedge-hyssop or Sacramento orcutt grass is located during the surveys in areas that cannot be avoided, the project applicant shall consult with CDFG to obtain ~~an incidental take~~ a management permit, under Section 2081 of the ~~CESA~~ California Fish and Game Code. Mitigation can be accomplished either in the onsite mitigation preserve area, or at an approved offsite mitigation bank. The ratio of mitigation credits will be determined during this consultation, and can be conducted concurrently with Mitigation Measure 4.8-2(B) subsections (c), (d), and (e).	LS

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		c) If any other special-status vernal pool plant species, including, but not limited to dwarf downingia and legenere are located during the surveys in areas that cannot be avoided, the project applicant shall implement Mitigation Measure 4.8-2(B) underline{subsections (c), (d), and (e),} with the addition of soil/seed bank salvage, for use in created wetlands in mitigation areas.	
		d) If any special-status upland plant species including, but not limited to big-scale balsamroot, or wetland species such as Sanford's arrowhead are located during the surveys, the project applicant shall comply with adopted CDFG Guidelines.	
4.8-4 **The Proposed Project could result in the loss and/or degradation of western pond turtles and its habitat.**	S (Lewis)	**Lewis Property** 4.8-~~3~~4(A) a) Prior to project construction, the project applicant and/or developer shall retain a qualified biologist to conduct preconstruction surveys of suitable habitat within the project site within 30 days prior to project construction to ensure no western pond turtles have established territories. If ground-disturbing activities are delayed or suspended for more than 30 days after the preconstruction survey, the site shall be re-surveyed. b) If individual western pond turtles are discovered during the survey on the project site, or immediately adjacent area, the project applicant or their agent shall initiate consultation with the CDFG to formulate and implement minimization measures, which could include capture and relocation of individuals found on-site.	LS

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	S (Village 7 PP)	c) If surveys identify the presence of western pond turtles on site, the project applicant shall implement mitigation measures required by the California Department of Fish and Game at the time of the consultation.	LS
		Village 7 Programmatic Portion	
		4.8-4(B) a) Prior to project construction, the project applicant and/or developer shall retain a qualified biologist to conduct preconstruction surveys of suitable habitat within the project site within 30 days prior to project construction to ensure no western pond turtles have established territories. If ground-disturbing activities are delayed or suspended for more than 30 days after the preconstruction survey, the site shall be re-surveyed.	
		b) If individual western pond turtles are discovered during the survey on the project site, or immediately adjacent area, the project applicant or their agent shall initiate consultation with the CDFG to formulate and implement minimization measures, which could include capture and relocation of individuals found on-site.	
		c) If surveys identify the presence of western pond turtles on site, the project applicant shall implement mitigation measures required by the California Department of Fish and Game at the time of the consultation.	
4.8-5 **The Proposed Project could result in the direct loss or disturbance of nesting migratory birds, including raptors (birds-of-prey).**	S (Lewis)	**Lewis Property**	LS
		4.8-5(A) a) If construction is to occur between March 15 through August 30, the project applicant, in consultation with the City of Lincoln and CDFG, shall conduct a preconstruction breeding-season survey of the project site within 30 days of when construction is planned to begin. The survey shall be conducted by a qualified	

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		biologist (who is also knowledgeable about the California black rail) to determine if any protected raptors or migratory birds (including, but not limited to the California black rail) are nesting on or directly adjacent to the project site. b) A description of methodology including dates of field visits, the names of survey personnel with resumes, and a list of references cited and persons contacted shall be provided to the City. c) A map showing the location(s) of any protected raptor or migratory bird nests observed on the project site shall be provided to the City. d) The project applicant, in consultation with the City of Lincoln and CDFG, shall avoid all protected raptor and migratory bird nest sites located in the project site during the breeding season (approximately March 15 through August 30) while the nest is occupied with adults and/or young. This avoidance could consist of delaying construction in close proximity to the nest during the nesting season. Any occupied nest shall be monitored by a qualified biologist to determine when the nest is no longer used. If the construction cannot be delayed, avoidance shall include the establishment of a non-disturbance buffer zone around the nest site. The size of the buffer zone will be determined in consultation with the City and CDFG. The buffer zone shall be delineated by highly visible temporary construction fencing.	

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Impact	**Level of Significance Prior to Mitigation**	**Mitigation Measure(s)**	**Level of Significance After Mitigation**
	S (Village 7 PP)	**Village 7 Programmatic Portion** 4.8-5(B) a) If construction is to occur between March 15 through August 30, the project applicant, in consultation with the City of Lincoln and CDFG, shall conduct a preconstruction breeding-season survey of the project site within 30 days of when construction is planned to begin. The survey shall be conducted by a qualified biologist (who is also knowledgeable about the California black rail) to determine if any protected raptors or migratory birds (including, but not limited to the California black rail) are nesting on or directly adjacent to the project site. b) A description of methodology including dates of field visits, the names of survey personnel with resumes, and a list of references cited and persons contacted shall be provided to the City. c) A map showing the location(s) of any protected raptor or migratory bird nests observed on the project site shall be provided to the City. d) The project applicant, in consultation with the City of Lincoln and CDFG, shall avoid all protected raptor and migratory bird nest sites located in the project site during the breeding season (approximately March 15 through August 30) while the nest is occupied with adults and/or young. This avoidance could consist of delaying construction in close proximity to the nest during the nesting season. Any occupied nest shall be monitored by a qualified biologist to determine when the nest is no longer used. If the construction cannot be delayed, avoidance shall include the establishment of a non-disturbance buffer zone around the nest site. The size of	LS

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TABLE 2-1

REVISED SUMMARY OF IMPACTS AND MITIGATION MEASURES (DRAFT EIR TABLE 3-1)

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Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		the buffer zone will be determined in consultation with the City and CDFG. The buffer zone shall be delineated by highly visible temporary construction fencing.	
4.8-6 The Proposed Project could result in the loss of foraging habitat for Swainson's hawk, white tailed kite, burrowing owl and other raptors.	S (Lewis)	**Lewis Property** 4.8-6(A) The project applicant shall ensure that at least an appropriate number of acres (as approved by the City and CDFG) of annual grasslands or other suitable raptor foraging habitat are preserved based upon project impacts of 363 acres (0.75:1 ratio). Preservation may occur through either: a) Payment of a mitigation fee to the City of Lincoln through a negotiated agreement between the City, the project applicant, and CDFG. The monies will be held in a trust fund, and used to preserve mitigation land through the purchase, monitoring, maintenance, and remediation of lands that support suitable raptor foraging habitat (consistent with CDFG guidelines); or b) Purchase of conservation easements or fee title to suitable raptor foraging habitat to protect the habitat from urban development; or c) Participate in Placer County Natural Community Conservation Plan/Habitat Conservation Plan, once adopted.	LS
	S (Village 7 PP)	**Village 7 Programmatic Portion** 4.8-6(B) The project applicant shall ensure that at least an appropriate number of acres (as approved by the City and CDFG) of annual grasslands or other suitable raptor foraging habitat are preserved based upon project impacts of 180 acres (0.75:1 ratio). Preservation may occur through either:	LS

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Impact	**Level of Significance Prior to Mitigation**	**Mitigation Measure(s)**	**Level of Significance After Mitigation**
		a) Payment of a mitigation fee to the City of Lincoln through a negotiated agreement between the City, the project applicant, and CDFG. The monies will be held in a trust fund, and used to preserve mitigation land through the purchase, monitoring, maintenance, and remediation of lands that supports suitable foraging habitat for Swainson's hawk. (consistent with CDFG guidelines); or b) Purchase of conservation easements or fee title to suitable Swainson's Hawk foraging habitat to protect the habitat from urban development; or c) Participate in Placer County Natural Community Conservation Plan/Habitat Conservation Plan, once adopted.	
4.8-7 **The Proposed Project could result in loss of nesting habitat for tri-colored blackbird.**	S (Lewis)	**Lewis Property** 4.8-7(A) a) The project applicant shall retain a qualified biologist to conduct pre-construction nesting surveys for tri-colored blackbird colonies within the project site and off-site areas proposed for infrastructure development. The survey should be conducted no more than 30 days from the onset of construction. If ground-disturbing activities are delayed or suspended for more than 30 days after the preconstruction survey, the site shall be re-surveyed. b) The project applicant, in consultation with the City of Lincoln and CDFG, shall avoid all active nest sites located in the project site during the breeding season while the nest site is occupied with adults and/or young. This avoidance could consist of delaying construction to avoid the nesting season or establishing a buffer around the nest site. Any occupied nest shall be monitored by a qualified biologist to determine when the nest is no	LS

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Impact	**Level of Significance Prior to Mitigation**	**Mitigation Measure(s)**	**Level of Significance After Mitigation**
		longer used. If the construction cannot be delayed, avoidance shall include the establishment of a non-disturbance buffer zone around the nest site. The size of the buffer zone will be determined in consultation with the City and CDFG, and will be, at a minimum, 250 feet. The buffer zone shall be delineated by highly visible temporary construction fencing.	
	S (Village 7 PP)	**Village 7 Programmatic Portion** 4.8-7(B) a) The project applicant shall retain a qualified biologist to conduct pre-construction nesting surveys for tri-colored blackbird colonies within the project site and off-site areas proposed for infrastructure development. The survey should be conducted no more than 30 days from the onset of construction. If ground-disturbing activities are delayed or suspended for more than 30 days after the preconstruction survey, the site shall be re-surveyed. b) The project applicant, in consultation with the City of Lincoln and CDFG, shall avoid all active nest sites located in the project site during the breeding season while the nest site is occupied with adults and/or young. This avoidance could consist of delaying construction to avoid the nesting season or establishing a buffer around the nest site. Any occupied nest shall be monitored by a qualified biologist to determine when the nest is no longer used. If the construction cannot be delayed, avoidance shall include the establishment of a non-disturbance buffer zone around the nest site. The size of the buffer zone will be determined in consultation with the City and CDFG, and will be, at a minimum, 250 feet. The buffer zone shall be delineated by highly visible temporary construction fencing.	LS

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	TABLE 2-1 **REVISED SUMMARY OF IMPACTS AND MITIGATION MEASURES (DRAFT EIR TABLE 3-1)**			
4.8-8	**The Proposed Project would result in the modification to stream corridors, disrupting the associated habitat.**	S (Lewis)	**Lewis Property** 4.8-8(A) In addition to pre-construction surveys for special status species, as described in Mitigation Measures 4.8-3, 4.8-4, and 4.8-7, the project applicant shall obtain all necessary permits to alter Ingram Slough, including a CDFG Streambed Alteration Agreement, a Corps Section 404 permit, a Regional Water Quality Control Board Section 401 Permit and a SWPPP and any FESA/CESA take permits, should special-status species be identified.	LS
		LS (Village 7 PP)	**Village 7 Programmatic Portion** 4.8-8(B) None required.	LS
4.8-9	**Development of the Proposed Project could result in habitat fragmentation and wildlife population isolation.**	LS (Lewis)	**Lewis Property** 4.8-9(A) None required.	LS
		LS (Village 7 PP)	**Village 7 Programmatic Portion** 4.8-9(B) None required.	LS
4.8-10	**Construction of the Proposed Project, in combination with other development in the County, could contribute to the cumulative loss of native plant communities, wildlife habitat values, special-status species and their potential habitat, and wetland resources in the region.**	S (Lewis)	**Lewis Property** 4.8-10(A) Implement Mitigation Measures 4.8-1 through 4.8-9. (Lewis Property and Village 7 Programmatic Portion)	SU
		S (Village 7 PP)	**Village 7 Programmatic Portion** 4.8-10(B) Implement Mitigation Measures 4.8-1 through 4.8-9. (Lewis Property and Village 7 Programmatic Portion)	SU

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4.9 Public Utilities			
4.9-1 **The Proposed Project would generate additional wastewater flows to be treated by the WWTRF.**	LS (Lewis)	**Lewis Property** 4.9-1(A) None required.	LS
	S (Village 7 PP)	**Village 7 Programmatic Portion** 4.9-1(B) Prior to approval of the first Final Small Lot Map for the first planning area developed in the Village 7 Programmatic Portion of the Village 7 Specific Plan, the City shall ensure the planned expansion of the WWTRF provides adequate capacity to accommodate flows from the Village 7 Programmatic Portion. The project applicants shall pay fair-share cost of required fees to fund the expansion of the WWTRF.	LS
4.9-2 **The Proposed Project would generate additional wastewater flows, but not at levels that that would exceed the capacity of the existing wastewater collection infrastructure.**	LS (Lewis)	**Lewis Property** 4.9-2(A) None required.	LS
	S (Village 7 PP)	**Village 7 Programmatic Portion** 4.9-2(B) The project applicants for the Village 7 Programmatic Portion shall submit a wastewater infrastructure plan to the City of Lincoln prior to approval of the first Final Small Lot Map for the first planning area developed in the Village 7 Programmatic Portion of the Village 7 Specific Plan. The applicants shall follow mitigation measures or recommendations identified within the plan to ensure wastewater flows would be adequately conveyed to the WWTRF.	LS

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4.9-3	The Proposed Project, combined with other development in the City of Lincoln, could require the expansion or construction of a wastewater treatment facility, which could result in significant environmental effects.	S (Lewis) S (Village 7 PP)	**Lewis Property** 4.9-3(A) None feasible. **Village 7 Programmatic Portion** 4.9-3(B) None feasible.	SU SU
4.9-4	The Proposed Project would generate solid waste that would be disposed of at the Western Regional Sanitary Landfill, but not at levels that would contribute to an exceedance of landfill capacity or substantially shorten landfill life.	LS (Lewis) LS (Village 7 PP)	**Lewis Property** 4.9-4(A) None required. **Village 7 Programmatic Portion** 4.9-4(B) None required.	LS LS
4.9-5	The Proposed Project, in combination with other development in Placer County, would generate additional solid waste, but it would not exceed the capacity of the Western Regional Sanitary Landfill.	LS (Lewis) LS (Village 7 PP)	**Lewis Property** 4.9-5(A) None required. **Village 7 Programmatic Portion** 4.9-5(B) None required.	LS LS
4.9-6	The Proposed Project would use electricity, but it would not exceed the existing or planned electricity supply or transmission facilities.	LS (Lewis) LS (Village 7 PP)	**Lewis Property** 4.9-6(A) None required. **Village 7 Programmatic Portion** 4.9-6(B) None required.	LS LS
4.9-7	The Proposed Project would require natural gas, but it would not exceed the existing or planned natural gas supply or transmission facilities.	LS (Lewis) LS (Village 7 PP)	**Lewis Property** 4.9-7(A) None required. **Village 7 Programmatic Portion** 4.9-7(B) None required.	LS LS

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4.9-8	**The Proposed Project, in combination with other development in the City of Lincoln, would not exceed the electrical or natural gas supply and transmission capabilities.**	LS (Lewis)	**Lewis Property** 4.9-8(A) None required.	LS
		LS (Village 7 PP)	**Village 7 Programmatic Portion** 4.9-8(B) None required.	LS
4.9-9	**The Proposed Project could result in or require the expansion of police facilities in order to maintain acceptable service ratios or response times.**	LS (Lewis)	**Lewis Property** 4.9-9(A) None required.	LS
		LS (Village 7 PP)	**Village 7 Programmatic Portion** 4.9-9(B) None required.	LS
4.9-10	**The Proposed Project, in combination with other development within the City, could result in or require the expansion of facilities in order to maintain acceptable service ratios and response times.**	LS (Lewis)	**Lewis Property** 4.9-10(A) None required.	LS
		LS (Village 7 PP)	**Village 7 Programmatic Portion** 4.9-10(B) None required.	LS
4.9-11	**The Proposed Project could result in the expansion of existing or construction of a new fire station in order to maintain acceptable service ratios or response times.**	LS (Lewis)	**Lewis Property** 4.9-11(A) None required.	LS
		LS (Village 7 PP)	**Village 7 Programmatic Portion** 4.9-11(B) None required.	LS
4.9-12	**The Proposed Project, in combination with other development in the City of Lincoln, could result in or require the expansion of existing or construction of new fire stations to maintain adopted service ratios or response times.**	LS (Lewis)	**Lewis Property** 4.9-12(A) None required.	LS
		LS (Village 7 PP)	**Village 7 Programmatic Portion** 4.9-12(B) None required.	LS

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TABLE 2-1

REVISED SUMMARY OF IMPACTS AND MITIGATION MEASURES (DRAFT EIR TABLE 3-1)

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
4.9-13 The Proposed Project would require school facilities and includes a K-5 school with capacity for 900 students with the Village 7 Specific Plan, which would accommodate project demand. Middle school and high school demand would be met with schools that would be operational before project buildout. Project applicants would be required to provide proportional funding for middle and high school construction in compliance with SB 50.	LS (Lewis) LS (Village 7 PP)	**Lewis Property** 4.9-13(A) None required. **Village 7 Programmatic Portion** 4.9-13(B) None required.	LS LS
4.9-14 The Proposed Project, in combination with other development, would result in the need for additional schools, which could result in the construction of new or physically altered school facilities.	LS (Lewis) LS (Village 7 PP)	**Lewis Property** 4.9-14(A) None required. **Village 7 Programmatic Portion** 4.9-14(B) None required.	LS LS
4.9-15 The Proposed Project would generate a demand for park and recreation facilities, which could require the construction of new or expansion of existing recreational facilities.	LS (Lewis) S (Village 7 PP)	**Lewis Property** 4.9-15(A) None required. **Village 7 Programmatic Portion** 4.9-15(B) The project applicant shall pay all applicable fair-share fees to the City pursuant to the established Public Facilities Element requiring 6 acres of parkland per 1,000 residents for the provision of recreational facilities to meet demands created by the Village 7 Programmatic Portion.	LS LS

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	Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
	TABLE 2-1			
	REVISED SUMMARY OF IMPACTS AND MITIGATION MEASURES (DRAFT EIR TABLE 3-1)			
4.9-16	**The Proposed Project, in combination with other development, could require the construction of new or expansion of existing parks and recreational facilities.**	LS (Lewis)	**Lewis Property** 4.9-16(A) None required.	LS
		LS (Village 7 PP)	**Village 7 Programmatic Portion** 4.9-16(B) None required.	LS
4.9-17	**The Proposed Project would increase the demand on water supplies. Existing and planned water supplies would be sufficient to meet the demands of the Proposed Project in addition to the City of Lincoln's existing and planned future uses, but the existing entitlements are not sufficient.**	S (Lewis)	**Lewis Property** 4.9-17(A) Prior to recordation of a Final Map, the City of Lincoln shall obtain necessary entitlements demonstrating there will be adequate water supply to serve the portion of the Proposed Project defined on the Final Map, in accordance with Government Code Section 66473.7(a)(1) – SB 221 Written Verification of Water Supply. (Lewis Property and Village 7 Programmatic Portion)	LS
		S (Village 7 PP)	**Village 7 Programmatic Portion** 4.9-17(B) Prior to recordation of a Final Map, the City of Lincoln shall obtain necessary entitlements demonstrating there will be adequate water supply to serve the portion of the Proposed Project defined on the Final Map, in accordance with Government Code Section 66473.7(a)(1) – SB 221 Written Verification of Water Supply. (Lewis Property and Village 7 Programmatic Portion)	LS
4.9-18	**The Proposed Project's demand for water would increase the demand on treated water, city-wide water storage and distribution facilities.**	LS (Lewis)	**Lewis Property** 4.9-18(A) None required.	LS
		LS (Village 7 PP)	**Village 7 Programmatic Portion** 4.9-18(B) None required.	LS

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Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
TABLE 2-1 **REVISED SUMMARY OF IMPACTS AND MITIGATION MEASURES (DRAFT EIR TABLE 3-1)**			
4.9-19 **The Proposed Project, in combination with buildout of project's in the City of Lincoln, would increase the demand on PCWA water supplies.**	S (Lewis)	**Lewis Property** 4.9-19(A) Implement Mitigation Measure 4.9-17 (obtain entitlements prior to ~~Tentative Map approval~~ Final Map recordation).	LS
	S (Village 7 PP)	**Village 7 Programmatic Portion** 4.9-19(B) Implement Mitigation Measure 4.9-17 (obtain entitlements prior to ~~Tentative Map approval~~ Final Map recordation).	LS
4.9-20 **The Proposed Project, in combination with buildout in the City of Lincoln, would contribute to increased demands on water distribution infrastructure, the construction or expansion of which could cause significant environmental effects.**	S (Lewis)	**Lewis Property** 4.9-20(A) None feasible.	SU
	S (Village 7 PP)	**Village 7 Programmatic Portion** 4.9-20(B) None feasible.	SU
4.10 Visual Resources			
4.10-1 **Development of the Proposed Project could alter views and scenic quality in the City of Lincoln.**	LS (Lewis)	**Lewis Property** 4.10-1(A) None required.	LS
	LS (Village 7 PP)	**Village 7 Programmatic Portion** 4.10-1(B) None required.	LS
4.10-2 **Development of the Proposed Project would increase glare and lighting in the project vicinity.**	S (Lewis)	**Lewis Property** 4.10-2(A) All light standards shall be shielded and directed such that adjacent properties are not illuminated.	LS
	S (Village 7 PP)	**Village 7 Programmatic Portion** 4.10-2(B) All light standards shall be shielded and directed such that adjacent properties are not illuminated.	LS

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4.10-3 **Development of the Proposed Project, in combination with other cumulative development, would alter existing views and the visual character of the City of Lincoln.**	SU (Lewis)	**Lewis Property** 4.10-3(A) None feasible.	SU
	SU (Village 7PP)	**Village 7 Programmatic Portion** 4.10-3(B) None feasible.	SU
4.10-4 **Implementation of the Proposed Project would contribute to increased lighting in the region.**	SU (Lewis)	**Lewis Property** 4.10-4(A) None feasible.	SU
	SU (Village 7 PP)	**Village 7 Programmatic Portion** 4.10-4(B) None feasible.	SU
4.11 Climate Change			
4.11-1 **Development of the proposed project could potentially result in a cumulatively considerable incremental contribution to the significant cumulative impact of global climate change.**	SU (Lewis)	**Lewis Property** ~~and Village 7 Programmatic Portion~~ *(Village 7 Programmatic Portion now separate)* 4.11-1(A) a) ~~At the time of application for design review for a project of more than 10 units or a commercial development of over 50,000 square feet, the City shall require the project applicant to submit an Energy Conservation Plan.~~ An Energy Conservation Plan for all commercial and residential development shall be required prior to recordation of the first small lot Final Map. The plan shall describe the techniques and programs to be employed in the development of the project to achieve ~~energy conservation~~ (1) a minimum 15 percent energy efficiency above that required by the 2008 Title 24 energy efficiency regulations, or (2) compliance with the then-current Title 24 energy efficiency regulations. These programs shall include~~, but shall not be limited to,~~ either:	SU

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Impact	**Level of Significance Prior to Mitigation**	**Mitigation Measure(s)**	**Level of Significance After Mitigation**
		(i) Participation in the PG&E Energy Star Performance Method. This method is available to builders of single-family <u>and multi-family</u> homes that are at least 15 percent more energy efficient than required by the ~~2005~~ <u>2008</u> Title 24 ~~Energy Code~~ <u>energy efficiency regulations</u> and meet all US EPA specifications. Participating builders become part of the California Energy Star New Homes Program, and their homes earn the Energy Star label. Incremental incentives can also be earned by adding energy efficient appliances and/or lighting to homes. OR (ii) Participation in the New Solar Homes Partnership (NSHP) Performance Method. This method is available to builders of single-family <u>and multi-family</u> homes that are at least 15 percent more efficient than required by the ~~2005~~ <u>2008</u> Title 24 ~~Energy Code~~ <u>energy efficiency regulations</u> and meet all US EPA specifications. ~~A second tier of participation is available to single family homes that exceed Title 24 by 35 percent, demonstrate a 40 percent reduction in cooling load, and include solar generation as an option for buyers. Both tiers require that all appliances provided by the builder must be Energy Star qualified. Builders may also qualify for additional solar incentives through the CEC's NSHP.~~ OR (iii) Participation in the Build It Green Program, which was created by Build It Green, a non-profit organization whose mission is to promote health, durable energy and resource efficient buildings throughout California. Using the Green Point	

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Impact	**Level of Significance Prior to Mitigation**	**Mitigation Measure(s)**	**Level of Significance After Mitigation**
		Checklist, a home can be considered green if it fulfills the prerequisites and earns at least 50 points and meets the minimum points per category: Energy (30 points); Indoor Air Quality (5 points); Resources (6 points); and Water (9 points). Build It Green uses certified Green Point Raters to measure success with the program and verification of the measures employed to meet the requirements of the checklist. b) The project applicant shall be responsible for having prepared, by an experienced and qualified firm, an Energy Resource Conservation Guide that will provide educational information on how homeowners can increase energy efficiency and conservation in their new homes. The information will be delivered to each original homeowner as part of the move-in package. The information packet shall be reviewed by, and be subject to approval of, City of Lincoln staff. ~~The City and the project applicant shall work together to publish and distribute an Energy Resource Conservation Guide describing measures individuals can take to increase energy efficiency and conservation prior to the occupation of the first residential unit. The applicant shall be responsible for funding the preparation of the Guide. The City will be responsible for the distribution of the guide. The Energy Resource Conservation Guide shall be updated every 5 years and distributed at the public permit counter.~~	

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Impact	**Level of Significance Prior to Mitigation**	**Mitigation Measure(s)**	**Level of Significance After Mitigation**
		c) <u>Installation of Light Emitting Diode (LED) traffic signals and LED street lights shall be required at the Lewis Property and be constructed in accordance with City improvement standards or as otherwise approved by the Development Services Director.</u> ~~The project applicant shall pay for an initial installment of Light Emitting Diode (LED) traffic lights in all Specific Plan area traffic lights.~~ d) <u>The project applicant shall ensure that a tree planting program at the Lewis Property, approved by the City of Lincoln staff, provides the following:</u> <u>**Streets:**</u> <u>Residential collector streets:</u> <u>1 tree per 35 linear ft</u> <u>Primary residential street:</u> <u>1 tree per 35 linear ft</u> <u>Major and minor paseos:</u> <u>1 tree per 25 ft.</u> <u>Ferrari Ranch Road:</u> <u>551 trees within the Lewis Property boundaries</u> <u>Moore Road:</u> <u>928 trees within the Lewis Property boundaries</u> <u>Central Blvd:</u> <u>1,471 trees within the Lewis Property boundaries</u> <u>**Residential Units:**</u> <u>LDR units:</u> <u>1 front yard tree</u> <u>Village Country Estate (VCE) units:</u> <u>2 front yard trees</u>	

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		MDR units: 1 front yard tree. Some MDR units may not have front yards; however, where the front of an MDR lot is on a paseo, trees will be spaced 25 ft on center along the paseo. The exact number of trees to be planted in MDR developments will be determined during the City's design review process by the City and project applicant with the goal of having one front yard or back yard tree for each residential unit.	
		HDR units: Average of 40 trees per acre	
		Open Space Areas:	
		Mini parks 27 trees per acre	
		Community parks 27 trees per acre	
		Neighborhood parks 27 trees per acre	
		School & VMU:	
		VMU: 10 trees per acre	
		School: 15 trees per acre	
		Commercial: Sufficient trees to provide 50% tree shading within 15 years in commercial and retail parking lots, consistent with General Plan policy OSC-3.10.	

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		NOTE: The number of trees specified above is an approximate number and will be subject to adjustment for physical constraints resulting from the actual location of physical improvements (both above ground and underground) and public safety considerations, such as the need to preserve vehicle operator sight distances at all roadway intersections. ~~The project applicant shall ensure the tree planting program provides 50% tree shading within 15 years in commercial and retail lots to reduce radiation and encourage the reduction of greenhouse gases, consistent with General Plan policy OSC 3.10.~~ e) Pursuant to the City's new 2050 General Plan, and specifically under the Energy Resources section, Goal OSC-3, "Encourage energy conservation in new and existing developments throughout the City," to address Policy OSC 3.9, "Shade Tree Planting," the project applicant shall be responsible for having prepared, by an experienced and qualified firm, or by an organization such as the Sacramento Tree Foundation, a tree information planting and care guide. The planting and care guide will be delivered to each original homeowner as a part of the move in package. The planting and care guide shall be reviewed by, and be subject to the approval of, City of Lincoln staff. ~~The applicant shall develop a tree planting packet for distribution in the Village 7 Specific Plan to help future residents understand their options for planting trees that can absorb carbon dioxide, consistent with General Plan policy HS 3.21.~~	

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Impact	**Level of Significance Prior to Mitigation**	**Mitigation Measure(s)**	**Level of Significance After Mitigation**
		f) The City shall require that energy efficient lighting fixtures, including fluorescent light be ~~used in~~ <u>installed as part of the original construction of</u> residential and commercial structures within the plan area. g) <u>The City shall require light-colored roofing materials with a solar reflective value and thermal emittance value of 0.25 or better on all residential and commercial buildings.</u> ~~The project applicant shall include light-colored roofing materials and road materials to address "urban heat island" effect.~~ h) <u>Pursuant to the City's new 2050 General Plan, and specifically under the Energy Resources section, Goal OSC-3, "Encourage energy conservation in new and existing developments throughout the City," the City shall be responsible pursuant to Policy OSC 3.14, "Early Planning for Energy Efficiency," for developing a program whereby energy planners and energy efficiency specialists will be included in pre-application discussions with a developer or builder to help identify the potential for inclusion of solar orientation and other energy efficient systems into the land plan and building practices.</u> ~~The City shall ensure recommendations from energy planners and energy efficiency specialists in the building permit review process are incorporated to ensure building and site design takes into account solar orientation, energy-efficient systems, building practices, and materials, consistent with General Plan policies OSC-3.8 and OSC-3.14.~~ i) Implement all mitigation measures identified in Section 4.4, Air Quality.	

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	SU (Village 7 PP)	j) Implement Mitigation Measure 4.7-4 (Urban Stormwater Pollutants) in Section 4.7, Hydrology and Water Quality. k) New commercial buildings (except schools) shall be 15 percent more energy efficient than the 2008 Title 24 building standards based on annual energy usage. l) The roadway system shall be designed to accommodate the usage of neighborhood electric vehicles (NEVs). m) Provide bus turnouts and transit shelters on roadways that are to be served by bus transit in the future in accordance with City improvement standards and as otherwise directed by City's Development Services Director. n) Water used during construction shall be reclaimed water. **Village 7 Programmatic Portion** 4.11-1(B) a) ~~At the time of application for design review for a project of more than 10 units or a commercial development of over 50,000 square feet, the City shall require the project applicant to submit an Energy Conservation Plan.~~ An Energy Conservation Plan for all residential development shall be required prior to recordation of the first small lot Final Map. The plan shall describe the techniques and programs to be employed in the development of the project to achieve ~~energy conservation~~ (1) a minimum 15 percent energy efficiency above that required by the 2008 Title 24 energy efficiency regulations, or (2) compliance with the then-current Title 24 energy efficiency regulations. These programs shall include, but shall not be limited to, either:	SU

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		(i) Participation in the PG&E Energy Star Performance Method. This method is available to builders of single-family homes that are at least 15 percent more energy efficient than required by the ~~2005~~ 2008 Title 24 ~~Energy Code~~ <u>energy efficiency regulations</u> and meet all US EPA specifications. Participating builders become part of the California Energy Star New Homes Program, and their homes earn the Energy Star label. Incremental incentives can also be earned by adding energy efficient appliances and/or lighting to homes. OR (ii) Participation in the New Solar Homes Partnership (NSHP) Performance Method. This method is available to builders of single-family homes that are at least 15 percent more efficient than required by the ~~2005~~ <u>2008</u> Title 24 ~~Energy Code~~ <u>energy efficiency regulations</u> and meet all US EPA specifications. ~~A second tier of participation is available to single-family homes that exceed Title 24 by 35 percent, demonstrate a 40 percent reduction in cooling load, and include solar generation as an option for buyers. Both tiers require that all appliances provided by the builder must be Energy Star qualified. Builders may also qualify for additional solar incentives through the CEC's NSHP.~~ OR (iii) <u>Participation in the Build It Green Program, which was created by Build It Green, a non-profit organization whose mission is to promote health, durable energy and resource efficient buildings throughout California. Using the Green Point Checklist, a home can be considered green if it fulfills</u>	

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		the prerequisites and earns at least 50 points and meets the minimum points per category: Energy (30 points); Indoor Air Quality (5 points); Resources (6 points); and Water (9 points). Build It Green uses certified Green Point Raters to measure success with the program and verification of the measures employed to meet the requirements of the checklist.	
		b) The ~~City and the~~ project applicant shall <u>be responsible for having prepared, by an experienced and qualified firm,</u> ~~work together to publish and distribute~~ an Energy Resource Conservation Guide <u>that will provide educational information on how homeowners can increase energy efficiency and conservation in their new homes. The information will be delivered to each original homeowner as part of the move-in package. The information packet shall be reviewed by, and be subject to approval of, City of Lincoln staff.</u> ~~describing measures individuals can take to increase energy efficiency and conservation prior to the occupation of the first residential unit. The applicant shall be responsible for funding the preparation of the Guide. The City will be responsible for the distribution of the guide. The Energy Resource Conservation Guide shall be updated every 5 years and distributed at the public permit counter.~~	
		c) <u>Installation of Light Emitting Diode (LED) traffic signals and LED street lights shall be required at the Village 7 Programmatic Portion and be constructed in accordance with City improvement standards or as otherwise approved by the Development Services Director.</u> ~~The project applicant shall pay for an initial installment of Light Emitting Diode (LED) traffic lights in all Specific Plan area traffic lights.~~	

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		d) The project applicants for projects within the Village 7 Programmatic Portion of the Specific Plan shall ensure that a tree planting program, approved by the City of Lincoln staff, provides the following: **Streets:** Residential collector streets: 1 tree per 35 linear ft Primary residential street: 1 tree per 35 linear ft Major and minor paseos: 1 tree per 25 ft **Residential Units:** LDR units: 1 front yard tree MDR units: 1 front yard tree. Some MDR units may not have front yards; however, where the front of an MDR lot is on a paseo, trees will be spaced 25 ft on center along the paseo. The exact number of trees to be planted in MDR developments will be determined during the City's design review process by the City and project applicant(s) with the goal of having one front yard or back yard tree for each residential unit. **Open Space Areas:** Mini parks 27 trees per acre Community parks 27 trees per acre Neighborhood parks 27 trees per acre	

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		NOTE: The number of trees specified above is an approximate number and will be subject to adjustment for physical constraints resulting from the actual location of physical improvements (both above ground and underground) and public safety considerations, such as the need to preserve vehicle operator sight distances at all roadway intersections. ~~The project applicant shall ensure the tree planting program provides 50% tree shading within 15 years in commercial and retail lots to reduce radiation and encourage the reduction of greenhouse gases, consistent with General Plan policy OSC 3.10.~~ e) Pursuant to the City's new 2050 General Plan, and specifically under the Energy Resources section, Goal OSC-3, "Encourage energy conservation in new and existing developments throughout the City," to address Policy OSC 3.9, "Shade Tree Planting," the project applicant shall be responsible for having prepared, by an experienced and qualified firm, or by an organization such as the Sacramento Tree Foundation, a tree information planting and care guide. The planting and care guide will be delivered to each original homeowner as a part of the move in package. The planting and care guide shall be reviewed by, and be subject to the approval of, City of Lincoln staff. ~~The applicant shall develop a tree planting packet for distribution in the Village 7 Specific Plan to help future residents understand their options for planting trees that can absorb carbon dioxide, consistent with General Plan policy HS 3.21.~~	

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		f) The City shall require that energy efficient lighting fixtures, including fluorescent lights, be ~~used in~~ installed as part of the original construction of residential ~~and commercial~~ structures within the plan area. g) The City shall require light-colored roofing materials with a solar reflective value and thermal emittance value of 0.25 or better on all residential buildings. ~~The project applicant shall include light-colored roofing materials and road materials to address "urban heat island" effect.~~ h) Pursuant to the City's new 2050 General Plan, and specifically under the Energy Resources section, Goal OSC-3, "Encourage energy conservation in new and existing developments throughout the City," the City shall be responsible pursuant to Policy OSC 3.14, "Early Planning for Energy Efficiency," for developing a program whereby energy planners and energy efficiency specialists will be included in pre-application discussions with a developer or builder to help identify the potential for inclusion of solar orientation and other energy efficient systems into the land plan and building practices. ~~The City shall ensure recommendations from energy planners and energy efficiency specialists in the building permit review process are incorporated to ensure building and site design takes into account solar orientation, energy-efficient systems, building practices, and materials, consistent with General Plan policies OSC 3.8 and OSC 3.14.~~	

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		i) Implement all mitigation measures identified in Section 4.4, Air Quality.	
		j) Implement Mitigation Measure 4.7-4 (Urban Stormwater Pollutants) in Section 4.7, Hydrology and Water Quality.	
		k) <u>The roadway system shall be designed to accommodate the usage of neighborhood electric vehicles (NEVs).</u>	
		l) <u>Provide bus turnouts and transit shelters on roadways that are to be served by bus transit in the future in accordance with City improvement standards and as otherwise directed by City's Development Services Director.</u>	
		m) <u>Water used during construction shall be reclaimed water.</u>	
4.11-2 The potential cumulative environmental effects of global climate change on water supply, including the Proposed Project's incremental contribution to GHG emissions that affect climate change, would not have a substantial adverse effect on the Proposed Project.	LS	4.11-2 None required	LS
		Initial Study Mitigation Measures	
Building height in air safety zone	PS	<u>Hazards and Hazardous Materials Mitigation Measure 1</u> The project developer shall request an airspace review for any building over 150 feet tall.	LS

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	REVISED SUMMARY OF IMPACTS AND MITIGATION MEASURES (DRAFT EIR TABLE 3-1)		
Impact	**Level of Significance Prior to Mitigation**	**Mitigation Measure(s)**	**Level of Significance After Mitigation**
Historical/archaeological resources	PS	Cultural Resources Mitigation Measure 2 The project proponent shall provide proof to the City that no structures on-site are over 50 years old. If structures on-site are discovered to be 50 years old or older, or the age cannot be determined, a qualified professional shall be hired by the project proponent to evaluate the structures for historical significance and provide mitigation measures, if needed. Compliance with mitigation measures shall be demonstrated to the City prior to construction activities. All reports shall be filed with the appropriate CHRIS Information Center.	LS
	PS	Cultural Resources Mitigation Measure 3 a) In the event any historic surface or subsurface archaeological features or deposits, including locally darkened soil ("midden"), that could conceal cultural deposits, animal bone, shell, obsidian, mortars, or human remains, are uncovered during construction, work within 100 feet of the find shall cease and a qualified archaeologist shall be contacted to determine if the resource is significant. If the find is determined to be of significance, resources (such as grinding stones and mano fragments) shall be donated to an appropriate cultural center. b) When Native American archaeological, ethnographic, or spiritual resources are involved, all identification and treatment shall be conducted by qualified archaeologists who are either certified by the Society of Professional Archaeologists (SOPA) or meet the federal standards as stated in the Code of Federal Regulations (36 C.F.R. 61), and Native American representatives who are approved by the local Native American community as scholars of their cultural traditions.	LS

LS = Less than Significant   S = Significant   STSU = Short-term Significant and Unavoidable   PS = Potentially Significant
SU = Significant and Unavoidable   STS = Short-term Significant   PSU = Potentially Significant and Unavoidable   NI = No Impact

		TABLE 2-1	
		REVISED SUMMARY OF IMPACTS AND MITIGATION MEASURES (DRAFT EIR TABLE 3-1)	
Impact	**Level of Significance Prior to Mitigation**	**Mitigation Measure(s)**	**Level of Significance After Mitigation**
		c) In the event that no such Native American is available, persons who represent tribal governments and/or organizations in the locale in which resources could be affected shall be consulted. When historic archaeological sites or historic architectural features are involved, all identification and treatment is to be carried out by historical archaeologists or architectural historians. These individuals shall meet either SOPA or 36 C.F.R. 61 requirements. d) If human bone or bone of unknown origin is found during construction, all work shall stop in the vicinity of the find and the County Coroner shall be contacted immediately. If the remains are determined to be Native American, the Coroner shall notify the Native American Heritage Commission who shall notify the person it believes to be the most likely descendent. The most likely descendent shall work with the contractor to develop a program for reinterment of the human remains and any associated artifacts. No additional work is to take place within the immediate vicinity of the find until the identified appropriate actions have been carried out.	
	PS	Cultural Resources Mitigation Measure 4 Should any evidence of paleontological resources (e.g., fossils) be encountered during grading or excavation either onsite or offsite as a result of a project improvement, work shall be suspended within 100 feet of the find, and the City of Lincoln shall be immediately notified. At that time, the City shall coordinate any necessary investigation of the site with a qualified paleontologist as needed to assess the resource and provide proper management recommendations. Possible management recommendations for important resources could include resource avoidance or data recovery excavations. The contractor shall implement any measures deemed necessary by the City for the protection of the paleontological resources.	LS

LS = Less than Significant   S = Significant   STSU = Short-term Significant and Unavoidable   PS = Potentially Significant
SU = Significant and Unavoidable   STS = Short-term Significant   PSU = Potentially Significant and Unavoidable   NI = No Impact

3. LIST OF AGENCIES/PERSONS COMMENTING

3.0 LIST OF AGENCIES/PERSONS COMMENTING

FEDERAL

There were no comments received from federal agencies by the close of the comment review period (July 27, 2009).

STATE

1. Terry Roberts, State Clearinghouse, Governor's Office of Planning and Research (July 28, 2009)

2. Sandy Hesnard, California Department of transportation, Division of Aeronautics (July 13, 2009)

3. Tim Miles, California Department of Toxic Substances Control (July 17, 2009)

4. Katy Sanchez, Native American Heritage Commission (June 22, 2009)

5. Terry Roberts, State Clearinghouse, Governor's Office of Planning and Research (August 3, 2009)

6. Dan Otis, California Department of Conservation, Division of Land Resource Protection (July 31, 2009)

7. William A. Davis, California Department of Transportation, District 3, Office of Transportation Planning – East (July 27, 2009)

COUNTY/REGIONAL AGENCIES

8. Michael J. Johnson, County of Placer Community Development/Resource Agency (July 27, 2009)

9. Angel Rinker, Placer County Air Pollution Control District (July 27, 2009)

10. Brian C. Martin, Placer County Water Agency (June 27, 2009)

11. Cathy Allen, Western Placer Unified School District (July 24, 2009)

12. Chris Hanson, Western Placer Waste Management Authority (July 27, 2009)

13. Greg Baker, United Auburn Indian Community of the Auburn Rancheria (July 15, 2009)

ORGANIZATIONS

14. Marilyn Jasper, Sierra Club – Placer Group (July 27, 2009)

15. Richard Daino, Lincoln Crossing Homeowners Association and Board of Directors July 27, 2009)

INDIVIDUALS

16. Ray and Darla Campbell, Lincoln (July 27, 2009)

17. Paul Denzler et al., Lincoln (July 22, 2009)

18. John Fett, Lincoln (July 26, 2009)

19. Arnold Victor, Lincoln (July 24, 2009)

20. John Williams, Lincoln (July 22, 2009)

4. COMMENTS AND RESPONSES

STATE OF CALIFORNIA

GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

STATE CLEARINGHOUSE AND PLANNING UNIT

ARNOLD SCHWARZENEGGER
GOVERNOR

CYNTHIA BRYANT
DIRECTOR

July 28, 2009

RECEIVED

JUL 31 2009

Rod Campbell
City of Lincoln
600 Sixth Street
Lincoln, CA 95648

CITY OF LINCOLN
COM'Y DEV DEPT

Subject: Village 7 Specific Plan Project
SCH#: 2005062001

Dear Rod Campbell:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on July 27, 2009, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

"A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

1-1

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

Terry Roberts
Director, State Clearinghouse

Enclosures
cc: Resources Agency

Document Details Report
State Clearinghouse Data Base

SCH#	2005062001
Project Title	Village 7 Specific Plan Project
Lead Agency	Lincoln, City of

Type	EIR	Draft EIR
Description	NOTE: Review Per Lead	

The proposed project is the construction and occupancy of a 703 acre planned "Village" community with 3,285 units consisting of a mix of low-, medium- and high-density residential dwellings. The project would also include neighborhood serving commercial/retail, community center, extensive open space and parks, and an elementary school. The proposed circulation system would include interior roads, and bicycle path and trail systems. Main access to the site would be from a western extension of Ferrari Ranch Road through the site and connecting to Moore Road on the west. Water and sewer services would be provided by the City of Lincoln via extensions from existing infrastructure.

Lead Agency Contact

Name	Rod Campbell		
Agency	City of Lincoln		
Phone	(916) 645-3320	*Fax*	
email			
Address	600 Sixth Street		
City	Lincoln	*State* CA	*Zip* 95648

Project Location

County	Placer				
City	Lincoln				
Region					
Lat / Long	38° 51' 45" N / 121° 19' 30" W				
Cross Streets	Ferrari Ranch Rd/Moore Road				
Parcel No.	multiple				
Township	12N	*Range* 6E	*Section* 20,28,	*Base* MDB&M	

Proximity to:

Highways	SR 65
Airports	Lincoln Regional
Railways	UPRR
Waterways	Auburn Ravine, Ingram Slough, Orchard Creek
Schools	
Land Use	LU: undeveloped, residences, grazing
	Zoning: Farm Building Site 80 acre
	GP: Agricultural, 80 acre minimum, Village 7

Project Issues   Aesthetic/Visual; Agricultural Land; Air Quality; Biological Resources; Cumulative Effects; Drainage/Absorption; Flood Plain/Flooding; Growth Inducing; Landuse; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Schools/Universities; Sewer Capacity; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wildlife; Wetland/Riparian

---

Reviewing Agencies   Resources Agency; Department of Conservation; Department of Fish and Game, Region 2; Office of Historic Preservation; Department of Parks and Recreation; Central Valley Flood Protection Board; Department of Water Resources; Caltrans, Division of Aeronautics; Caltrans, District 2; Caltrans, Division of Transportation Planning; Department of Health Services; Regional Water Quality Control Bd., Region 5 (Sacramento); Department of Toxic Substances Control; Native American Heritage Commission

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Note: Blanks in data fields result from insufficient information provided by lead agency.

Date Received 06/10/2009   *Start of Review* 06/10/2009   *End of Review* 07/27/2009

COMMENT LETTER 1:   **TERRY ROBERTS, GOVERNOR'S OFFICE OF PLANNING AND RESEARCH, STATE CLEARINGHOUSE, JULY 28, 2009**

Response to Comment 1-1

The State Clearinghouse (SCH) stated that the City of Lincoln has complied with the review requirements for draft environmental documents pursuant to CEQA. The SCH received comments from three state agencies prior to the close of the review period that ended July 27, 2009: California Department of Transportation (Caltrans) Division of Aeronautics, California Department of Toxic Substances Control (DTSC), and the Native American Heritage Commission (NAHC).

A response to the Caltrans Division of Aeronautics letter is provided in Response to Comment 2-1.

A response to the DTSC letter is provided in Response to Comment 3-1.

A response to the NAHC letter is provided in Response to Comment 4-1.

Letter 2

DEPARTMENT OF TRANSPORTATION
DIVISION OF AERONAUTICS – M.S.#40
1120 N STREET
P. O. BOX 942874
SACRAMENTO, CA 94274-0001
PHONE (916) 654-4959
FAX (916) 653-9531
TTY 711

Flex your power!
Be energy efficient!
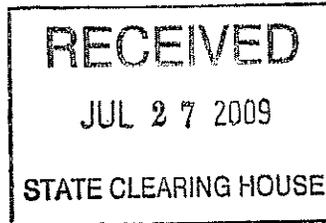
July 13, 2009

Rod Campbell
City of Lincoln
600 Sixth Street
Lincoln, CA 95648

RECEIVED
JUL 2 7 2009
STATE CLEARING HOUSE

Clear
7-27-09
C

Dear Mr. Campbell:

City of Lincoln's Draft Environmental Impact Report for the Village 7 Specific Plan Project; SCH# 2005062001

The California Department of Transportation (Caltrans), Division of Aeronautics (Division), reviewed the above-referenced document with respect to airport-related noise and safety impacts and regional aviation land use planning issues pursuant to the California Environmental Quality Act (CEQA). The Division has technical expertise in the areas of airport operations safety, noise, and airport land use compatibility. We are a funding agency for airport projects and we have permit authority for public-use and special-use airports and heliports.

The proposal is for a 703-acre planned village community that will include 3,285 residential units.

The project site is located approximately two miles southeast of the Lincoln Regional Airport. Due to its proximity to the airport, the project site may be subject to aircraft overflights and subsequent aircraft-related noise and safety impacts.

In the Draft Environmental Impact Report, Mitigation Measure 4.1-2(A) c) states "Notify home buyers within C1 Zone regarding noise and safety issues as required by the ALUCP." Additionally, in accordance with Business and Professions Code Section 11010 and Civil Code Sections 1102.6, 1103.4, and 1353, available on-line at http://www.leginfo.ca.gov/calaw.html, any person who intends to offer subdivided lands, common interest developments and residential properties for sale or lease within an airport influence area is required to disclose that fact to the person buying the property. Therefore, disclosure should also apply to residential development within the airport's "D Zone" as shown in Figures 4.1-1 and 4.1-3.

2-1

These comments reflect the areas of concern to the Division of Aeronautics with respect to airport-related noise, safety, and regional land use planning issues. We advise you to contact our District 3 office concerning surface transportation issues.

Thank you for the opportunity to review and comment on this proposal. If you have any questions, please call me at (916) 654-5314 or by email at sandy.hesnard@dot.ca.gov.

Sincerely,

Original Signed by

SANDY HESNARD
Aviation Environmental Specialist

c: State Clearinghouse, Placer County ALUC, Lincoln Regional Airport

COMMENT LETTER 2:   **SANDY HESNARD, CALIFORNIA DEPARTMENT OF TRANSPORTATION, DIVISION OF AERONAUTICS, JULY 13, 2009**

Response to Comment 2-1

Figure 4.1-3 in Section 4.1, Land Use, in the Draft EIR illustrates the location of the "C1" and "D" airport land use compatibility zones at the project site. Page 4.1-10 in the Draft EIR explains that Zone C1 requires that noise and safety issues associated with overflights be disclosed to homebuyers of parcels within the zone. Impact 4.1-2 on page 4.1-22 in the Draft EIR evaluates land use compatibility impacts related to the zones and identifies mitigation (Mitigation Measure 4.1-2(A)(c)) to address potential noise and safety issues associated with aircraft overflights.

The comment noted that California law requires the disclosure of whether property being offered for sale or lease is within an airport influence area to potential buyers or renters. The City of Lincoln concurs that such a disclosure should be made for all residential properties in the"C1" Zone and in the "D" Zone shown on Figure 4.1-3 in the Draft EIR. The developer of the Lewis Property in the Village 7 project area has agreed that it will make and record a disclosure concerning all residential properties within either the "C1" Zone or "D" Zone.

Mitigation Measures 4.1-2(A) and (B) have been revised, as follows, to incorporate the required disclosure notice for both C1 and D zones:

4.1-2(A)c)   *Record disclosures concerning all residential properties* ~~Notify home buyers~~ *within the C1 Zone and D Zone regarding noise and safety issues as required by Placer County ALUCP and California Business and Professions Code section 11010 and California Civil Code sections 1102.6, 1103.4, and 1353*.

4.1-2(B)c)   *Record disclosures concerning all residential properties* ~~Notify home buyers~~ *within the C1 Zone and D Zone regarding noise and safety issues as required by Placer County ALUCP and California Business and Professions Code section 11010 and California Civil Code sections 1102.6, 1103.4, and 1353*.

Department of Toxic Substances Control
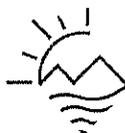
Linda S. Adams
Secretary for
Environmental Protection

Maziar Movassaghi
Acting Director
8800 Cal Center Drive
Sacramento, California 95826-3200

Arnold Schwarzenegger
Governor

July 16, 2009

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STATE CLEARING HOUSE

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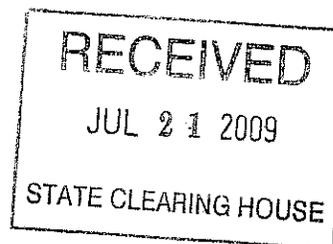
Mr. Rod Campbell
City of Lincoln
600 Sixth Street
Lincoln, California 95648

DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE VILLAGE 7 SPECIFIC PLAN
PROJECT (SCH # 2005062001)

Dear Mr. Campbell:

The Department of Toxic Substances Control (DTSC) has reviewed the document
described above that proposes converting agricultural property to residential and
building residential housing on the land. The report also discusses the findings of the
Phase I Environmental Site Assessment which discusses the possibility of residual
pesticide contamination. The report appears to conclude that because no visual
evidence of contamination was present during the site visit and because the properties
were not listed in government databases, that no further evaluation is necessary unless
visual contamination is discovered during construction. Based upon experience with
agricultural sites, DTSC has determined that Phase I Environmental Site Assessments
and visual inspections are often not adequate, by themselves, to determine whether
residual pesticides pose a risk to workers or future residents. DTSC recommends that
additional research be conducted to determine whether pesticides were used on the
proposed development site. The site should be evaluated to determine if and where
storage, mixing, rinsing and disposal of pesticides may have occurred and whether
contamination exists.

3-1

In addition, although DTSC does not regulate pesticides legally applied to crops or
livestock, if pesticides have historically been used on the property, we strongly
recommend that these areas be tested for environmentally persistent pesticides such
as organic pesticides and metals prior to development. The results of any testing
should be evaluated to determine if concentrations present in soils will be protective of
residents and workers.

Mr. Rod Campbell
July 16, 2009
Page 2

If you have any questions, please contact me by email at *tmiles@dtsc.ca.gov* or by telephone at (916) 255-3710.

Sincerely,

Tim Miles

Tim Miles
Hazardous Substances Scientist
Brownfields and Environmental Restoration Program

cc: State Clearinghouse
       Office of Planning and Research
       1400 10th Street, Room 121
       Sacramento, California 95814-0613

       Mr. West Bourgault, P.G. (by Email)
       Placer County Environmental Health
       3091 County Center Drive, Suite 180
       Auburn, CA 95603-2614

       Ms. Nancy Ritter (by Email)
       Planning & Environmental Analysis Section (PEAS)
       CEQA Tracking Center
       Department of Toxic Substances Control
       1001 I Street
       P.O. Box 806
       Sacramento, California 95812-0806

COMMENT LETTER 3:   **TIM MILES, CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL, JULY 16, 2009**

Response to Comment 3-1

A Phase 1 Environmental Site Assessment (ESA) was prepared for the site in 2001, which is referenced in the Draft EIR, and the results of which are summarized on pages 4.6-2 through 4.6-4. The Phase 1 ESA report preparers concluded there was no evidence of potential environmental conditions that would indicate the need for any subsequent analysis. As stated on page 4.6-3 in the Draft EIR, the site has been used for cultivation of grain crops and grazing since as early as 1910.

However, in response to the comment, a supplemental review of additional aerial photographs from 1952 to 2002 was completed. The photographs show no indication of irrigated row crops or orchards on the project site. As such, pesticide/herbicide applications typically associated with vegetable and fruit/nut crops are not expected to have occurred on the property. No outbuildings or structures suspected of being mixing areas for pesticides or herbicides were present. An individual with site knowledge who was interviewed during preparation of the Phase 1 ESA was contacted, and he reconfirmed the site had only been used for pastureland and field crops and that he was unaware of any pesticide use.[1] Therefore, additional testing does not appear warranted at this time.

The Draft EIR (Impact 4.6-2 on page 4.6-15) does identify the potential for previously unknown conditions involving soil contamination to be encountered during construction, and Mitigation Measure 4.6-2 was recommended to mitigate that impact. Implementation of that mitigation measure would require evidence of contamination to be investigated, which would include soil testing if it were determined appropriate by the environmental professional examining the discovery.

---

1   GeoTrans, "Response to EIR Comments Pertaining to 2001 Phase 1 EA," letter from Tim Costello to Phil Rodriguez, Lewis Planned Communities, September 10, 2009.

Letter 4

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-4082
(916) 657-5390 - Fax

June 22, 2009

Clear
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RECEIVED
JUN 2 4 2009
STATE CLEARING HOUSE

Rod Campbell
City of Lincoln
600 Sixth Street
Lincoln, CA 95648

RE: SCH# 2005062001 Village 7 Specific Plan Project: Placer County.

Dear Mr. Campbell:

    The Native American Heritage Commission has reviewed the Notice of Completion (NOC) regarding the above referenced project. The California Environmental Quality Act (CEQA) states that any project that causes a substantial adverse change in the significance of an historical resource, which includes archeological resources, is a significant effect requiring the preparation of an EIR (CEQA guidelines 15064(b)). To adequately comply with this provision and mitigate project-related impacts on archaeological resources, the Commission recommends the following actions be required:

✓ Contact the appropriate Information Center for a record search to determine:
   ▪ If a part or all of the area of project effect (APE) has been previously surveyed for cultural resources.
   ▪ If any known cultural resources have already been recorded on or adjacent to the APE.
   ▪ If the probability is low, moderate, or high that cultural resources are located in the APE.
   ▪ If a survey is required to determine whether previously unrecorded cultural resources are present.
✓ If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
   ▪ The final report containing site forms, site significance, and mitigation measurers should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure.
   ▪ The final written report should be submitted within 3 months after work has been completed to the appropriate regional archaeological Information Center.
✓ Contact the Native American Heritage Commission for:
   ▪ A Sacred Lands File Check. **Sacred Lands File check completed, no sites indicated**
   ▪ A list of appropriate Native American Contacts for consultation concerning the project site and to assist in the mitigation measures. **Native American Contacts List attached**
✓ Lack of surface evidence of archeological resources does not preclude their subsurface existence.
   ▪ Lead agencies should include in their mitigation plan provisions for the identification and evaluation of accidentally discovered archeological resources, per California Environmental Quality Act (CEQA) §15064.5(f). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American, with knowledge in cultural resources, should monitor all ground-disturbing activities.
   ▪ Lead agencies should include in their mitigation plan provisions for the disposition of recovered artifacts, in consultation with culturally affiliated Native Americans.
   ▪ Lead agencies should include provisions for discovery of Native American human remains in their mitigation plan. Health and Safety Code §7050.5, CEQA §15064.5(e), and Public Resources Code §5097.98 mandates the process to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery.

4-1

Sincerely,

Katy Sanchez

Katy Sanchez
Program Analyst
(916) 653-4040

CC: State Clearinghouse

Native American Contact
Placer County
June 22, 2009

Rose Enos
15310 Bancroft Road   Maidu
Auburn   , CA 95603   Washoe
(530) 878-2378

United Auburn Indian Community of the Auburn Rancheria
Jessica Tavares, Chairperson
10720 Indian Hill Road   Maidu
Auburn   , CA 95603   Miwok
530-883-2390
530-883-2380 - Fax

Todd Valley Miwok-Maidu Cultural Foundation
Christopher Suehead, Cultural Representative
PO Box 1490   Miwok
Foresthill   , CA 95631   Maidu
tvmmcf@foothill.net

United Auburn Indian Community of the Auburn
Tribal Preservation Committee
10720 Indian Hill Road   Maidu
Auburn   , CA 95603   Miwok
530-883-2390
530-883-2380 - Fax

COMMENT LETTER 4:   **KATY SANCHEZ, NATIVE AMERICAN HERITAGE COMMISSION, JUNE 22, 2009**

Response to Comment 4-1

Potential impacts on archaeological resources were evaluated in the Initial Study environmental checklist for the Draft EIR. The Initial Study checklist is included in Appendix A in the Draft EIR. The evaluation is presented in Item 15 on pages 46 through 49 in the environmental checklist, and was based on a cultural resources assessment, which included a records search at the North Central Information Center. Consultation requests were also sent to the Native American contacts listed in the comment letter, and this consultation is also noted in the report.[2] The comment letter indicates no Sacred Lands sites. The assessment concluded there are no known archaeological resources that would be adversely affected by the Proposed Project, and no additional investigation was required. However, because there is the potential for previously unidentified resources to be discovered during construction, the Initial Study identified Mitigation Measure 3 pertaining to cultural resources to ensure such resources are protected, if found, consistent with the commenter's request. The mitigation measure requires inspection by qualified personnel, consultation with Native American representatives (if appropriate), provisions for discovery of remains, and disposition of recovered artifacts. The requirement for notification will be included on construction drawings and contracts involving site disturbance.

---

2   ECORP Consulting, Inc. Cultural Resources Inventory and Evaluation Nader Property, Placer County, California, November 2006.

STATE OF CALIFORNIA

GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

STATE CLEARINGHOUSE AND PLANNING UNIT

ARNOLD SCHWARZENEGGER
GOVERNOR

CYNTHIA BRYANT
DIRECTOR

August 3, 2009

RECEIVED

AUG 0 6 2009

Rod Campbell
City of Lincoln
600 Sixth Street
Lincoln, CA 95648

CITY OF LINCOLN
COM'Y DEV DEPT

Subject: Village 7 Specific Plan Project
SCH#: 2005062001

Dear Rod Campbell:

The enclosed comment (s) on your Draft EIR was (were) received by the State Clearinghouse after the end
of the state review period, which closed on July 27, 2009. We are forwarding these comments to you
because they provide information or raise issues that should be addressed in your final environmental
document.

The California Environmental Quality Act does not require Lead Agencies to respond to late comments.
However, we encourage you to incorporate these additional comments into your final environmental
document and to consider them prior to taking final action on the proposed project.

5-1

Please contact the State Clearinghouse at (916) 445-0613 if you have any questions concerning the
environmental review process. If you have a question regarding the above-named project, please refer to
the ten-digit State Clearinghouse number (2005062001) when contacting this office.

Sincerely,

Terry Roberts
Senior Planner, State Clearinghouse

Enclosures
cc: Resources Agency

COMMENT LETTER 5:   TERRY ROBERTS, GOVERNOR'S OFFICE OF PLANNING AND
                          RESEARCH, STATE CLEARINGHOUSE, AUGUST 3, 2009

Response to Comment 5-1

The SCH received comments from one state agency after the close of the review period that ended July 27, 2009: California Department of Conservation.

As stated in the comment letter, CEQA does not require the Lead Agency to respond to comments received after the close of the review period. However, this Final EIR includes responses to the California Department of Conservation, which are presented in Responses to Comments 6-1 through 6-3.

NATURAL RESOURCES AGENCY

ARNOLD SCHWARZENEGGER, GOVERNOR

DEPARTMENT OF CONSERVATION

DIVISION OF LAND RESOURCE PROTECTION

801 K STREET • MS 18-01 • SACRAMENTO, CALIFORNIA 95814

PHONE 916 / 324-0850 • FAX 916 / 327-3430 • TDD 916 / 324-2555 • WEBSITE conservation.ca.gov

July 31, 2009

RECEIVED
JUL 3 1 2009
STATE CLEARING HOUSE

VIA FACSIMILE (916) 645-3552
Mr. Rod Campbell, Community Development Director
City of Lincoln Community Development Department
600 Sixth Street
Lincoln, CA 95648
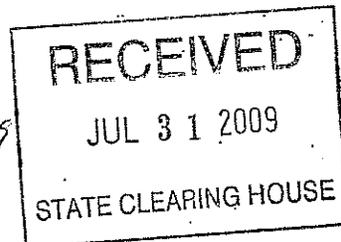
Dear Mr. Campbell

Subject: Draft Environmental Impact Report (DEIR) for City of Lincoln, Village 7 Specific
Plan Project - SCH# 2005062001, Placer County

Thank you for requesting comment from the Department of Conservation (Department) on the
above-referenced Draft Specific Plan. The Department's Division of Land Resource Protection
(Division) has reviewed the DEIR for the referenced project. The Division monitors farmland
conversion on a statewide basis and administers the California Land Conservation (Williamson)
Act and other agricultural land conservation programs. We offer the following comments and
recommendations with respect to the proposed Specific Plan's potential impacts on agricultural
land and resources.

Project Description

The project involves preparation of a Specific Plan for the development of a 703 gross acre
site with up to 125,000 square feet of additional commercial space. The project site also
includes a 26.5-acre portion of parcel number 021-350-007, which is restricted by a Land
Conservation (Williamson) Act contract. The project as proposed will also convert 185.64
acres of Prime Farmland, and 319.69 acres of Farmland of Local Importance to non-
agricultural uses

6-1

Project Location

The project is located in an unincorporated area of Placer County, southwest of the City of
Lincoln, within the City's Sphere of Influence. The area to the east of the project site is single-
family residential developed land. The area to the north and west of the proposed project site
includes agricultural lands designated as Prime Farmland, Farmland of Statewide Importance,
Farmland of Local Importance and lands restricted by Williamson Act contract.

Williamson Act Lands

The Department recommends that the following information be included in the
environmental review document regarding Williamson Act land impacted by the project.

6-2

*The Department of Conservation's mission is to balance today's needs with tomorrow's challenges and foster intelligent, sustainable,
and efficient use of California's energy, land, and mineral resources.*

Mr. Rod Campbell, Community Development Director
July 31, 2009
Page 2 of 4

As a general rule, land can be withdrawn from Williamson Act contract only through the nine-year nonrenewal process. Immediate termination via cancellation is reserved for "extraordinary", unforeseen situations (See <u>Sierra Club v. City of Hayward</u> (1981) 28 Cal.3d 840, 852-855). Furthermore, it has been held that "cancellation is inconsistent with the purposes of the (Williamson) act if the objectives to be served by cancellation should have been predicted and served by nonrenewal at an earlier time, or if such objectives can be served by nonrenewal now" (<u>Sierra Club v. City of Hayward</u>).

- If cancellation is proposed, notification must be submitted to the Department when the County or City accepts the application as complete (Government Code §51284.1). The board or council must consider the Department's comments prior to approving a tentative cancellation. Required findings must be made by the board or council in order to approve tentative cancellation. We recommend that the environmental document include discussion of how cancellations involved in this project would meet required findings. However, notification of cancellation of a Williamson Act contract must be submitted separately from the California Environmental Quality Act (CEQA) process and CEQA documentation. The notice should be mailed to Bridgett Luther, Director, Department of Conservation, c/o Division of Land Resource Protection, 801 K Street, MS 18-01, Sacramento, CA 95814-3528.

- Pursuant to Government Code §51243, if a city annexes land under Williamson Act contract, the city must succeed to all rights, duties and powers of the county under the contract unless conditions in §51243.5 apply to give the city the option to not succeed to the contract. Although a city may have protested a contract and although LAFCO may have upheld the protest, conditions in §51243.5 may not have been met to give the city the option to not succeed to the contract. A LAFCO must notify the Department within 10 days of a city's proposal to annex land under contract (Government Code §56753.5). A LAFCO must not approve a change to a sphere of influence or annexation of contracted land to a city unless specified conditions apply (Government Code §§51296.3, 56426, 56426.5, 56749 and 56856.5). Termination of a Williamson Act/Farmland Security Zone (FSZ) contract for a public improvement by acquisition can only be accomplished by a public agency, having the power of eminent domain. The Department must be notified in advance of any proposed public acquisition (Government Code §§51290 - 51292), and specific findings must be made. The property must be acquired in accordance with eminent domain law by eminent domain or in lieu of eminent domain in order to void the contract (Government Code §51295). The public agency must consider the Department's comments prior to taking action on the acquisition. School districts are precluded from acquiring land under FSZ contract. We recommend discussion in the environmental document of whether such action is envisioned by this project and how the acquisition will meet the required findings. However, notification must be submitted separately from the CEQA process and CEQA documentation to the address noted above.

- If any part of the site is to continue under contract, or remain within an agricultural preserve, after project completion, the environmental document should discuss the proposed uses for those lands. Uses of contracted and preserve land must meet compatibility standards identified in Government Code §§51238 - 51238.3, 51296.7.

6-2
(cont.)

Mr. Rod Campbell, Community Development Director
July 31, 2009
Page 3 of 4

Otherwise, contract termination (see above) must occur prior to the initiation of the land use, or the preserve must be disestablished.

• An agricultural preserve is a zone authorized by the Williamson Act, and established by the local government, to designate land qualified to be placed under contract. Preserves are also intended to create a setting for contract-protected lands that is conducive to continuing agricultural use. Therefore, the uses of agricultural preserve land must be restricted by zoning or other means so as not to be incompatible with the agricultural use of contracted land within the preserve (Government Code §51230). The environmental document should also discuss any proposed general plan designation or zoning within agricultural preserves affected by the project.

6-2
(cont.)

Mitigation Measures.

The DEIR states that the City is aware that there are policies that would help to protect existing neighboring agricultural uses, but it does not have a mitigation program plan to offset the loss of Important Farmland, and states that the loss of agricultural resources resulting from the planned project will be significant and unavoidable.

The Department encourages the use of permanent agricultural conservation easements as mitigation for agricultural land conversion. The Department recommends that agricultural conservation easements be placed on land of at least equal quality and size as partial compensation for the direct loss of agricultural land. If growth inducing or cumulative agricultural impacts are involved, we recommend that the ratio be increased. We recommend that the quality of mitigation farmland be equivalent to that of the land converted (e.g., prime for prime). We highlight this measure because of its acceptance and use by lead agencies as mitigation under the CEQA, and because it follows a rationale similar to that of wildlife habitat mitigation. Agricultural easements will protect a portion of those remaining resources and lessen project impacts in accordance with CEQA Guideline §15370.

6-3

The Department encourages the City to consider mitigating significant impacts due to the conversion of prime agricultural land and the cumulative loss of farmland by requiring the applicant, prior to issuance of a grading or building permit, to complete one or more of the following measures at a ratio of 1:1 for Prime Farmland or Farmland of Statewide Importance as defined by the Department:
1) funding and purchase of an agricultural conservation easement;
2) purchase of credits from an established farmland mitigation bank;
3) contribution of land or funding to an organization that provides for the preservation of farmland in California;
4) completion of a new Williamson Act or FSZ contract;
5) implementation of an agricultural land mitigation program that provides equal or more effective mitigation than those listed above.
Qualifying land can be within the Sacramento Valley region or outside the Valley for the same or equivalent crops.

Mr. Rod Campbell, Community Development Director
July 31, 2009
Page 4 of 4

The Department appreciates the opportunity to review the subject DEIR. If you have any questions or need assistance in the area of agricultural land conservation, please contact Jacquelyn Ramsey, Environmental Planner, at 801 K Street, MS 18-01, Sacramento, California 95814; or, phone (916) 323-2379.

Sincerely,
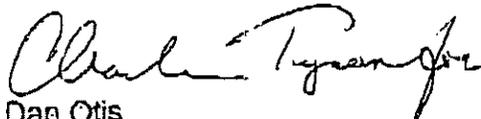
Dan Otis
Williamson Act Program Manager

cc: City of Lincoln
        City Council
        600 Sixth Street
        Lincoln, CA 95648

        Placer County Board of Supervisors
        175 Fulweiler Avenue
        Auburn, CA 95603

        Placer County Resource Conservation District
        251 Auburn Ravine, Suite 107
        Auburn, CA 95603-3719

        State Clearinghouse

COMMENT LETTER 6:   **DAN OTIS, CALIFORNIA DEPARTMENT OF CONSERVATION, DIVISION OF LAND RESOURCE PROTECTION, JULY 31, 2009**

Response to Comment 6-1

The comment summarizes information presented in the Project Description about the project components. The amount of land designated Prime Farmland and Farmland of Local Importance that would be converted to non-agricultural uses is consistent with the data presented in Table 4.1-2 on page 4.1-29 in the Draft EIR. The Draft EIR (Impact 4.1-6, page 4.1-41) notes the 26.5-acre Williamson Act contract on APN 021-350-007.

The comment states that the area to the north and west of the site includes agricultural lands designated as Prime Farmland, Farmland of Statewide Importance, and Farmland of Local Importance, the text of which appears to have been extracted from the cumulative impact analysis on p. 4.1-43 (Impact 4.1-8). That description of designated lands was intended to illustrate, generally, the presence of such lands throughout the Lincoln planning area to establish the cumulative context. However, it should be clarified that to the extent such lands may be in the *vicinity* of the Proposed Project, few of these lands are actually contiguous with the project site. The northern boundary of the project site is Auburn Ravine. As illustrated in Figure 4.1-4 on page 4.1-31 in the Draft EIR, there is no Prime Farmland immediately north or west of the project site. A portion of the western boundary of the project site is the City of Lincoln Wastewater Treatment and Reclamation Facility; only the area to the north of the WWTRF and to the west of the project site and a small area along the southwest boundary is Farmland of Local Importance. There is no mapped Farmland of Statewide Importance adjacent to any western or northern portion of the project site. Along the southeast corner of the project site is the Orchard Creek Conservation Bank.

Response to Comment 6-2

The Draft EIR (Impact 4.1-6, page 4.1-41) evaluates the potential conflict with the 26.5-acre Williamson Act contract on APN 021-350-007. The impact analysis explains the regulatory process for termination of the contract. As recommended in Mitigation Measure 4.1-6 (page 4.1-42 in the Draft EIR), no land under Williamson Act contract will be rezoned in the Village 7 Specific Plan area until the contract has expired or otherwise been cancelled in accordance with the requirements of California law. No part of the parcel under the Williamson Act contract would remain within an agricultural preserve or in a farmland security zone after the parcel is rezoned. As noted in the Draft EIR, annexation of the land in the Village 7 Specific Plan area is anticipated to take place in phases over time, rather than as one large annexation, so it is probable that the parcel under the Williamson Act contract would not be annexed into the City until that contract has expired. No part of the Village 7 Specific Plan area has been designated as an agricultural preserve by the City's recently adopted General Plan or by the Village 7 Specific Plan, so there is no need for zoning that restricts it to agricultural uses. Agricultural uses of the parcel subject to the Williamson Act contract will be allowed to continue in agricultural uses until such time as that contract expires or is otherwise terminated.

Response to Comment 6-3

The commenter suggests that the City of Lincoln require mitigation at a 1:1 or greater ratio for the conversion of Prime Farmland or Farmland of Statewide Importance to urban uses, and suggests a number of potential methods of preserving farmland as mitigation for the conversion of farmland to urban uses, such as the purchase of agricultural conservation easements or the payment of fees to a third party organization or governmental agency whose purpose includes the purchase and maintenance of agricultural conservation easements.

The City's recently adopted General Plan (2008) contains a number of Goals and Policies designed to preserve agricultural lands and avoid land use conflicts with agricultural areas that are not within the boundaries of the City. They include Goal OSC-2, Policies OSC-2.1 and OSC-2.2, Policies LU-5.3, -5.4 and -5.5, and Open Space and Conservation Implementation Measure #7, which read as follows:

> Goal OSC-2. To cooperate with Placer County in preserving agricultural operations which are located outside the City's boundaries.
>
> Policy OSC-2.1. Agricultural Buffers. The City will provide for open space or other appropriate buffers, to protect agricultural operations located adjacent to the City planning boundaries, when reviewing land use plans for such areas.
>
> Policy OSC-2.2. Agricultural Disclosures. The City will require that developers of residential projects which are within general proximity of agricultural operations in the County provide notification to new homeowners within their deeds of the County's right to farm ordinance.
>
> Policy LU-5.3. Protect Agriculture. The City shall ensure that agricultural land uses are not prematurely terminated by protecting the continued operation of agricultural land uses.
>
> Policy LU-5.4. Agricultural Buffers. The City shall require that agricultural land uses designated for long-term protection (i.e., in a Williamson Act contract or under a conservation easement) shall be buffered from urban land uses through the use of techniques including, but not limited to, greenbelts, open space setbacks, sound walls, fencing and berming.
>
> Policy LU-5.5. Agricultural Disclosure. Residential development locating next to an active agricultural area will have a notice included in the deed notifying buyers of the agricultural use.
>
> Open Space and Conservation Implementation Measure #7. The City shall adopt a right-to-farm ordinance to protect agricultural operations immediately adjacent to the City from complaints from new urban development.

The foregoing policies are designed to provide adequate buffers and land use designations necessary to avoid incompatible land uses that might impact those areas in both the City and the unincorporated portions of Placer County planned for ongoing agricultural activities. With these policies, the City considers the proposed policies adequate to address the protection of agricultural resources. Although development anticipated under the Village 7 Specific Plan would result in the conversion of some existing agricultural lands to a developed use, the City is committed to balancing the impacts of future planned growth with existing productive agricultural resource areas and activities.

The adoption of a mitigation measure requiring the purchase of agricultural conservation easements or similar options identified in the comment would not alter the findings of the Draft EIR's analysis that the conversion of agricultural land in the Village 7 project area to urban uses is a significant and unavoidable impact.

It is also important to note that while the California Dept of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program's map determined that approximately 319.69 acres of the Lewis Property was Prime Farmland and 185.64 acres was Farmland of Statewide Importance, (the Village 7 Programmatic portion of the project contained no prime farmland and no farmland of statewide importance), a closer examination of the soils present raise significant doubt about the accuracy of those classifications.

As noted in the Draft EIR (pages 4.1-30 through 4.1-35), four soil types make up the majority of the soils on the Lewis Property: Cometa-Fiddyment complex, Cometa-Ramona sandy loam, Kilaga loam, and San Joaquin Sandy loam. Cometa-Fiddyment complex soil has a Storie Index of 34 and the San Joaquin Sandy loam soil has a Storie Index of 31, which indicate that these are poor soils for agricultural uses. Cometa-Ramona sandy loam soil has a Storie Index of 50 and Kilaga loam soil has a Storie Index of 54, which are both Grade 3 soils and are suited to few crops and require special management. The Draft EIR also noted that the reminder of the soil types at the Village 7 project site are made up of: Alamo-Fiddyment complex soil with a Storie Index of 22; Fiddyment loam soil with a Storie Index of 27; Ramona sandy loam soil with a Storie Index of 65; and Xerofluvents, frequently flooded, with a Storie Index of 36. Consequently, of all the soil types present at the project site, only one located at the Lewis Property has a Storie Index rating of 60 or higher that is suitable for agricultural production, the Ramona sandy loam which is situated in a small area at the southwest portion of the property adjacent to Ingram Slough. The remaining soils on the Lewis Property have ratings which indicate that there are limitations on their agricultural use. As noted in Response to Comment 3-1, a previous property owner – Wayne Nader – also indicated the site had only been used for pastureland and field crops for several decades because of poor soil conditions (hardpan and clay).[3] Taken as a whole, the Lewis Property is not considered a productive agricultural area.

A similar situation is found with the soils in the Village 7 Programmatic Portion of the Project. The soils in the Programmatic Portion are made up of Cometa sandy loam soil with a Storie Index rating of 39, Cometa-Fiddyment complex soil with a Storie Index of 34, San Joaquin Sandy loam soil with a Storie Index of 31, and Xerofluvents with a Storie Index of 36. Soils with a Storie Index greater than 60 are generally considered best for agricultural production, since they have few limitations. Soils with a Storie Index of less than 60 are progressively more poorly suited for agricultural production the lower the Storie Index rating. Consequently, the soils in the Village 7 Programmatic Portion of the project are not considered very productive for agricultural uses due to their low Storie Index ratings and limited agricultural viability.

---

3   GeoTrans, "Response to EIR Comments Pertaining to 2001 Phase 1 EA," letter from Tim Costello to Phil Rodriguez, Lewis Planned Communities, September 10, 2009.

Letter 7

DEPARTMENT OF TRANSPORTATION

DISTRICT 3
703 B STREET
P. O. BOX 911
MARYSVILLE, CA 95901-0911
PHONE (530) 741-4233
FAX (530) 741-4245
TTY (530) 741-4509

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CITY OF LINCOLN
COM'Y DEV DEPT

July 27, 2009

09PLA0011
Village 7 Specific Plan DEIR
SCH# 2005062001
PLA65 PM 14.05/11.92

Rodney Cambell
City of Lincoln
Community Development Department
600 Sixth Street
Lincoln, CA 95648

Dear Mr. Cambell:

Thank you for the opportunity to review and comment on the Draft Environmental Impact Review (DEIR) for the Village 7 Specific Plan. The project proposes a maximum of 3,285 residential units, a school, fire station, a recreation center, retail uses, and park/open space uses on approximately 703 acres to be annexed into the City of Lincoln. The Department's comments are as follows:

| 7-1

DEIR Page 4.3-32 & 33

We agree with the proposed Mitigation Measure 4.3-5 to pay SPRTA fees which will fund improving SR 65 to six lanes south of Lincoln. We also understand that the Tier 2 projects have been incorporated into the SPRTA program; and the fees will contribute to the completion of the improvements at the SR 65/I-80 interchange and fund the new Placer Parkway connection between SR 65 and SR 99.

| 7-2

DEIR Page 4.3-37 & 38

The discussion of impacts (4.3-14) states that "the proposed project would worsen cumulatively unacceptable operations (to a significant degree) on State Route 193 and State Route 65 through Placer County, Rocklin, and Roseville." Eighteen different locations are listed as being impacted including the intersection of SR 193 and Sierra College Blvd. The seventeen other locations are freeway onramps and offramps at the following SR 65 interchanges: Blue Oaks Blvd., Sunset Blvd, Whitney Ranch Pkwy., Twelve Bridges Dr., and Pleasant Grove Blvd.

The proposed Mitigation Measure (MM) 4.3-14 states: *The project applicants or their successors shall pay SPRTA Fees to help widen SR 65 to six lanes, and pay a fair-share of the cost to make improvements to the SR 193/Sierra College Boulevard intersection significantly impacted by the Proposed Project if a regional funding mechanism and roadway improvement plan for SR 193 are adopted prior to issuance of Building Permits at the Proposed Project.*

| 7-3

Rodney Cambell
July 27, 2009
Page 2

The SPRTA program does include widening Sierra College Blvd from SR 193 to the Sacramento County line, but does not specifically address improvements at intersection of SR 193 and Sierra College Blvd. The seventeen impacted freeway ramps are not included anywhere in the SPRTA program as proposed improvements. There is no nexus between paying SPRTA fees and the impacts listed.

MM 4.3-17 also says that the project should pay fair share fees if a regional funding mechanism is adopted for improvements to SR 193. This mitigation does not meet CEQA requirements. It is uncertain and unenforceable. The project should be required to pay fair-share fees to the City of Lincoln based on the proportionate share impact to the intersection.

7-3
(cont.)

As indicated above paying SPRTA fees does nothing to mitigate cumulative impacts to the seventeen freeway ramps. Appropriate mitigation would be to pay fair-share fees to a program that will ensure future deficiencies are addressed. The impacted ramps are within the jurisdictions of Placer County, Rocklin and Roseville. Currently, these three agencies participate in a Joint Powers Authority (JPA) to fund interchange improvements on SR 65. The HWY 65 Joint Powers Authority (JPA) Fee Program collects fees from development projects that impact or benefit from interchange improvements. The City of Lincoln should join the JPA to assist in funding the needed ramp improvements in these other jurisdictions.

It important to note that the Department has plans to install ramp meters at all the impacted onramps to protect mainline operations and to ensure the smooth flow of traffic on SR 65. Onramps that are forecasted to be over-capacity will need to be improved. Local development in Lincoln, Rocklin, Roseville, and Placer County are responsible for impacts to those ramps and should be assessed fees for any needed improvements.

7-4

As this project progresses please provide us with any updated or new information regarding this project. Please make sure we are forwarded a copy of the Final EIR. If you have any questions regarding these comments please do not hesitate to contact Aaron Cabaccang, Aaron_Cabaccang@dot.ca.gov, (530)741-5174.

Sincerely,

William A. Davis, Chief
Office of Transportation Planning - East

c: Caltrans Traffic Operations – Teresa Limon

COMMENT LETTER 7:   WILLIAM A. DAVIS, CALIFORNIA DEPARTMENT OF
                          TRANSPORTATION, DISTRICT 3, OFFICE OF TRANSPORTATION
                          PLANNING-EAST, JULY 27, 2009

Response to Comment 7-1

The comment summarizes project elements. Comment noted.

Response to Comment 7-2

Comment noted. Caltrans staff expressed agreement with proposed Mitigation Measure 4.3-5 (page
4.3-33 in the Draft EIR) that would require the project applicant or successors to pay applicable
SPRTA fees, which will help fund SR 65 widening to six lanes. Caltrans staff also acknowledged
that Tier 2 fees will contribute to the completion of improvements at the SR 65/I-80 interchange and
the Placer Parkway connection between SR 65 and SR 99.

Response to Comment 7-3

The commenter states that there are 17 impacted freeway ramps on SR 65 which are not included
anywhere in the SPRTA program for the installation of unspecified future ramp improvements. It is
suggested that appropriate mitigation would be to pay fair share fees to a program that will ensure
future deficiencies are addressed. The commenter also suggested that the City of Lincoln should
join the Highway 65 Joint Power Authority to assist in funding needed ramp improvements in these
other jurisdictions.

The Draft EIR (Impact 4.3-5 on page 4.3-32 and Impacts 4.3-13 and 4.3-14 on pages 4.3-36 through
4.3-38) identifies the SPRTA fee program as one option to mitigating Proposed Project impacts. The
South Placer Regional Transportation Authority (SPRTA) has developed a Capital Improvement
Program (CIP), which will be funded by new development in South Placer County. The CIP will
collect $50 million toward the widening of SR 65 to six lanes from I-80 to the Lincoln Bypass
(estimated cost is $95 million). The Proposed Project, by virtue of paying SPRTA fees, will be
helping to fund these improvements. Although the SPRTA CIP does not mention specific ramp
improvements, the widening of SR 65 to six lanes will improve merge, diverge, and weave
movements at these ramps and thereby reduce, if not eliminate, the need for ramp metering lights or
other ramp improvements.

Further, in addition to SPRTA fees, the project applicant will also be subject to payment of the Tier II
traffic impact fee, which will help fund both Placer Parkway and I-80/SR65 interchange
improvements. Placer Parkway is a planned four- to six-lane expressway that will extend from
SR 65 to SR 70/99. This facility will provide traffic relief to both I-80 and SR 65, including
improvement at the listed ramps/interchanges. No further mitigation is required.

The commenter expressed concerns with "mitigation measure 4.3-17" to mitigate impacts on
SR 193. Insofar as there is no "mitigation measure 4.3-17" in the Draft EIR, City staff assumes the
commenter meant Mitigation Measure 4.3-14. As noted in the Draft EIR, the impacts on the
identified roadway segments that are outside of the city limits of the City of Lincoln will remain
significant and unavoidable even with the proposed mitigation measure. On its own, the City of
Lincoln has no ability to plan, design, and construct roadway improvements in another jurisdiction or
on a state highway; its only feasible mitigation is totally dependent upon coming to an agreement
with such other jurisdictions on the City's fair share of the costs to pay for the construction of
roadway improvements planned by the other jurisdiction. Any such agreement will require the City
of Lincoln and the other jurisdiction to agree on the exact scope, nature, and extent of the roadway

improvements needed. Without any agreement on the scope, nature, and extent of the specific roadway improvements and their cost, there is no foundation upon which the City can determine the nexus for a mitigation fee that may be imposed on the Proposed Project to pay for those improvements. Due to the uncertainty over the ability of the City of Lincoln to implement the roadway improvements identified as potential mitigation in the Draft EIR, the impacts on SR 193 from the Proposed Project were considered significant and unavoidable (Draft EIR page 4.3-38). As noted in the Draft EIR, given the absence of a plan or program for improvements adopted by the other agencies with jurisdiction over SR 193, there is no reasonable basis for the Draft EIR to definitively conclude that Mitigation Measure 4.3-14 requiring the payment of a fair share fee at the time of building permit issuance would reduce the project's traffic impacts to a less-than-significant level; hence the conclusion in the Draft EIR that the impact must be considered significant and unavoidable in the absence of an adopted fee. Fees as mitigation measures to reduce traffic impacts to a less-than-significant level have only been held valid CEQA mitigation measures in instances where the agency with jurisdiction over the impacted roadway has adopted a plan or program for the improvement of that roadway and the fee is related to the project's fair share cost of making the identified improvements. [See, *Tracy First v. City of Tracy,* 2009 DJDAR 12885 (8-27-2009), 2009 WL 2623319; *Save Our Peninsula Committee vs. Monterey County*, 87 Cal.App.4th 99, 104 Cal.Rptr.2d 326 (2001); *Anderson First Coalition vs. City of Anderson*, 130 Cal.App.4th 1173, 30 Cal.Rptr.3d 738 (2005); *City of Marina vs. Board of Trustees*, 39 Cal.4th 341, 46 Cal.Rptr.3d 355 (2006).]

The City of Lincoln is not currently part of the Highway 65 JPA, which has helped fund improvements to the Stanford Ranch Road/Galleria Boulevard, Pleasant Grove Boulevard, Blue Oaks Boulevard, and Sunset Boulevard interchanges on SR 65. Insofar as those interchanges are substantially complete, it would be moot at this point for the City to join the Highway 65 JPA. Moreover, the Highway 65 JPA never included improving or constructing interchanges at SR 65 in the City of Lincoln, which the City has funded without any contribution from the JPA for impacts caused to those interchanges in the City.

Response to Comment 7-4

The commenter states that ramp meters will be installed at impacted on-ramps on SR 65, and that local development responsible for those impacts should be assessed fees for any needed improvements.

The SR 65 on-ramps are within the exclusive jurisdiction of Caltrans as part of the state highway system. A number of on-ramps along SR 65 already have ramp metering lights (e.g., the ramps at the SR 65/Pleasant Grove interchange southbound ramps). No known fee program currently exists to fund ramp meters on SR 65, and the City is not aware of any officially planned and approved ramp metering program for their construction.

As stated in Response to Comment 7-3, the project will be paying into two regional traffic impact fee programs to help mitigate project-generated impacts on SR 65. These programs will help fund the widening of SR 65 to six lanes and construction on Placer Parkway, which should alleviate the need for ramp meters, as described in Response to Comment 7-3. However, in the absence of a Caltrans capital improvement program or other plan for ramp metering lights along SR 65, it would not be feasible for the City of Lincoln to impose a mitigation fee on the Proposed Project that would, in turn, satisfy CEQA requirements. As a result, the Draft EIR concluded the project would have significant and unavoidable impacts on SR 65.

COUNTY OF PLACER
Community Development/Resource Agency

Michael J. Johnson, AICP
Agency Director

PLANNING

July 27, 2009

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CITY OF LINCOLN
COM'Y DEV DEPT

Mr. Rodney Campbell
Director Community Development
City of Lincoln
600 Sixth Street
Lincoln, CA 95648

SUBJECT: **Placer County Comments –Draft Environmental Impact Report, Village 7
Specific Plan**

Dear Mr. Campbell:

Thank you for providing Placer County the opportunity to review the Draft Environmental
Impact Report for the Village 7 Specific Plan. County staff has reviewed the Draft
Environmental Impact Report and forwards the following comments on the document for
your review and consideration.

General Comments
1. The DEIR acknowledges that the project site will need to be annexed into the City, and
   that this DEIR will be the environmental analysis for the annexation request, but the
   document does not provide a detailed description of what the annexation request will
   include, particularly as to existing or proposed roadways. (Page 2-8)

8-1

Land Use
1. The Land Use section of the DEIR correctly states that Village 7 will be located
   directly adjacent to an existing 650-acre wetland and vernal pool mitigation bank
   (Orchard Creek Mitigation Bank), which is located in the northernmost part of the
   Sunset Industrial Area Plan and abuts the Lincoln Crossing project and the
   southeasterly portion of the Village 7 Specific Plan project. However, the DEIR does
   not state nor analyze that the southwesterly one-half of the project site would be
   located immediately adjacent to the Agriculture / Fairgrounds relocation Area of the
   SIA Plan or that it would be located within close proximity (approximately 200 yards)
   to the Athens Avenue Industrial Reserve Area located to the immediate southwest of
   the project.

   Projects within the Agriculture / Fairgrounds Relocation Area could include uses with
   significant land use compatibility issues, such as outdoor amphitheaters, motocross

8-2

tracks and equestrian centers, and may also include industrial type agricultural uses such as feed lots and slaughter houses. Land uses within the Athens Avenue Industrial Reserve Area would include uses allowed in the Industrial Core Land Use Planning Area, which include light manufacturing, warehousing, distribution, construction contractors, and similar industrial uses.

8-2
(cont.)

2. The EIR should analyze the potential land use conflicts resulting from encroachment of residential development (ranging from low-density to high-density) immediately adjacent to the Sunset Industrial Area Plan. The EIR should propose mitigation measures to reduce any conflicts, including but not limited to recordation of Buyer's Awareness Deed Disclosure statements over the project property notifying prospective land owners that they are located adjacent to an Industrial Reserve Area, and that future development of lands within the Industrial Reserve Area may result in nuisance from noise, odor, dust, vibration, etc.

3. The Sunset Industrial Area is very important to the economic health of Placer County, its citizens, and its businesses by providing a broad range of primary wage earner jobs and economic opportunities for individuals, business, and industry. The continued ability to provide the raw materials and industrial services produced by industries within the SIA Plan area are critical to the future well being of the County.

8-3

The EIR should analyze the potential economic impacts to the County resulting from encroachment of incompatible land uses within the Village 7 Specific Plan that would have the potential to limit or harm the ability of the Sunset Industrial Area Plan to develop in the manner envisioned by the plan.

Transportation

1. For Existing plus Project impacts, Placer County typically requires that the developer construct sufficient improvements to mitigate the project impacts. Therefore, Mitigation Measure 4.3-7 for impacts to Nelsen Lane within Placer County needs to require that the developer improve Nelsen Lane, similar to MM 4.3-6 for Moore Road. The increase in traffic without any improvements could create safety issues along this roadway segment. Placer County may be willing to accept that the developer pays a fair share contribution to upgrade the road and mitigate the project's impacts, similar to the language contained within MM 4.3-13, if an appropriate mechanism is in place.

8-4

2. No analysis was performed of the intersection of Moore Road and Nelsen Lane. This intersection should be included in the analysis for both Existing and Cumulative conditions to determine project impacts and appropriate mitigations.

8-5

3. In Placer County's NOP comments, the City was asked to look at providing additional north-south roadways to facilitate regional circulation. The traffic analysis shows unacceptable LOS on the existing main north-south roads, Fiddyment and Industrial, but does not provide any analysis or discussion of an additional roadway, such as an extension of the main road running through the project site.

8-6

4.   The DEIR provides analysis of Cumulative conditions on Placer County roadway segments, but does not include analysis or discussion of intersection impacts.

8-7

5.   Under the Cumulative Conditions section of the DEIR there is a list of major roadway improvements assumed in the modeling and analysis, including several within Placer County, yet the document does not provide details as to how these are to be funded, either by existing or proposed fee programs. Therefore the DEIR should either provide details about the proposed funding, and how realistic it is too assume these improvements, or determine what the projects fair share responsibility should be and include a mitigation measure obligating the developer to make fair share payments.

8-8

6.   How does the City of Lincoln propose to ensure that the project developers will be committed and obligated to mitigating impacts, paying regional fees or fair share payments? Will the project have a Development Agreement? Will the DA be available for review by outside agencies prior to action on the project by the City of Lincoln? Will the project be obligated to pay Tier 2 fees?

8-9

7.   Since this is the first of several Villages which will increase traffic and cause impacts to Placer County roadways, how does the City of Lincoln intend to demonstrate that they are willing and committed to meeting and conferring with Placer County to establish either a fee program or methodology to determine fair share impacts and costs?

8-10

Past Uses

1.   Although discussed within the Draft EIR, the Phase 1 Environmental Assessment (Phase I EA) was not provided within the Draft EIR or as an appendix. This analysis can provide valuable information regarding potential hazards and can help supplement the assumptions made in the Draft EIR. PCEHS recommends the Phase 1 EA be included as an appendix to the Draft EIR.

8-11

2.   Parcels within and adjacent to the project area have historically been used for agricultural purposes. Agricultural operations commonly used environmentally persistent agricultural chemicals from the 1880's to the 1980's. The chemicals were typically applied liberally and mixed onsite, often resulting in significant residual soil contamination. According to the Draft EIR, the Phase 1 EA states that because there was no visual indication of soil contamination, no further analysis was needed. A visual inspection is not adequate to determine whether residual agricultural chemicals persist in concentrations that would result in a human health risk or environmental hazard. PCEHS recommends that the project site be evaluated to determine if and where storage, mixing, rinsing and disposal of chemicals may have occurred and whether contamination exists as determined by appropriate soil sampling. The results of the soil sampling should be evaluated to determine if concentrations present in soils will be protective of residents and workers. PCEHS recommends that any soil sampling conducted should be performed in accordance with California EPA, Department of Toxic Substances Control (DTSC) guidelines and should reference the current US EPA Preliminary Remediation Goals (with California revisions) and California Human Health Screening Levels for risk levels.

8-12

3. Many agricultural operations installed underground storage tanks to store diesel fuel, waste oil, and gasoline. These tanks were frequently installed without permits, as underground storage tank permitting requirements were not implemented until the 1980's. Unregulated underground storage tanks can result in soil and groundwater contamination; any underground storage tanks existing at the property should be properly removed under permit with PCEHS.

4. Similarly, agricultural operations frequently store diesel fuel, gasoline, pesticides and other hazardous materials in aboveground tanks and containers. Storage and handling of these materials can result in residual contamination of soil and groundwater. Any hazardous materials storage areas should be evaluated to determine if contamination exists as determined by appropriate soil sampling. The results of the sampling should be evaluated to determine if concentrations present in soils will be protective of future residents and workers.

8-12 (cont.)

5. According to the Draft EIR, the Phase 1 EA documented oil soil staining on "the Lewis property" portion of the project site. PCEHS Services recommends these areas be sampled to determine the extent of the contamination in soil and groundwater.

8-13

6. The Aitken Ranch II portion of the Village 7 Specific Plan (APN 021-263-006) was identified as a past turkey ranching operation. The Draft EIR discusses potential risks of arsenic contamination and nitrate contamination due to the turkey ranching activities. As stated in the Draft EIR, the Phase 1 EA concluded there were no indications of arsenic contamination. However, there was no mention of how this was determined, such as with soil samples. PCEHS recommends conducting soil samples to identify potential contamination, including arsenic, related to turkey ranching activities. There is also mention of potential nitrate contamination from the turkey burial sites, dry-well carcass disposal areas, and turkey waste composting site. The Draft EIR discusses that the turkey disposal sites are expected to contain decomposed turkey remains and elevated concentrations of nitrate. The Draft EIR also discusses the potential for nitrates and arsenic to be present in soils in the composting area. Based upon past experience with contamination resulting from historical turkey ranching operations, it is likely that the groundwater may have been affected by nitrates as a result of the onsite turkey disposal and waste composting facility. This is a potentially significant impact. PCEHS recommends the project proponent ensure that all turkey waste products are properly removed and properly disposed. PCEHS further recommends extensive sampling to assure there is no residual contamination from the turkey ranching operations that would result in a human health risk or environmental health risk.

8-14

7. The Draft EIR discusses that the septic system associated with the turkey ranch operation may have been used for disposal of chemicals, which could have adversely affected soil or groundwater. This is a potentially significant impact. PCEHS recommends the soil and groundwater be sampled to assure there is no contamination due to disposal of chemicals in the septic system.

8. The property is located adjacent to Auburn Ravine. Many creeks in Placer County have historically been used for mining activity. Mining processes involve the use of various hazardous materials, including mercury and arsenic. Past mining activity is frequently evidenced by the presence of tailings piles, which may contain varying levels of these contaminants. Any evidence of past mining should be investigated.

8-14 (cont.)

9. According to the Draft EIR, the Phase 1 EA identified debris piles and waste tires present on the project site. Debris piles and waste tires can create a breeding ground for vectors such as mosquitoes and rodents. PCEHS recommends the debris piles are immediately removed, and the contents of the debris piles properly disposed in an appropriate disposal facility.

10. According to the Draft EIR, the Phase 1 EA discusses the potential for the presence of lead based paint in and on existing structures. Presence of and demolition of these structures may result in lead paint debris contaminating soils in the vicinity. Additionally, soil in the vicinity of the existing structures may have elevated concentrations of lead resulting from flaking of lead-based paint. PCEHS recommends appropriate disposal of lead laden construction debris and soil sampling to determine if lead contamination exists.

8-15

11. The Draft EIR discusses the possibility that building and/or piping materials located at the project site are of the type and age that typically contain asbestos. Asbestos containing materials (ACM) that are intended for disposal are classified as hazardous waste. Any ACM that is intended for disposal is legally required to be properly disposed and transported under manifest.

Existing Wells and Septic Systems

1. Information on file with Placer County Environmental Health Services indicates that there are septic systems associated with residential uses of the property. Older septic systems are prone to failure, creating a potentially significant impact to groundwater quality and/or a health hazard through inadequate treatment of sewage effluent. Failure to properly destroy an abandoned septic system can create a potential physical hazard. Any septic systems that were used to serve the existing or prior residential uses on the property should be properly destroyed under permit with PCEHS.

8-16

2. The Draft EIR discusses the presence of domestic water wells present on the site. An unused and un-maintained water well is a threat to groundwater quality and can act as an open conduit to groundwater; it can be a means of entry for contamination resulting from runoff of surface water, including irrigation water, roadway runoff, and other types of pollution. Any water wells that were used to serve the existing or prior residential and/or agricultural uses on the property should be properly destroyed under permit with PCEHS. Hand-dug wells are a physical safety hazard. Any existing hand dug wells should be secured in such a way as to prevent access by small children until they can be properly destroyed.

8-17

3. The Draft EIR indicates there is a monitoring well on the project site that is owned by the City of Lincoln. The Draft EIR should discuss whether or not this well will be kept, and if so how it will be maintained.

8-17 (cont.)

Stormwater Detention

1. The project application states that the project will include a stormwater detention system, including detention ponds. Stormwater detention basins and pipes, unless properly designed and managed, have the potential to create a significant health hazard by providing an environment conducive to breeding mosquito disease vectors.

2. In order to minimize potential health hazards related to mosquito breeding, Placer County Environmental Health Services recommends that this project be evaluated with respect to mosquito vector control. Possible mitigation measures could be development of a Mosquito Management Plan with the Placer Mosquito Abatement District (PMAD).

8-18

Hazards and Hazardous Materials

1. The environmental document states there will be a commercial center within this project. Although the document does not mention a service station as a potential future use within the commercial portion of the commercial development, it does not specifically exclude it. Likewise, the project may include other commercial facilities that store and use hazardous materials, such as dry cleaners. Use and storage of hazardous materials at service stations and other commercial facilities create the potential for accidental spills and unauthorized releases. These events are potentially significant impacts to groundwater quality and human health and should be addressed in the environmental document. A Hazardous Materials Business Plan will be required for all facilities that use and/or store hazardous materials in quantities that are subject to regulation. If any facility will generate hazardous waste, such as waste motor oil, these facilities will also be subject to regulation and will be required to store and dispose of hazardous waste in conformance with county regulations and state and federal law. Prior to installation of any underground storage tanks, these facilities will be required to submit plans to PCEHS for review and approval and obtain a tank installation permit. These facilities will also be required to obtain an annual operating permit with Placer County Environmental Health Services. The Draft EIR mentions a dry cleaning business as a potentially approvable use within the commercial area. Dry cleaners typically use chemicals requiring submittal of a hazardous materials business plan. The Draft EIR does not discuss the use and storage of chemicals at the adjacent wastewater treatment plant and related potential impacts associated with the potential release of hazardous chemicals.

8-19

2. The Draft EIR does not discuss the potential environmental impacts of landfill gases or hazardous chemical handling associated with the Western Placer Waste Management Authority Materials Recovery Facility.

8-20

Flood Control

1.   Per the DEIR, increases in peak flow runoff due to this development will be mitigated by the installation of 2 planned stormwater detention basins located in the northern half of the project site.

2.   The applicant is also proposing to mitigate for the proposed project's increases in volume runoff. The DEIR indicates that prior to final map approval, the applicant will identify 101 acre-feet of retention storage in the watershed. If not provided for onsite, retention storage capacity will be obtained at the existing City of Lincoln Stormwater Retention Facility and/or the approved Lakeview Farms Volumetric Mitigation Facility.

8-21

Thank you for the opportunity to provide comments on the Village 7 Specific Plan Draft Environmental Impact Report. The County looks forward to having a meaningful discussion with you and your staff to more fully integrate County comments on this project.

Should you have any questions regarding the information in this letter, please do not hesitate to call me at (530) 745-3099.

Sincerely,

MICHAEL J. JOHNSON, AICP
Agency Director

cc: Rich Colwell, Chief Assistant CEO
     Scott Finley, County Counsel's Office
     Gina Langford, CDRA Environmental Coordinator
     Wes Zicker, Engineering and Surveying Director
     Paul Thompson, Deputy Planning Director
     Ken Grehm, Department of Public Works Director

COMMENT LETTER 8:   **MICHAEL J. JOHNSON, PLACER COUNTY COMMUNITY DEVELOPMENT/RESOURCE AGENCY, JULY 27, 2009**

Response to Comment 8-1

The Draft EIR (page 2-1 in Chapter 2, Project Description) describes the annexation request. It indicates the project consists of an application to annex approximately 703 acres of land in unincorporated Placer County (the Village 7 Specific Plan comprising the entire project site) into the southwest portion of the City of Lincoln. The annexation application for 703 acres is also noted on page 2-24.

Impact 4.1-4 on pages 4.1-26 through 4.1-28 in the Draft EIR Section 4.1, Land Use, describes the relationship to Placer LAFCO policies regarding annexation with regard to roadways. As stated on page 4.1-26, there is one existing roadway for which an annexation request could apply: the segment of Moore Road between the western boundary of the existing City limits and the City's Wastewater Treatment and Reclamation Facility (WWTRF) at Fiddyment Road. As noted in the Draft EIR, it is anticipated that the City will annex the entire width of the right of way of that remaining segment of Moore Road into the City. (Draft EIR, page 4.1-27) Those portions of that segment of Moore Road being annexed into the City would have the side of Moore Road immediately adjacent to the Village 7 Specific Plan area of the City improved to City standards with curbs, gutters, sidewalks and bike lanes. Whenever other areas along this segment of Moore Road are annexed into the City at a future date, the opposite side of Moore Road also would be similarly improved to City standards. At those portions of Moore Road where both sides will be fully within the City following the annexation of the Village 7 Specific Plan area, i.e., those portions running through the Village 7 Specific Plan area and adjacent to the 3D South and Sorrento (Aitken Ranch) areas, Moore Road would be improved to City standards for the full width of the right of way. No other roadways within the County would be affected or form a new boundary.

Impact 4.1-4 also notes that applications for expansion of the City's service area boundaries to serve the project would be submitted simultaneously with the city annexation. However, because the project site is within the City's SOI, a Municipal Service Review (MSR) would not be required. As stated on page 4.1-27, no special districts would need to be detached as part of the Proposed Project.

Response to Comment 8-2

Figure 4.1-2 on page 4.1-7 in the Draft EIR shows the location of the Sunset Industrial Area Plan community boundary relative to the project site. The commenter suggests the Draft EIR should have analyzed potential land use conflicts from "encroachment" of the Proposed Project on the Sunset Industrial Area Plan.

CEQA Guidelines Section 15125(d) and (e) establish the requirements under which a project's potential inconsistency with an adopted plan should be disclosed in the environmental setting for the EIR. Section 15125(d) limits the evaluation to general plans and regional plans. The Sunset Industrial Area Plan is not intended to be a general plan as defined by Government Code 65300 et seq. It is an "area plan" prepared for the purpose of refining and implementing the goals and policies of the Placer County General Plan for the Sunset Industrial Area.[4] The Sunset Industrial Area Plan is not a regional planning document.

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4   Placer County, Sunset Industrial Area Plan, adopted 1997, p.1-1.

Notwithstanding there is not a requirement under CEQA to evaluate potential inconsistencies with an area plan, in accordance with CEQA Guidelines 15125(e), "where a proposed project is compared with an adopted plan, the analysis shall examine the existing *physical condition* [emphasis added] at the time the notice of preparation is published." The NOP was published in June 2006. As of the date of the NOP and the publication of the Draft EIR (June 2009), the fairgrounds had not been relocated to the planning area as described in the Sunset Industrial Area Plan. As such, it would be inappropriate for the Draft EIR to evaluate how the proposed Village 7 Specific Plan project would or would not be consistent with the types of activities listed by the commenter. The second requirement under 15125(e) would also not apply (potential future conditions) because the evaluation is not required.

Moreover, the intent of CEQA is to disclose the direct and indirect significant impacts of the proposed project *on the environment* (CEQA Guidelines Section 15126.2). The Proposed Project is the construction and operation of the Village 7 Specific Plan. Because no significant impacts related to the Sunset Industrial Area Plan would occur as a result of the Proposed Project, they were not identified in the Draft EIR.

Upon annexation into the City, the project site would be within the City of Lincoln. The Draft EIR addresses consistency with the appropriate land use plan. The City of Lincoln 2050 General Plan, adopted 2008, would be the applicable adopted planning document that would satisfy the requirements of Section 15125 of the CEQA Guidelines. Chapter 6 in the Draft EIR provides a 25-page comprehensive analysis regarding the project's consistency with applicable Lincoln General Plan goals and policies.

Nonetheless, to be responsive to issues raised by the comment and to inform the decision makers, the City has prepared the following supplemental information.

The "Agriculture/Fairgrounds Relocation Area" and the "Athens Avenue Industrial Reserve Area" referred to by the commenter are individual planning subareas shown in Placer County's Sunset Area Industrial Plan. A portion of the "Agriculture/Fairgrounds Relocation Area" is immediately south of the southwestern half of the Village 7 Specific Plan project boundary. That portion has been zoned by Placer County as Open Space in the Sunset Area Industrial Plan. As stated in the Sunset Industrial Area Plan, the "Agriculture/Fairgrounds Relocation Planning Area" is to be "dominated by agricultural lands and open space.

Within the "Agriculture/Fairgrounds Relocation Planning Area" the County is considering the construction of a new Placer County Fairgrounds facility in an unspecified location.[5] When it adopted the Sunset Industrial Area Plan, the County stated "[the Fairgrounds Facility is a proposed land use that may or may not be constructed within the Sunset Industrial Area." More recently, in August 2009, a map included in the draft Placer County Conservation Plan shows the closest part of the "Agriculture/Fairgrounds Relocation Area" as a Reserve Designation Area. That designation is intended to preserve land as wetlands and wildlife habitat, which would preclude development of that area with fairgrounds or industrial uses, if the Placer County Conservation Plan were adopted. As stated in the Sunset Industrial Area Plan,[6] the Open Space area along Orchard Creek also is intended to serve as a buffer between industrial development in the Sunset Industrial Area and future residential development in the City of Lincoln to the north. Consequently, no incompatibility would arise between that area and the Village 7 Specific Plan area.

Nonetheless, in the event the proposed fairgrounds relocation were to move forward, the Sunset Industrial Area Plan has a number of policies that Placer County would be required to implement to

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5   Placer County, Sunset Industrial Area Plan, adopted 1997, p.1-36.
6   Placer County, Sunset Industrial Area Plan, adopted 1997, p. 1-34.

ensure proposed development in that area would not affect adjacent land uses in the City of Lincoln, such as the Village 7 Specific Plan. First, Policy 1.G.6 requires that environmental review must be completed by the County prior to the siting and establishment of any fairground elements. Policy 1.G.2 requires the County to specifically evaluate noise and land use compatibility effects. Policy 1.G.1 directs that the final location must recognize environmental constraints. Thus, assuming the Village 7 Specific Plan is approved and constructed, it would be the responsibility of Placer County to ensure that new land uses within the Sunset Area Industrial Plan area that have the potential to create adverse environmental effects on the Village 7 Specific Plan area are identified and appropriately mitigated.

Page 4.1-6 in the Draft EIR Land Use Environmental Setting has been revised to include additional information about the Sunset Area Industrial Plan and its purpose. Please see Chapter 2, Text Changes to the Draft EIR. With regard to Placer County's "Athens Avenue Industrial Reserve Area," the northernmost extension of Placer County's "Athens Avenue Industrial Reserve Area" is southwest of the Village 7 Specific Plan project site, but it is not contiguous. However, no new significant impacts have been identified that require analysis in the Draft EIR, and no mitigation measures are required.

Response to Comment 8-3

The economic impacts of the proposed Village 7 Specific Plan residential development on proposed industrial land uses do not require analysis in the Draft EIR, as provided by CEQA. Section 15131 of the CEQA Guidelines establishes the framework for the extent to which economic impacts should be analyzed. Specifically, "economic or social effects of a project shall not be treated as significant effects on the environment…. The focus of the analysis shall be on the physical changes." Economic or social effects of a project may be used to determine the significance of physical changes caused by the project (Section 15131(b)).

Further, as described in Response to Comment 8-2, the Proposed Project would not have an adverse physical impact on the Sunset Industrial Area as a result of encroachment of incompatible land uses.

No additional analysis or changes to the Draft EIR are necessary as a result of this comment. Please see also Response to Comment 8-2.

Response to Comment 8-4

The City of Lincoln General Plan identifies Nelson Lane as a future six-lane major arterial. As noted in the Final EIR for the City's General Plan (page 2-60), Nelson Lane lies within the City's Sphere of Influence, and its future realignment would be funded by local sources. The alignment of Nelson Lane north of Moore Road will be moved so that it intersects Moore Road directly opposite Fiddyment Road to better align with a future interchange at the SR 65 bypass.

Nelson Lane is currently a two-lane rural road not constructed to current County standards. In March 2005, this segment was observed to carry 1,100 vehicles per day. Because the addition of project traffic to this segment was identified to substantially worsen conditions relating to traffic flow, safety, and/or driver convenience (Impact 4.3-7 on page 4.3-34 in the Draft EIR), it was considered a significant impact. The impact identified at this location relates to a current physical deficiency, not a capacity deficiency. The segment of Nelson Lane that would be affected by project traffic is in Placer County but is also within the City's Sphere of Influence.

The *Placer County Capital Improvement Program* (2005) does not include improvements to Nelson Lane within its fee program. As such, a fair-share contribution by the applicant for improvements to

Nelson Lane would not be a feasible mitigation measure because Placer County has not adopted any plan or program for the physical improvement of Nelson Lane, and fees are not being collected by the County from other development to fund the remaining cost of any potential Nelson Lane improvements.

More specifically, on its own, the City of Lincoln has no ability to plan, design, and construct roadway improvements for Nelson Lane; its only feasible mitigation is totally dependent upon coming to an agreement with Placer County on the City's fair share of the costs to pay for the construction of roadway improvements planned by the other jurisdiction. Any such agreement will require the City of Lincoln and the other jurisdiction to agree on the exact scope, nature, and extent of the roadway improvements needed. Without any agreement on the scope, nature, and extent of the specific roadway improvements and their cost, there is no foundation upon which the City can determine the nexus for a mitigation fee that may be imposed on the Proposed Project to pay for those improvements. Due to the uncertainty over the ability of the City of Lincoln to implement the roadway improvements identified as potential mitigation in the Draft EIR, the impacts were considered significant and unavoidable (Draft EIR page 4.3-34). As noted in the Draft EIR, given the absence of a plan or program for improvements adopted by the County, which has jurisdiction over Nelson Lane, the Draft EIR concludes that the impact must be considered significant and unavoidable. Moreover, fees as mitigation measures to reduce traffic impacts to a less-than-significant level have only been held valid CEQA mitigation measures in instances where the agency with jurisdiction over the impacted roadway has adopted a plan or program for the improvement of that roadway and the fee is related to the project's fair share cost of making the identified improvements. [See, *Tracy First v. City of Tracy,* 2009 DJDAR 12885 (8-27-2009), 2009 WL 2623319; *Save Our Peninsula Committee vs. Monterey County*, 87 Cal.App.4th 99, 104 Cal.Rptr.2d 326 (2001); *Anderson First Coalition vs. City of Anderson*, 130 Cal.App.4th 1173, 30 Cal.Rptr.3d 738 (2005); *City of Marina vs. Board of Trustees*, 39 Cal.4th 341, 46 Cal.Rptr.3d 355 (2006).]

The commenter states that Placer County typically requires the developer to construct sufficient improvements to mitigate project impacts, and suggests the developer should improve Nelson Lane. The commenter suggests Placer County would be "willing to accept that the developer pays a fair share contribution… if an *appropriate mechanism* [emphasis added] is in place." However, as stated above, there are no established mechanisms or agreements in place that would allow the collection of development fees to mitigate project impacts on Nelson Lane.

Response to Comment 8-5

The commenter states that the Moore Road/Nelson Lane intersection should have been analyzed under existing and cumulative conditions. In their comments on the NOP (Appendix B in the Draft EIR), Placer County staff did not request this intersection be analyzed in the Draft EIR. For that reason, the Draft EIR did not specifically evaluate that intersection. However, to be responsive to the comment, this Final EIR includes information about intersection operations.

The Moore Road/Nelson Lane intersection is a three-legged intersection with stop-control on the Nelson Lane approach to Moore Road. As indicated by the traffic impact analysis data presented in Table 4.3-6 on page 4.3-16 in the Draft EIR, the stop-controlled Moore Road/Fiddyment Road intersection would operate at LOS C or better under existing plus project conditions. Because this intersection has more side-street traffic and total traffic than the Moore Road/Nelson Lane intersection, operations at the Moore Road/Nelson Lane intersection would remain acceptable with the addition of project trips. Under cumulative conditions, Nelson Lane is assumed to be realigned westerly to intersect Moore Road directly opposite Fiddyment Road. This new intersection was analyzed under cumulative conditions (see Table 4.3-9 on page 4.3-23 in the Draft EIR) and found to operate acceptably.

There would be no significant impacts related to the Moore Road/Nelson Lane intersection operations under existing plus project or cumulative plus project conditions. No changes to the Draft EIR are necessary as a result of this comment.

Response to Comment 8-6

The commenter suggests that the Draft EIR should have looked at providing additional north-south roadways to facilitate regional circulation. This could include the extension of the main north-south road running through the project site.

In its NOP comment letter dated July 3, 2006 (see Appendix B in this Draft EIR), County staff requested the City prepare a detailed analysis on the need for north/south roadway connections along and within the southern portion of the proposed city boundary as part of the EIR for its *General Plan update* [emphasis added], and that based on that analysis, the extensions should be included in the modeling for the Proposed Project.

Subsequent to the County's NOP comment letter, the City completed the traffic impact analysis for the then-proposed General Plan update. The General Plan EIR was certified and the General Plan was adopted in 2008, at the time this Draft EIR was being prepared. In connection with its new General Plan Circulation Element, the City of Lincoln determined that other roads would better serve as a north/south connector, i.e., Dowd Road and Fiddyment Road, for purposes of regional circulation.

The adopted City of Lincoln 2050 General Plan includes expansions of Fiddyment Road and Dowd Road to accommodate improved regional circulation. Under the prior General Plan, these roads were each designated as four lanes. Under the new General Plan, Fiddyment Road is six lanes from the City's south SOI boundary northerly to Moore Road and beyond. Under the new General Plan, Dowd Road is six lanes from Moore Road to Catlett Road and four lanes from Catlett Road to the City's south SOI boundary.

The City of Lincoln's General Plan Circulation Element does not show a road extending south from the Village 7 Specific Plan area, so, it would not be appropriate or consistent for the traffic impact analysis for the Proposed Project to consider such an extension as a means to alleviate project-generated traffic volumes on Fiddyment Road and Industrial Avenue in the context of regional circulation improvements.

It must also be noted that the area south of the Proposed Project consists of the existing Orchard Creek wetlands mitigation bank, with the balance of the area comprising lands the draft Placer County Conservation Plan (PCCP) has designated as a "Reserve Designation Area," for the preservation of wetlands and wildlife habitat (map dated August 5, 2009). Thus, in light of the significant environmental constraints created by the existing wetland mitigation bank and the draft PCCP's proposed Reserve Designation Area, the City does not consider it feasible or appropriate to extend the main north-south roadway within the Village 7 Specific Plan southerly through the sensitive areas of the County, as suggested by the commenter.

No additional analysis or changes to the Draft EIR are necessary as a result of this comment.

Response to Comment 8-7

The commenter states that the Draft EIR provides analysis on Placer County roadway segments, but no analysis or discussion of cumulative intersection impacts. The commenter did not identify which Placer County intersections should have been examined in the Draft EIR.

The Draft EIR analyzed the impacts of the Proposed Project on various segments of Fiddyment Road, Athens Avenue, Foothills Boulevard, and Industrial Avenue within Placer County for existing plus project and cumulative conditions. Intersections along these roadways were analyzed under "existing plus project" conditions, but not under cumulative conditions because of the uncertainty of the appropriate lane configurations and traffic controls to assume. While the Placer County Regional Transportation Plan (2007) and CIP lists various roadway widenings, it does not discuss specific intersection improvements. As such, assumptions of specific intersection improvements would have been speculative. This approach is consistent with Section 15130(b) of the CEQA Guidelines, which specifies that "the discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone". The Draft EIR follows this guidance.

No analysis or changes to the Draft EIR are necessary as a result of this comment.

Response to Comment 8-8

The commenter states that the Draft EIR lists several major roadway improvements assumed under cumulative conditions, but does not provide details as to how these are to be funded.

With regard to roadway improvements assumed in Placer County, the assumptions were based on the Placer County Cumulative travel demand computer model. Of the seven Placer County roadway segments that were analyzed, six of those segments were assumed to have the same number of lanes as today. The only exception was Industrial Avenue south of Twelve Bridges Drive, which was assumed to be widened from two to four lanes.

The commenter also requested details on how funding would be provided to mitigate for cumulative impacts on roadway segments in Placer County identified in the traffic modeling analysis for the project. The Draft EIR's discussion of impacts identified roadway segments that would be impacted in Placer County under the cumulative condition scenario. Since those roadways are situated within Placer County, the City of Lincoln has no jurisdiction over them and no ability to implement roadway improvements by itself. In some cases there is an existing regional mechanism which includes the City of Lincoln and Placer County, such as the South Placer Regional Transportation Authority (SPRTA), that requires the Proposed Project to pay the SPRTA fees in order to provide mitigation at roadways outside of the City's jurisdiction and control. In the absence of a regional funding mechanism based upon a plan or program for making the identified roadway improvements by the government agency with jurisdiction over the roadway in question, the City has no nexus for otherwise imposing and implementing a fee on the Proposed Project as a mitigation measure. Please see also Response to Comment 8-4.

Response to Comment 8-9

Compliance with the fees and fair-share costs proposed as Mitigation Measures 4.3-13 and 4.3-14 will be required as part of the mitigation monitoring and reporting agreement that will be adopted upon approval and certification of the Final EIR for the Village 7 Specific Plan Project. In addition, as noted in the Project Description in Chapter 2 of the Draft EIR, there will be a development agreement between the City or the developer for the Lewis Property portion of the Village 7 project area, and the City will require the landowners of the other properties in the Village 7 project area to also enter into development agreements, as noted in the Draft EIR (page 2-24). As required by California law, the development agreements will be available for public review prior to the dates of the public hearings where they are considered for adoption. The commenter also inquired as to whether the City would require Tier 2 fees. On May 12, 2009, the Lincoln City Council approved entering into a Memorandum of Agreement with the County and other cities for the imposition of the Tier 2 fees on new development in the City of Lincoln.

Response to Comment 8-10

While not directed to the analysis in the Draft EIR, the comment asks how the City of Lincoln will demonstrate to Placer County that the City is willing and committed to meet and confer with the County concerning fee programs and methodologies to determine fair share costs for regional roadway impacts on County roads.

Recent history has shown that the City of Lincoln is willing to participate in appropriate regional funding mechanisms for impacts to the regional roadway system, as evidenced by the City's participation in the SPRTA and the City's recent approval of the Memorandum of Agreement for the Tier 2 development fee program by and between the cities of Lincoln, Rocklin, Roseville and Placer County.

Response to Comment 8-11

The City does not typically include the Phase 1 ESA as an appendix to the Draft EIR. However, the City provided a copy of the Phase 1 report to County staff in response to a request dated July 17, 2009, and an electronic copy is provided on CD in the back of this Final EIR (Appendix J).

Response to Comment 8-12

City staff and the applicant believe all reasonable efforts have been implemented to research and disclose the potential for residual persistent agricultural chemicals or historic activities that may have involved the use of hazardous materials to pose a human health or environmental risk at the project site.

As described on page 4.6-3 in the Draft EIR, the site has been historically used for grain crops and grazing since at least 1910, and only a few locations had any farm-related structures (the "farm site," shown on Figure 4.6-1 in the Draft EIR and the residence). The Draft EIR (page 4.6-3) summarized the results of a Phase 1 Environmental Site Assessment, which evaluated the potential for underground storage tanks (USTs) and above-ground storage tanks (ASTs) to be present on the property, among other items. There was one AST, and as stated on page 4.6-3, a UST was removed prior to 1998. The results of soil testing indicated the soil was not impacted at the former UST location. The farm site was investigated for hazardous materials storage during the Phase 1 ESA, and no Recognized Environmental Conditions were identified.

Please see Response to Comment 3-1 (Department of Toxic Substances Control) regarding the need for soil sampling, and measures that would be implemented in the event previously unidentified contamination is encountered.

Response to Comment 8-13

The reported minor oil staining noted on page 4.6-3 in the Draft EIR was inside a small equipment shed. The staining was "spotty", indicative of incidental drips from portable equipment storage and a tractor, and not indicative of a sustained or significant spill. The spotting was less than that observed in a typical vehicle parking space in a parking lot. The staining was considered by the Phase 1 ESA report preparers (Geotrans) a de minimis condition under the standard for ESA preparation (ASTM E1527-05) that would not require additional investigation.[7]

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7   GeoTrans, "Response to EIR Comments Pertaining to 2001 Phase 1 EA," letter from Tim Costello to Phil Rodriguez, Lewis Planned Communities, September 10, 2009.

Response to Comment 8-14

The results of the Phase 1 ESA for the Aitken Ranch II portion of the project were summarized in the Draft EIR environmental setting (page 4.6-4). The Phase 1 ESA did not provide data to support the Phase 1 ESA report preparers' conclusion about arsenic. Impacts associated with the Aitken Ranch II portion of the Proposed Project are evaluated under the "Village 7 Programmatic Portion" subheading of Impact 4.6-1 on page 4.6-14 in the Draft EIR. Based on the Draft EIR authors' review of the Phase 1 ESA for the Aitken Ranch II portion, the Draft EIR's analysis concluded "it remains unknown whether soil or groundwater has been contaminated...due to residual materials in the soil resulting from past turkey farming operations." Consequently, this was identified as a potentially significant impact. The City concurs with the comment that additional investigation is needed. Mitigation Measure 4.6-1(B)(b) has been revised to specifically require testing to determine whether soil or groundwater has been adversely affected by prior uses and activities at the Aitken Ranch II property. The potential for septic systems to have also affected soil or groundwater would be included as part of testing. Since the time of preparation of the Draft EIR, the debris piles at the Lewis Property have been removed, and no contamination was encountered. The debris piles at the Aitken Ranch II property have also been removed. Mitigation Measure 4.6-1(B) has also been revised to require that any debris piles at the remainder of the Village 7 Programmatic Portion will be removed prior to site development.

Mitigation Measure 4.6-1(B) has been revised, as follows, to clarify implementation of soil and groundwater testing.

> 4.6-1(B)(b) *For the Aitken Ranch II area, the applicant shall have a qualified professional review the results of the Phase 1 ESA and develop specific recommendations for removal of potentially contaminated items, soil and/or groundwater testing, ~~as needed,~~ and any subsequent remedial actions associated with the former turkey farming operations to ensure that development of the project site will not result in adverse human health or environmental risks during construction or occupancy. Soil and groundwater testing shall be performed prior to any site development activities that would disturb surface soils at the location of the former turkey farming operations. If chemicals are present in soils that would present a human health or environmental risk, a soil management plan shall be prepared by the qualified professional prior to approval of Final Grading or Improvement Plans. The soil management plan shall specify how affected soils will be tested, removed, stockpiled, or otherwise handled prior to and during soil-disturbing activities.*

Prior to installing new wells, the City tests the quality of water as part of standard well installation and development protocols. The City also quarterly monitors the quality of water from all of its wells as part of on-going consumer confidence activities and reports the results annually. To date, the City's monitoring and production wells south of the Auburn Ravine have not shown any water quality concerns that would be attributed to the former turkey ranch. If any potential contamination to local groundwater resources were to be detected as a result of previous activities of the turkey ranch, the City would take appropriate steps to either cease the use of contaminated wells or incorporate appropriate treatment. Implementation of Mitigation Measure 4.6-1(B)(b), as revised above, will also address any potential groundwater issues.

The northwestern corner of the Aitken Ranch II property is near, but not adjacent to Auburn Ravine. There is one parcel that separates Aitken Ranch II from Auburn Ravine. The Phase 1 ESA for the Aitken Ranch II property did not identify historic mining as a potential source of chemical contamination for the property. A review of aerial photographs included in the Phase 1 ESA does not show any evidence of mining-related features such as tailings piles.

Response to Comment 8-15

The existing structures at the farm site in the Lewis Property were evaluated for the presence of lead and asbestos in conjunction with recent demolition activities. Asbestos was found in some building materials, and pre-demolition abatement of friable asbestos was performed in April 2009. Four clearance air samples showed no evidence of asbestos. Peeling and flaking multi-layer paint was sampled for lead content prior to structure demolition. The test results indicated the paint was not hazardous waste based on lead content. Asbestos and lead paint removal and disposal was performed by a California-licensed abatement contractor. Fluorescent light tubes (potentially mercury-containing) and ballasts (potentially PCB-containing), and appliances containing chloroflurocarbons were also removed.

Mitigation Measure 4.6-1(B) on page 4.6-15 in the Draft EIR identifies the steps that must be implemented to investigate and properly remove asbestos and lead in structures in the Village 7 Programmatic Area.

Response to Comment 8-16

The Draft EIR (page 4.6-3) reported the results of the Phase 1 ESA, which indicated a septic system with tanks and leach fields were present on the site. The septic systems were associated with the residences. Since the date of preparation of the Draft EIR, all septic systems in the Lewis Property have been destroyed in accordance with PCEHS requirements.

Response to Comment 8-17

Domestic wells that were used to serve the existing or prior residential/agricultural uses on the property will be properly destroyed in accordance with PCEHS requirements. This requirement is stated in Mitigation Measure 4.6-1(A) on page 4.6-14 in the Draft EIR.

The current monitoring well at the Lewis Property was originally drilled by Lewis at the City's request as a potential water supply well. Testing of the new well showed that its total dissolved solids were unsuitable, so the City Engineer elected to use the well for water quality monitoring purposes instead. The City has recently determined that this well is no longer needed for water quality monitoring, so it will be closed and capped in accordance with State, City, and PCEHS requirements prior to issuance of a grading permit for the portion of the Lewis Property south of Ingram Slough.

Response to Comment 8-18

The Proposed Project could include the development of two detention basins in the northern part of the specific plan area in the Village 7 Programmatic Portion. Each would be designed to hold storm flows from the contributing subsheds for up to 48 hours. Mosquitoes (vectors) can carry diseases that afflict humans, and they also transmit several diseases and parasites that can affect dogs and horses. These include heartworm in dogs, West Nile virus, Eastern equine encephalitis, malaria, dengue, and yellow fever, among others. Standing water provides breeding opportunities for mosquitoes, provided temperatures are high enough, there are available nutrients, and if the water were present long enough for mosquitoes to complete their four life stages (egg, larval, pupal, and adult).

Irrigated agricultural fields where standing water is present for long periods of time pose the greatest mosquito hazard problem in the Placer Mosquito and Vector Control District's service area. However, water in the detention basins would only be held for up to 48 hours, which is not long enough for mosquitoes to use as breeding habitat. Therefore, hazards associated with diseases and parasites carried by mosquitoes are minimal, and impacts would be less than significant.

Additionally, the project would be annexed into the district's service area, and the detention ponds would be monitored and serviced by the City and funded through a Lighting and Landscape District or other City-approved funding mechanism, and the Village 7 Specific Plan area will be annexed into the Placer Mosquito and Vector Control District.

No additional analysis or changes to the Draft EIR are necessary as a result of this comment.

Response to Comment 8-19

Impact 4.6-3 on page 4.6-16 in the Draft EIR states that hazardous materials would be used on-site during project operation, including commercial land uses. The analysis assumed the types of businesses in which hazardous materials could be used would be associated with the "neighborhood commercial" village mixed-use (VMU) land use designation proposed for the Specific Plan. As stated on page 4.1-17 in the Draft EIR (Section 4.1, Land Use), the uses would be similar to those provided for by the Commercial (C) district (Zoning Ordinance Section 18.22), including a bakery, barber shop, beauty shop, café, day care center, drug store, dry cleaners, general store, office, personal services, postal annex, stationary store, community parkhouse (recreation center), sales offices, and other neighborhood-scale uses. These permitted uses are specified in the General Development Plan (GDP) for the proposed project. Other neighborhood commercial uses identified in Section 18.22 of the Lincoln Municipal Code not expressly enumerated in the GDP are prohibited. A service station would be a conditionally permitted use only if deemed consistent by the Planning Commission, and a conditional use permit would be required. Given these limitations, it is not expected there would be a service station, which would have the greatest potential for an environmental release.

The Draft EIR acknowledges on page 4.6-1 "the presence of hazardous materials…is a part of everyday urban life that could affect residents, workers, and visitors within and adjacent to the project area. Some of these activities can pose a risk of exposure of people or the environment due to accidental releases, such as spills… Transportation of hazardous materials through or near the project site could also present hazards." These potential impacts are disclosed in the Draft EIR. They are not considered significant impacts, however, because the types and amounts of hazardous materials would be limited through the GDP to small-scale businesses (as compared to a project industrial uses), and because there is a comprehensive regulatory system in place to minimize such hazards. Compliance with existing federal, State, and local laws and regulations pertaining to hazardous materials management would be sufficient to minimize health and safety risks, because these laws and regulations have been designed to protect health and safety and are enforced by State and local agencies. For example, the Draft EIR (pages 4.6-10 and 4.6-11) specifically identifies the role of the Placer County Environmental Health Services (PCEHS) as the Certified Uniform Program Agency (CUPA), which is responsible for monitoring hazardous materials release response plans, risk management and prevention, and hazardous waste generation. The requirements for businesses subject to Hazardous Materials Business Plan requirements are also stated in the Draft EIR in the Regulatory Setting on page 4.6-11.

As a result, routine hazardous materials use would not present a significant hazard to the public or the environment, based on the standards of significance presented in the Draft EIR on pages 4.6-12 and 4.6-13.

The City of Lincoln's Wastewater Treatment and Reclamation Facility (WWTRF) is a tertiary treatment system that uses ultraviolet (UV) disinfection technology. Gaseous chlorine, which is still used to some extent at some wastewater treatment plants, and which poses a serious chemical release hazard, is not used at the WWTRF. There would be no significant impacts associated with hazardous materials releases from the WWTRF that could affect the Proposed Project.

No additional analysis or changes to the Draft EIR are necessary as a result of this comment.

Response to Comment 8-20

The southerly boundary of the Proposed Project site is approximately one mile from the Western Placer Waste Management Authority Materials Recovery Facility (MRF). Methane (landfill gas) is generated by decomposing waste at the landfill (not the MRF), which is also approximately one mile from the southerly boundary of the project site. The methane is collected in a special gas recovery system that uses the gas to generate electricity. Because it is a closed system, landfill gas does not present an emissions risk to the Proposed Project. The landfill and the MRF are not permitted by the State to accept hazardous chemical waste. No additional analysis or changes to the Draft EIR are necessary as a result of this comment.

Response to Comment 8-21

The comment reiterates the proposed plan for mitigating stormwater peak flows and volumetric storage. Comment noted

Placer County
AIR POLLUTION CONTROL DISTRICT

3091 County Center Drive, Suite 240 Auburn, CA 95603 • (530) 745-2330 • Fax (530) 745-2373
www.placer.ca.gov/apcd   Thomas J. Christofk, Air Pollution Control Officer

July 27, 2009

Rodney Campbell
City of Lincoln Community Development Department
600 Sixth Street
Lincoln, CA 95648

Original Hand Delivered on July 27, 2009

Sent by Facsimile to:

(916) 645-3552

Copy Sent by First Class Mail

SUBJECT: Draft Environmental Impact Report (DEIR) for the Village 7 Specific Plan & Annexation

Dear Mr. Campbell,

The Placer County Air Pollution Control District (PCAPCD) appreciates the opportunity to comment on the above referenced document. Pursuant to Public Resources Code Section 21092.5, please provide the PCAPCD with written responses to all comments contained herein prior to the certification of the Final Environmental Impact Report.

9-1

The PCAPCD has reviewed the Draft EIR (DEIR) and requests that the applicant address each of the items discussed below.

URBEMIS Modeling Analysis

Emissions stated in the model analysis for the proposed project appear to be underestimated for the following reasons.

9-2

1. The data used in the URBEMIS model analysis is not consistent with the Proposed Project Land Uses as shown in Table 2-1. More specifically, the table indicates that the total of 772 units of the Lewis Property will be developed as High Density Residential, which may include 202 units of holding capacity for the 105,000 square foot Neighborhood Commercial portion. It appears that the area delineated as Neighborhood Commercial was not included in the Air Quality Analysis and was omitted from the model analysis data. The model should reflect the total acreage shown for each land use designation in Table 2-1: Land Uses and Figure 2-3: Land Use Plan.

2. Further, the PCAPCD disagrees that the additional 202 units as stated in footnote 1 of Table 2-1 would appropriately represent a "worst-case" scenario in place of the proposed Retail Neighborhood Commercial consisting of approximately 105,000 square feet of commercial space. According to the Trip Generation book (Institute of Transportation Engineers, 2007), the following trip rates are found:

9-3

    ➢ Retail (Discount Supermarket p.854), for an average vehicle trip per 1000 Sq. Feet Gross Floor Area on a weekday, the average trip generation is **96.82 trips per day.** The total trips generated by 105,000 square feet of neighborhood commercial area can be 10,166

(98.2 X 105) trips per day.

> Residential (Apartments p. 306), for an average vehicle trip per dwelling unit on a weekday, the average trip generation is **6.72 trips per day.** The total trips generated by 202 apartment units can be 1,358 (6.72 x 202) trips per day.

Depending on the above findings, the potential daily trips generated by 105,000 square feet of neighborhood commercial area is substantially higher than daily trips generated by 202 apartment units. The analysis is therefore determined to be incomplete as it does not accurately account for total potential trip generations in the event that the project is developed as proposed. The proposed Retail Neighborhood Commercial consisting of approximately 105,000 square feet of commercial space shall be included in the URBEMIS model analysis.

3. The daily trip setting used in the URBEMIS model analysis to account for the Elementary School traffic is not consistent with the data used from the traffic study. More specifically, Table 4.3-5 indicates a daily trip rate of 1.29 for approximately 900 students. However, the URBEMIS model analysis in Appendix D provides a total square footage used to calculate the trip generation. The data used in the air quality analysis should be consistent with the measurement of data used in the project's related traffic study.

4. The URBEMIS analysis shown in Appendix D states that there will be no wood burning appliances within the Specific Plan area. Therefore, no particular matter (PM) emissions are derived from fireplaces shown in Table 4.4-8 and 4.4-9. However, the analysis' results conflict with the proposed mitigation measure 4.4-3(A). Therefore, the PCAPCD requires mitigation measure 4.4-3(A) should be reworded based on the URBEMIS analysis as follows:

4.4-3(A)
~~Only low-emission, EPA-certified fireplace shall be installed in residential units containing open hearth fireplaces.~~

The conditions of approval and the covenants, conditions, and restrictions (CC&R) for the project should explicitly forbid the installation of Wood burning appliances or masonry fireplace within the Specific Plan area. Only natural gas or propane fired fireplace appliances are permitted.

Section 4.11 Climate Change and Energy Conservation

The project, as proposed, does not adequately meet the goals and policies as specified in the City's General Plan (2050) in order to address climate change/greenhouse gases and energy conservation. The Draft EIR does include some energy-efficiency features that would reduce greenhouse gas emissions to a small degree. And while this is a good start, the measures are insufficient to offset the project related greenhouse gas emissions. The document fails to describe the techniques and monitoring programs to be employed in the development of the project to achieve the following goals and polices of the General Plan (2050) in order to reduce climate change/greenhouse gases and energy consumption. At a minimum, the proposed project shall include specific mitigation measures to ensure that all policies as stated in Goal OSC-3 & Goal HS-3 of the General Plan (2050) are incorporated within the Specific Plan.

Open Space & Conservation Element (OSC): 3.1, 3.7, 3.8, and 3.11.

Health & Safety Element (HS): 3.1, 3.2, 3.4, 3.6, 3.7, 3.8, 3.9, 3.10.

Mitigation Measure Revisions

9-3
(cont.)

9-4

9-5

9-6

9-7

The PCAPCD requests that the following mitigation measures be revised as shown below.

1. The following mitigation measure shall be revised to include the following language:

   ➢ **4.4-1(A)** The applicant shall submit evidence to the City of Lincoln, as lead agency, of an approved Construction Emission/Dust Control Plan from PCAPCD prior to any grading activities.

2. The following mitigation measure shall be corrected as follows:

   ➢ **4.4-2(A) and other sections where applicable.** Construction equipment operators shall shut off equipment when not in use to avoid unnecessary idling. Vehicle idling shall be kept below ~~10~~ 5 minutes in accordance with the County Code.

3. Although PCAPCD concurs that the applicant shall participate with the District to provide off-site mitigation, the District strongly recommends that the applicant provide additional on-site mitigation as part of this project in order to mitigate the project's contribution to long-term emissions. The Draft EIR should evaluate feasible alternatives and adopt mitigation measures that would avoid or reduce the project's greenhouse gas emissions. Subsequently, the applicant shall coordinate with the PCAPCD to discuss the incorporation of feasible mitigation within the project prior to the certification of the FEIR for the proposed Specific Plan.

   The following mitigation program should be incorporated into the proposed project and required *prior to the certification of the FEIR*. Prior to the certification of the FEIR, PCAPCD would like to work with the applicant and the City to establish an off-site mitigation program.

   ➢ **4.4-3 (A)** The project applicant shall participate in the PCAPCD off-site mitigation program….

   According to the information submitted in the DEIR, the proposed project exceeds the cumulative air quality thresholds as established by the APCD (a maximum of 10 pounds per day of ROG and/or NOx). The estimated total amount of excessive ROG and Nox for this project is **555.38 pounds per day** (equivalent to **51.09 tons per year**). In order to mitigate the projects contribution to long-term emission of pollutants, the applicant shall either:

   a. **(preferred by APCD):** Establish mitigation **on-site** by incorporating design features within the project. This may include, but not be limited to: "green" building features such solar panels, energy efficient heating and cooling, exceeding Title 24 standards, bike lanes, bus shelters, etc. **NOTE:** The specific amounts of "credits" received shall be established and coordinated through the Placer County Air Pollution Control District. .

   b. Establish mitigation **off-site** within the same region (i.e. east or west Placer County) by participating in an offsite mitigation program, coordinated through the Placer County Air Pollution Control District. Examples include, but are not limited to participation in a "Biomass" program that provides emissions benefits; retrofitting, repowering, or replacing heavy duty engines from mobile sources (i.e. busses, construction equipment, on road haulers); or other program that the project proponent may propose to reduce emissions.

   c. Participate in the Placer County Air Pollution District Offsite Mitigation Program by paying the equivalent amount of money, which is equal to the projects contribution of pollutants (ROG and NOx), which exceeds the cumulative threshold of 10 pounds per day. The estimated payment for the proposed project is $(TBD) based on $14,300 per ton for a one

9-7 (cont.)

9-8

9-9

year period. The actual amount to be paid shall be determined, and satisfied per current California Air Resource Board guidelines, at the time of certification of the FEIR.

9-9 (cont.)

d. Any combination of a, b, or c, as determined feasible by the Director of APCD.

4. The following mitigation measure, and as stated in other sections of the document, shall be reworded as stated below. Note that the 2005 Title 24 Energy Code is already out of date, as used in MM 4.11 and throughout the monitoring program. Future development shall exceed the *current* energy efficiency regulations of Title 24 as determined by the date of application submittal.

9-10

➢ **4.11-1 a)** An Energy Conservation Plan shall be required prior to the approval or recordation of a Parcel Map, Subdivision Final Map, and/or prior to the issuance of a building permit for all commercial and residential development and shall describe the techniques and programs to be employed in the development of the project to achieve a minimum of 15 percent of energy efficiency above that required by the current Title 24 Energy Code.

Cordially,

Angel Rinker
Associate Planner
Placer County Air Pollution Control District

cc: Yu-Shuo, Senior Planner, PCAPCD
       Gina L. Langford, Environmental Coordinator, Placer County ERC

COMMENT LETTER 9:   ANGEL RINKER, PLACER COUNTY AIR POLLUTION CONTROL
                       DISTRICT, JULY 27, 2009

Response to Comment 9-1

City staff, the applicant's representatives, and the EIR consultant met with PCAPCD staff on February 18, 2010, to review the district's comments on the Draft EIR. At that time, the applicant summarized the results of and voluntarily provided PCAPCD staff a review copy of a technical report[8] prepared by ENVIRON International, which quantified anticipated reductions for the Lewis Property portion of the Specific Plan that could be achieved by implementing project design features and mitigation measures. (See Responses to Comments 9-6 and 9-9 for additional information). An electronic copy of the report is included on CD at the back of this Final EIR (Appendix K).

As requested by PCAPCD staff, written responses to each comment will be provided to district staff prior to certification of the EIR.

Response to Comment 9-2

Project operational emissions were estimated using the URBEMIS 2007 model using the same assumptions developed for the traffic impact analysis. City staff believes the emissions estimates are not underestimated for the reasons stated in Responses to Comments 9-3 and 9-4.

Response to Comment 9-3

The URBEMIS inputs for operational impacts are consistent with the traffic impact analysis assumptions developed by the consultant (Fehr & Peers). The assumption made to analyze Neighborhood Commercial development as high-density residential (permissible under the flex zoning should commercial not occur) is a conservative approach to estimating Proposed Project trips[9] and, therefore, for estimating operational emissions. The rationale for this assumption is provided on page 4.3-14 in the Draft EIR in Section 4.3, Transportation and Circulation, which states: "a 9.2-acre parcel located directly north of Ferrari Ranch Road is contemplated for neighborhood commercial uses. This parcel has also been identified as potentially yielding 202 apartment units should the demand for neighborhood commercial not materialize. The land use totals above assume this parcel is developed with 202 apartment units because it provides a more conservative analysis of project impacts (i.e., generates more off-site vehicle trips)." The 772 units modeled using the ITE[10] trip rate for high-density residential (6.72 trips per day) includes the 202 units of holding capacity referenced in the Table 2-1 footnote 1. The vehicle traffic operational air emissions analysis assumed the traffic impact analysis model assumptions, as stated on page 4.4-18 in the Draft EIR in Section 4.4, Air Quality to ensure consistency with the traffic analysis. The appropriateness of using the traffic impact study trip assumptions in the URBEMIS analysis was confirmed by PCAPCD staff at the February 18th meeting.

Using the ITE trip generation rate suggested by the commenter (96.82 trips per day for a 105,000-sf discount supermarket, as compared to the 6.72 trips per residential unit per day used in the traffic impact analysis) to estimate air emissions would overestimate trips that would, in turn, also result in an inconsistency with the traffic impact analysis. No comments were received from any other agency indicating that the trip generation rates used in the traffic impact analysis (shown in Table 4.3-5 in the Draft EIR) were incorrect, or that daily or peak hour trips were underestimated.

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8   Environ International, Climate Change Technical Report, The Lewis Property at Village 7, March 2010.

9   John Gard, Fehr & Peers, personal communication to Alice Tackett, PBS&J, October 27, 2008.

10   ITE: Institute of Transportation Engineers.

Moreover, according to the project applicant, a 105,000-square-foot (sf) discount supermarket is not envisioned under the Neighborhood Commercial land use designation, based on similar development projects elsewhere. As explained to PCAPCD staff at the February 18th meeting, the likely size of a supermarket would be approximately 45,000 to 50,000 sf.

As explained above, the Draft EIR includes an analysis of operational emissions based on the traffic impact study assumptions. However, in response to this specific comment and other PCAPCD staff comments concerning ROG/NO$_x$ and GHG emissions in the comment letter, operational emissions were quantified a second way: assuming the Lewis Property portion of the Specific Plan develops the commercial land use at the levels shown in Table 2-1 in the Draft EIR (page 2-8), should the high-density residential units not be constructed in the Neighborhood Commercial land use. The land use breakdown assumed for that analysis is as follows:

Lewis Property Land Use	Units/Square Feet
Single-family dwellings	1,698 units
Multi-family dwellings	570 units
Neighborhood Commercial	105,000 square feet of commercial uses
Community Center	20,000 square feet of commercial space
Elementary School	64,800 square feet
TOTAL	**2,470 units / 125,000 square feet commercial/64,800 square feet school**
Notes: Neighborhood Commercial includes supermarket; Community Center includes 15,000 sf for community center and 5,000 sf for retail/office Source: Village 7 Specific Plan, 2010	

ITE trip rates specific to each land use were used to estimate "baseline" (unmitigated) criteria air pollutant emissions for the Neighborhood Commercial land use mix. Emissions reductions that could be achieved by incorporating the specific measures already included in the Village 7 Specific Plan, as well as additional on-site mitigation measures listed in Mitigation Measure 4.11-1, as revised, were then applied to determine the mitigated emissions and percent reduction in emissions for the Neighborhood Commercial land use mix. The total emissions only include the categories for those mitigation measures that can be imposed by the City on the project and that can be demonstrated to result in quantifiable reductions (natural gas use, mobile sources (circulation network), and fireplaces). Other emissions sources, such as landscape equipment and consumer products, would not be regulated by the City, and quantification of emissions reductions would be speculative. A letter report prepared by ENVIRON International summarizing the data was provided PCAPCD staff at the February 18th meeting. A comparison of mobile source emissions data shown in Table 4.4-8 and the estimates developed for the land use mix shown above indicate that implementation of either development assumption for Neighborhood Commercial (as allowed under flex zoning) would, with one exception, still result in criteria air pollutant emissions levels that exceed the thresholds of significance. The data also show that the Draft EIR does not underestimate emissions, and that it establishes a "worst-case" upper estimate of emissions that could occur should the Neighborhood Commercial be developed with the high-density units instead of the Neighborhood Commercial land use mix.

COMPARISON OF DRAFT EIR TABLE 4.4-8 MOBILE SOURCE EMISSIONS DATA WITH NEIGHBORHOOD COMMERCIAL LAND USE MIX ASSUMPTIONS					
Summer (pounds per day)					
Land Use Mix Assumption	**ROG**	**NOx**	**CO**	**PM10**	**PM2.5**
Neighborhood Commercial developed with 772 high-density residential units (unmitigated)[1]	116.21	106.40	1,123.59	334.79	63.79
Neighborhood Commercial developed with commercial/retail/office (unmitigated)[2]	115.07	99.23	1,048.09	304.21	58.03
PCAPCD threshold	82	82	550	82	
Significant Impact (Unmitigated)	Yes	yes	yes	yes	(a)
Neighborhood Commercial developed with commercial/retail/office (mitigated)[2]	90.99	73.92	779.26	226.02	43.11
PCAPCD threshold	82	82	550	82	
Significant Impact (Mitigated)	Yes	no	yes	yes	(a)
% Reduction (Neighborhood Commercial land use mix)	21%	26%	26%	26%	26%
Winter (pounds per day)					
Land Use Mix Assumption	**ROG**	**NOx**	**CO**	**PM10**	**PM2.5**
Neighborhood Commercial developed with 772 high-density residential units (unmitigated)[1]	117.03	154.99	1,212,24	334.79	63.79
Neighborhood Commercial developed with commercial/retail/office (unmitigated)[2]	117.8	144.21	1,153.71	304.21	58.03
PCAPCD threshold	82	82	550	82	
Significant Impact (Unmitigated)	yes	yes	yes	yes	(a)
Neighborhood Commercial developed with commercial/retail/office (mitigated)[2]	88.25	107.37	860.02	226.02	43.11
PCAPCD threshold	82	82	550	82	
Significant Impact (Mitigated)	yes	yes	yes	yes	(a)
% Reduction (Neighborhood Commercial land use mix)	25%	26%	25%	26%	26%
Notes:					
(a) PCAPCD has not established a threshold					
Sources:					
1 PBS&J, 2008, compiled from URBEMIS 2007 output included in Appendix D, summarized in Draft EIR Table 4.4-8.					
2 ENVIRON International, Analysis of ROG and NOx Emission Mitigation Measures Lewis Property at Village 7, February 10, 2010.					

At the February 18th meeting, PCAPCD stuff suggested Table 4.4-8 in the Draft EIR be revised to show mitigated emissions reductions achieved by implementing the relevant mitigation measures identified in the Draft EIR and in the GHG technical report. City staff agrees such data could further inform the decision-making process and would be useful in determining the applicant's share of off-site mitigation fees, but, as explained in Response to Comment 9-9, an accurate determination of specific, mitigated development emissions would be uncertain at this time because it has not yet been determined how the Neighborhood Commercial designation would be developed. Further, because the unmitigated emissions shown in Table 4.4-8 are based on the traffic impact study (which assumed 772 high-density residential units, as allowable under flex zoning), it would be inappropriate to include the mitigated reductions for the Neighborhood Commercial land use mix shown above. Calculating the emissions reductions specific to the land use assumptions for the data in Table 4.4-8 also would not alter the conclusions of the impact analysis because the levels of

emissions would continue to exceed the numerical thresholds. Additionally, the traffic impact study software accounts for internal trips associated with mixed-use development and design features such that the mitigation measures applied to the baseline for the Neighborhood Commercial land use mix are already incorporated. As a result, the vehicle miles traveled (VMT) differs between the two land use development assumptions. Because VMT is an element of the emissions estimates, the percentage reduction achieved for the Neighborhood Commercial land use mix by incorporating project design features and mitigation should not be directly applied to the high-density residential scenario to estimate mitigated emissions for the data shown in Table 4.4-8. However, it is reasonable to assume some reduction in emissions would be realized.

For the reasons described above, no further analysis or changes to the Draft EIR are proposed in response to this comment.

Response to Comment 9-4

The overall daily trip generation of the elementary school matches the data listed in Table 4.3-5 in the Draft EIR. The URBEMIS analysis assumption for the elementary school indicates a daily trip rate of 1.29 and 900 students. The unit types selected (e.g., square footage) listed in the URBEMIS analysis in Appendix D does not affect the average daily trip length or the daily vehicle miles traveled (VMT). Therefore, mobile source emissions would not change if the unit type listed in the URBEMIS analysis assumptions shown in Appendix D used square feet instead of students.

No additional analysis or changes to the Draft EIR are necessary as a result of this comment.

Response to Comment 9-5

The commenter is correct; the URBEMIS analysis assumes no wood-burning appliances would be used. Mitigation Measures 4.4-3(A) and (B) have been revised as follows:

> 4.4-3(A) *The project applicant shall implement the following mitigation measures:*
>
> ~~*Only low-emission, EPA-certified fireplace shall be installed in residential units containing open hearth fireplaces*~~. *<u>The conditions of approval and the covenants, conditions, and restrictions (CC&Rs) for the project shall explicitly prohibit the installation of wood-burning stoves and wood-burning fireplaces within the Lewis Property portion of the Specific Plan area. Only natural gas- or propane-fireplace stoves and fireplaces are permitted.</u> Prior to the issuance of occupancy permits, the applicant must provide written proof of compliance with this measure to the City and PCAPCD.*

> 4.4-3(B) *The project applicant shall implement the following mitigation measures:*
>
> ~~*Only low-emission, EPA-certified fireplace shall be installed in residential units containing open hearth fireplaces*~~. *<u>The conditions of approval and the covenants, conditions, and restrictions (CC&Rs) for the project shall explicitly prohibit the installation of wood-burning stoves and wood-burning fireplaces within the Village 7 Programmatic Portion area. Only natural gas- or propane-fireplace stoves and fireplaces are permitted.</u> Prior to the issuance of occupancy permits, the applicant must provide written proof of compliance with this measure to the City and PCAPCD.*

Response to Comment 9-6

Pages 4.11-12 through 4.11-14 in the Draft EIR enumerate all the GHG-reducing policies that are applicable to the Proposed Project, and pages 4.11-18 through 4.11-19 describe how the Proposed Project would be consistent with those policies. As stated on page 6-1 in the Draft EIR (Chapter 6, General Plan Policy Consistency), although City staff has done its best to ascertain consistency, the Lincoln City Council is responsible for the ultimate decision regarding consistency with the City of Lincoln's General Plan policies.

The commenter identifies specific General Plan policies the agency believes should be incorporated within the Specific Plan. The components of the Specific Plan that would implement relevant policies are described on pages 4.11-18 through 4.11-19 and in Mitigation Measure 4.11-1. However, to inform the decision making process, City staff response to each of the specific policies of concern to the commenter is provided below.

Open Space and Conservation Element policies OSC-3.1, OSC-3.7, OSC-3.8, and OSC-3.11 are listed on page 4.11-13 in the Draft EIR. Implementation of Open Space and Conservation Element policy OSC-3.1 (Energy Conservation Measures) and policy OSC-3.11 (Energy Efficient Buildings) is both a component of the Specific Plan/General Development Plan and also in Mitigation Measure 4.11-1(a). As stated in the third and fourth bullets on page 4.11-19 in the Draft EIR, green building design that encourages energy-efficient design is an element of the General Development Plan. In addition, Mitigation Measure 4.11-1(a), as revised (see Response to Comment 9-9), requires an Energy Conservation Plan to incorporate strategies for energy efficiency. Open Space and Conservation Element policy OSC-3.8 (Solar Orientation and Building Site Design) is incorporated into the Specific Plan (see page 4.11-19, fourth bullet), as is OSC-3.7 (Solar Orientation and Active Solar Devices). Mitigation Measure 4.11-1(h) also addresses solar orientation and site design. The features identified in the Specific Plan/General Development Plan would automatically be required through City Council approval and adoption of the Specific Plan, General Development Plan, and associated Conditions of Approval, or are included in Mitigation Measure 4.11-1, and would not require additional mitigation, as suggested by the commenter. For mitigation measures, the City will be responsible for enforcement and monitoring of adopted mitigation measures through the Mitigation Monitoring Program (see Chapter 5 of this Final EIR). Because the policies referenced by the commenter are already incorporated into the project and/or will be required through mitigation measures identified in the Draft EIR, City staff does not believe additional mitigation is required, or that additional "techniques and monitoring programs" are warranted to ensure consistency with these policies.

The commenter identified several Health and Safety Element policies related to air quality that were not specifically enumerated in the policy list on pages 4.12 through 4.14. These policies (HS-3.1, HS-3.2, HS-3.4, HS-3.6, HS-3.7, HS-3.8, HS-3.9, and HS-3.10 were not included in the list because they are of a general nature or were incorporated elsewhere into the analysis. The commenter is also referred to Chapter 6, General Plan Policy Consistency, pages 6-9 through 6-10, which describe how the project incorporates policies HS-3.8, 3.9, and 3.10.

The commenter is of the opinion the Draft EIR has not included information about "techniques and monitoring programs to be employed … to achieve [the referenced General Plan goals and policies]". The policies referenced by the commenter and City staff response are provided below.

Policy HS-3.1 Cooperation with Local and Regional Agencies

The City shall cooperate with other local, regional, and State agencies in developing an effective approach to implementing air quality plans that achieve State and Federal Ambient Air Quality

Standards. Air quality plans shall incorporate programs developed by the Sacramento Area Council of Governments and the PCAPCD.

Policy HS-3.1 defines the City's role in regional air quality planning; it does not address specific development requirements for a project applicant.   To the extent the Proposed Project would generate air emissions, such emissions have been comprehensively evaluated and mitigation measures formulated in the Draft EIR (see Section 4.4, Air Quality, and Section 4.11, Climate Change), and no additional evaluation or mitigation is necessary.   Implementation of identified mitigation measures would occur through the City's review and enforcement of the project's Mitigation Monitoring Program. In light of the revisions to the mitigation measures already identified in the Draft EIR (Mitigation Measure 4.11-1, as revised) and additional mitigation measures that have been added to reduce the global climate change impacts of the Proposed Project,   no additional techniques or monitoring are required to ensure consistency with policy HS-3.1.

Policy HS-3.2 Regional Agency Review of Development Proposals

The City shall solicit and consider comments from local and regional agencies on proposed projects that may affect regional air quality. The City shall submit development proposals to the Placer County Air Pollution Control District for review and comment in compliance with the California Environmental Quality Act (CEQA) prior to consideration by the City.

The City provided the Draft EIR to the PCAPCD, and PCAPCD staff provided written comments on the Draft EIR (this comment letter). The City is responding to PCAPCD comments on the Draft EIR in this Final EIR. The City also received comments from Caltrans and the Placer County Community Development Department concerning the project, which have regional air quality implications (see Comment Letters 3 and 8, respectively). It is the City's responsibility to implement this policy; it is not a requirement imposed on the project applicant. No additional techniques or monitoring are required to ensure consistency with policy HS-3.2.

Policy HS- 3.4 Transportation Demand Management

The City shall encourage public and private businesses to implement employee use of rideshare programs, public transportation, NEV's, and/or alternatives to motorized transportation such as bicycling or walking to work.

As stated on page 6-10 in the Draft EIR, and as also explained on page 4.11-19 in the Draft EIR, the Specific Plan incorporates numerous features to accommodate NEVs, bicycling, pedestrian use, and transit. The Proposed Project contains limited employment-generating uses. The City, through the map approval process and issuance of building permits, will be responsible for ensuring the transportation-related features of the approved Specific Plan/General Development Plan are constructed. No additional techniques or monitoring are required to ensure consistency with this policy.

Policy HS- 3.6 City Review of Development Proposals

The City shall require consideration of alternatives or amendments that reduce emissions of air pollutant when reviewing project applications.

The Draft EIR for the Proposed Project includes an Alternatives analysis (see Chapter 7, Alternatives).   Four alternatives were evaluated: No Project, Increased Open Space/Reduced Density Alternative, 2002 Land Use Plan Alternative, and Off-Site Alternative. Of these, two alternatives – No Project and Increased Open Space/Reduced Density Alternative – have the potential to reduce air pollutant emissions. The 2002 Land Use Plan Alternative could also have

slightly reduced emissions, primarily because of the need for fewer indirect emissions sources such as water and wastewater treatment. The analysis of alternatives was prepared consistent with CEQA Guidelines Section 15126.6, and it fulfills the City's obligation under CEQA. The Lincoln City Council, as the decision maker, will have the opportunity to consider all alternatives prior to approving the project. No additional techniques or monitoring are required to ensure consistency with this policy.

> Policy HS- 3.7 Transportation Management Program
>
> The City shall require as a condition of approval for industrial, commercial, and office projects a Transportation Management Program that is consistent with the City's circulation policies of the General Plan.

The Proposed Project is a residential project with limited neighborhood-serving commercial/retail uses. The project incorporates numerous design features to reduce vehicle travel, as previously noted. No additional techniques or monitoring are required to ensure consistency with this policy.

> Policy HS- 3.8 Air Quality Analysis
>
> The City may require an analysis of potential air quality impacts associated with significant new developments through the environmental review process, and identification of appropriate mitigation measures prior to approval of the project development.

The Draft EIR (Section 4.4, Air Quality) contains a comprehensive evaluation of potential air quality impacts associated with the Village 7 Specific Plan. Mitigation measures have been identified, as required. Enforcement and monitoring of compliance with those mitigation measures would be accomplished by City staff through its ongoing review and implementation of the project's Mitigation Monitoring Program (see Chapter 5 of this Final EIR). No additional techniques or monitoring are required to ensure consistency with this policy.

> Policy HS- 3.9 Dust Suppression Measures
>
> The City shall require contractors to implement dust suppression measures during excavation, grading, and site preparation activities. Techniques may include, but are not limited to, the following: Site watering or application of dust suppressants, Phasing or extension of grading operations, Covering of stockpiles, Suspension of grading activities during high wind periods (typically winds greater than 25 miles per hour), and Revegetation of graded areas.

Construction dust impacts of the Proposed Project were evaluated in Impact 4.4-1 on pages 4.4-20 through 4.4-22 in the Draft EIR. Mitigation Measure 4.4-1(A) for the Lewis Property and 4.4-1(B) for the Village 7 Programmatic Portion list specific dust control measures that are consistent with the PCAPCD requirements and that exceed those listed in the policy. Implementation of this mitigation measure would be the responsibility of the City to monitor and enforce through the Mitigation Monitoring Program. No additional techniques or monitoring are required to ensure consistency with this policy.

> Policy HS- 3.10 Travel Demand Measures
>
> Coordinating with the PCAPCD, the City shall require large development projects to mitigate air quality impacts. As feasible, mitigations may include, but are not limited to the following: Providing bicycle access and bicycle parking facilities,   Providing preferential parking for high-occupancy vehicles, car pools, or alternative fuels vehicles (including neighborhood electric vehicles or NEVs), and   Establishing telecommuting programs or satellite work Centers.

As described for policy HS-3.7, the Proposed Project is a residential project with limited neighborhood-serving commercial/retail uses. The project incorporates numerous design features to reduce vehicle travel, such as bicycle and NEV lanes, as previously noted. Commercial/retail development will include the required number of parking spaces consistent with City code. No additional techniques or monitoring are required to ensure consistency with this policy.

> Policy HS- 3.11 Woodburning
>
> The City shall require the use of natural gas or the installation of low emission, EPA-certified fireplace inserts in all open hearth fireplaces in new homes. The city shall promote the use of natural gas over wood products in space heating devices and fireplaces in all new homes and existing homes considering remodeling plans.

The Draft EIR includes Mitigation Measure 4.4-3(A) for the Lewis Property and 4.4-3(B) for the Village 7 Programmatic Portion that prohibits the use of wood-burning fireplaces and stoves in the project. Compliance with this mitigation measure (as revised, see Response to Comment 9-5) will be the responsibility of City staff, as provided in the Mitigation Monitoring Program (Chapter 5, this Final EIR). No additional techniques or monitoring are required to ensure consistency with this policy.

No additional analysis or changes to the Draft EIR are necessary as a result of the comments regarding policy consistency.

With regard to the comment that the "energy-efficiency features" (also referred to as "measures") identified in the Draft EIR are insufficient and would only reduce GHG emissions to a small degree, City staff respectfully disagrees. The commenter did not identify any specific or alternative energy-efficiency measures that should be considered beyond the recommendation to increase energy efficiency over Title 24 requirements (see Comment 9-10) or in addition to those noted in the Draft EIR. As explained in Response to Comment 9-10, Mitigation Measures 4.11-1(A) and (B), as revised in this Final EIR, will require all residential uses and commercial buildings to exceed the 2008 Title 24 building energy efficiency standards by 15 percent. As discussed in the February 18th meeting with PCAPCD staff, the GHG emissions-reducing effect of incorporating the additional energy efficiency into the Lewis Property portion of the project is estimated to achieve a 10 percent reduction in CO_2 emissions,[11] which City staff does not consider small.

The Draft EIR (pages 4.11-18 through 4.11-19) clearly explains the elements of the Proposed Project that would address climate change and energy conservation. Mitigation Measure 4.11-1 in the Draft EIR identified additional requirements. The Draft EIR concluded such features would reduce, but would not avoid (or "offset") project GHG emissions. In conjunction with preparation of this Final EIR, the project applicant for the Lewis Property portion of the Specific Plan has quantified the actual level of GHG emissions reduction that project design features, as well as the additional enhancements and mitigation identified during the course of preparation of the report, would achieve. The applicant presented the results of that study to PCAPCD staff at the February 18th meeting and provided a copy of the technical report[12] to staff for their use. As a result of the comment and subsequent discussion with PCAPCD staff, the City has modified Mitigation Measure 4.11-1 by adding additional mitigation measures and separated the mitigation into Mitigation Measure 4.11-1(A) for the Lewis Property and Mitigation Measure 4.11-1(B) for the Village 7 Programmatic Portion. Please see also Response to Comment 9-9 for additional information.

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11   Environ International, Climate Change Technical Report, The Lewis Property at Village 7, March 2010, Table 2.7-6.

12   Environ International, Climate Change Technical Report, The Lewis Property at Village 7, March 2010.

Response to Comment 9-7

Mitigation Measure 4.4-1(A) and (B) have been revised as follows:

- *The applicant shall submit to the City of Lincoln, as the lead agency, and receive approval of a Construction Emission/Dust Control Plan prior to ~~groundbreaking~~ issuance of a grading permit.*

Response to Comment 9-8

Mitigation Measure 4.4-2(A) and (B) have been revised as follows:

- *Construction equipment operators shall shut off equipment when not in use to avoid unnecessary idling. Vehicle idling shall be kept below ~~10 minutes~~ five consecutive minutes in accordance with Lincoln Municipal Code Section 10.14 requirements.*

Response to Comment 9-9

The Draft EIR (pages 4.11-18 through 4.11-19) describes the on-site project features that would reduce GHG emissions, as well as help reduce long-term criteria air pollutant emissions for ROG and NO_x that are addressed by the PCAPCD's off-site mitigation program. In conjunction with preparation of this Final EIR, the Lewis Property applicant prepared a quantified analysis of the GHG reductions that can be achieved by incorporating the specific measures already included in the Village 7 Specific Plan as well as mitigation on-site measures listed in revised Mitigation Measures 4.11-1(A) and 4.11-(B) that will result in quantifiable emissions reductions for ROG and NO_x. The results of this analysis were presented to PCAPCD staff at the February 18th meeting.

To the extent that a development's emissions of criteria pollutants exceed PCAPCD thresholds, the project applicants must participate in the PCAPCD's Off-site Mitigation Program as required by Mitigation Measures 4.4-3(A) and 4.4-3(B) prior to the issuance of building permits. The PCAPCD requested that participation and payment of fees to it for the Off-site Mitigation Program be required prior to the time of the City's certification of the Final EIR for the Village 7 Specific Plan, but an accurate determination of a specific development's emissions of the criteria air pollutants would be uncertain at that time because the exact number of residential units and the exact square footage of commercial buildings in the Village 7 Specific Plan area would not yet be known and approved by the City.

The project applicant for the Lewis Property had ENVIRON International prepare an emissions inventory report for the Lewis Property portion of the Specific Plan consistent with the methodologies established by the California Climate Action Registry (CCAR).[13] A copy of the ENVIRON report is included in this Final EIR as Appendix K. The emissions inventory considered seven categories of GHG emissions: emissions due to vegetation changes, emissions from construction activities, residential emissions, commercial building emissions, mobile source emissions, municipal emissions, and area source emissions. The emissions from construction and land-use change would be one-time emissions events, while the other emissions would occur annually throughout the life of the project. The ENVIRON report determined that the total annual emissions for the Lewis Property would be 27,067 tonnes without any mitigation, and only 21,208 tonnes per year with mitigation. It was concluded that the mitigation measures suggested in the ENVIRON report would reduce the Lewis Property's GHG emissions by approximately 22 percent. Applicable mitigation measures suggested by the ENVIRON report have been added by the City to Mitigation Measure

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[13]   Environ International, Climate Change Technical Report, The Lewis Property at Village 7, March 2010.

4.11-1(A) for the Lewis Property, and, where appropriate, to Mitigation Measure 4.11-1(B) for the Programmatic Portion of the Specific Plan area.

To ensure the GHG emissions reductions assumed in the quantification are implemented, the City has revised Mitigation Measure 4.11-1 as shown below. These revisions do not alter the conclusions of significance presented in the Draft EIR for GHG emissions, but are intended to clarify and enhance the mitigation measures presented in the Draft EIR.

Lewis Property Mitigation Measure 4.11-1(A)

4.11-1(A)(a)   *At the time of application for design review for a project of more than 10 units or a commercial development of over 50,000 square feet, the City shall require the project applicant to submit an Energy Conservation Plan. An Energy Conservation Plan for all commercial and residential development shall be required prior to recordation of the first small lot Final Map. The plan shall describe the techniques and programs to be employed in the development of the project to achieve energy conservation (1) a minimum 15 percent energy efficiency above that required by the 2008 Title 24 energy efficiency regulations, or (2) compliance with the then-current Title 24 energy efficiency regulations. These programs shall include, but shall not be limited to, either:*

(i) *Participation in the PG&E Energy Star Performance Method. This method is available to builders of single-family and multi-family homes that are at least 15 percent more energy efficient than required by the 2005 2008 Title 24 Energy Code energy efficiency regulations and meet all US EPA specifications. Participating builders become part of the California Energy Star New Homes Program, and their homes earn the Energy Star label. Incremental incentives can also be earned by adding energy efficient appliances and/or lighting to homes.*

OR

(ii) *Participation in the New Solar Homes Partnership (NSHP) Performance Method. This method is available to builders of single-family and multi-family homes that are at least 15 percent more efficient than required by the 2005 2008 Title 24 Energy Code energy efficiency regulations and meet all US EPA specifications. A second tier of participation is available to single-family homes that exceed Title 24 by 35 percent, demonstrate a 40 percent reduction in cooling load, and include solar generation as an option for buyers. Both tiers require that all appliances provided by the builder must be Energy Star qualified. Builders may also qualify for additional solar incentives through the CEC's NSHP.*

OR

(iii) *Participation in the Build It Green Program, which was created by Build It Green, a non-profit organization whose mission is to promote health, durable, energy and resource efficient buildings throughout California. Using the Green Point Checklist, a home can be considered green if it fulfills the prerequisites and earns at least 50*

points and meets the minimum points per category: Energy (30 points); Indoor Air Quality (5 points); Resources (6 points); and Water (9 points). Build It Green uses certified Green Point Raters to measure success with the program and verification of the measures employed to meet the requirements of the checklist.

b) *The project applicant shall be responsible for having prepared, by an experienced and qualified firm, an Energy Resource Conservation Guide that will provide educational information on how homeowners can increase energy efficiency and conservation in their new homes. The information will be delivered to each original homeowner as part of the move-in package. The information packet shall be reviewed by, and be subject to approval of, City of Lincoln staff. ~~The City and the project applicant shall work together to publish and distribute an Energy Resource Conservation Guide describing measures individuals can take to increase energy efficiency and conservation prior to the occupation of the first residential unit. The applicant shall be responsible for funding the preparation of the Guide. The City will be responsible for the distribution of the guide. The Energy Resource Conservation Guide shall be updated every 5 years and distributed at the public permit counter.~~*

c) *Installation of Light Emitting Diode (LED) traffic signals and LED street lights shall be required at the Lewis Property and be constructed in accordance with City improvement standards or as otherwise approved by the Development Services Director. ~~The project applicant shall pay for an initial installment of Light Emitting Diode (LED) traffic lights in all Specific Plan area traffic lights.~~*

d) *The project applicant shall ensure that a tree planting program at the Lewis Property, approved by the City of Lincoln staff, provides the following:*

Streets:

Residential collector streets: 1 tree per 35 linear ft
Primary residential street: 1 tree per 35 linear ft
Major and minor paseos: 1 tree per 25 ft.
Ferrari Ranch Road: 551 trees within the Lewis Property boundaries
Moore Road: 928 trees within the Lewis Property boundaries
Central Blvd: 1,471 trees within the Lewis Property boundaries

Residential Units:

LDR units: 1 front yard tree
Village Country
Estate(VCE) units: 2 front yard trees
MDR units: 1 front yard tree. Some MDR units may not have front yards; however, where the front of an MDR lot is on a paseo, trees will be spaced 25 ft on center along the paseo. The exact number of trees to be planted in MDR developments will be determined during the City's design review process by the City and project applicant with the

goal of having one front yard or back yard tree for each residential unit.
HDR units: Average of 40 trees per acre

Open Space Areas:

Mini parks   27 trees per acre
Community parks   27 trees per acre
Neighborhood parks   27 trees per acre

School & VMU:

VMU: 10 trees per acre
School: 15 trees per acre
Commercial: Sufficient trees to provide 50% tree shading within 15 years in commercial and retail parking lots, consistent with General Plan policy OSC-3.10.
NOTE: The number of trees specified above is an approximate number and will be subject to adjustment for physical constraints resulting from the actual location of physical improvements (both above ground and underground) and public safety considerations, such as the need to preserve vehicle operator sight distances at all roadway intersections.

The project applicant shall ensure the tree planting program provides 50% tree shading within 15 years in commercial and retail lots to reduce radiation and encourage the reduction of greenhouse gases, consistent with General Plan policy OSC-3.10.

 e) *Pursuant to the City's new 2050 General Plan, and specifically under the Energy Resources section, Goal OSC-3, "Encourage energy conservation in new and existing developments throughout the City," to address Policy OSC 3.9, "Shade Tree Planting," the project applicant shall be responsible for having prepared, by an experienced and qualified firm, or by an organization such as the Sacramento Tree Foundation, a tree information planting and care guide. The planting and care guide will be delivered to each original homeowner as a part of the move in package. The planting and care guide shall be reviewed by, and be subject to the approval of, City of Lincoln staff. The applicant shall develop a tree planting packet for distribution in the Village 7 Specific Plan to help future residents understand their options for planting trees that can absorb carbon dioxide, consistent with General Plan policy HS-3.21.*

 f) *The City shall require that energy efficient lighting fixtures, including fluorescent lights, be used in installed as part of the original construction of residential and commercial structures within the plan area.*

 g) *The City shall require light-colored roofing materials with a solar reflective value and thermal emittance value of 0.25 or better on all residential and commercial buildings. The project applicant shall include light-colored roofing materials and road materials to address "urban heat island" effect.*

 h) *Pursuant to the City's new 2050 General Plan, and specifically under the Energy Resources section, Goal OSC-3, "Encourage energy conservation in new and existing developments throughout the City," the City shall be responsible pursuant to Policy OSC 3.14, "Early Planning for Energy Efficiency," for developing a program whereby energy planners*

and energy efficiency specialists will be included in pre-application discussions with a developer or builder to help identify the potential for inclusion of solar orientation and other energy efficient systems into the land plan and building practices. ~~*The City shall ensure recommendations from energy planners and energy efficiency specialists in the building permit review process are incorporated to ensure building and site design takes into account solar orientation, energy-efficient systems, building practices, and materials, consistent with General Plan policies OSC-3.8 and OSC-3.14.*~~

i) *Implement all mitigation measures identified in Section 4.4, Air Quality.*

j) *Implement Mitigation Measure 4.7-4 (Urban Stormwater Pollutants) in Section 4.7, Hydrology and Water Quality.*

k) *New commercial buildings (except schools) shall be 15 % more energy efficient than the 2008 Title 24 building standards based on annual energy usage.*

l) *The roadway system shall be designed to accommodate the usage of neighborhood electric vehicles (NEVs).*

m) *Provide bus turnouts and transit shelters on roadways that are to be served by bus transit in the future in accordance with City improvement standards and as otherwise directed by City's Development Services Director.*

n) *Water used during construction shall be reclaimed water.*

Village 7 Programmatic Portion Mitigation Measure 4.11-1(B)

4.11-1(B)(a)   ~~*At the time of application for design review for a project of more than 10 units or a commercial development of over 50,000 square feet, the City shall require the project applicant to submit an Energy Conservation Plan.*~~ *An Energy Conservation Plan for all residential development shall be required prior to recordation of the first small lot Final Map. The plan shall describe the techniques and programs to be employed in the development of the project to achieve* ~~*energy conservation*~~ *(1) a minimum 15 percent energy efficiency above that required by the 2008 Title 24 energy efficiency regulations, or (2) compliance with the then-current Title 24 energy efficiency regulations. These programs shall include, but shall not be limited to, either:*

(i) *Participation in the PG&E Energy Star Performance Method. This method is available to builders of single-family homes that are at least 15 percent more energy efficient than required by the* ~~*2005*~~ *2008 Title 24* ~~*Energy Code*~~ *energy efficiency regulations and meet all US EPA specifications. Participating builders become part of the California Energy Star New Homes Program, and their homes earn the Energy Star label. Incremental incentives can also be earned by adding energy efficient appliances and/or lighting to homes.*

OR

(ii) *Participation in the New Solar Homes Partnership (NSHP) Performance Method. This method is available to builders of single-family homes that are at least 15 percent more efficient than required by the ~~2005~~ 2008 Title 24 ~~Energy Code~~ energy efficiency regulations and meet all US EPA specifications. ~~A second tier of participation is available to single-family homes that exceed Title 24 by 35 percent, demonstrate a 40 percent reduction in cooling load, and include solar generation as an option for buyers. Both tiers require that all appliances provided by the builder must be Energy Star qualified. Builders may also qualify for additional solar incentives through the CEC's NSHP.~~*

OR

(iii) *Participation in the Build It Green Program, which was created by Build It Green, a non-profit organization whose mission is to promote health, durable, energy and resource efficient buildings throughout California. Using the Green Point Checklist, a home can be considered green if it fulfills the prerequisites and earns at least 50 points and meets the minimum points per category: Energy (30 points); Indoor Air Quality (5 points); Resources (6 points); and Water (9 points). Build It Green uses certified Green Point Raters to measure success with the program and verification of the measures employed to meet the requirements of the checklist.*

b) *The project applicant shall be responsible for having prepared, by an experienced and qualified firm, an Energy Resource Conservation Guide that will provide educational information on how homeowners can increase energy efficiency and conservation in their new homes. The information will be delivered to each original homeowner as part of the move-in package. The information packet shall be reviewed by, and be subject to approval of, City of Lincoln staff. ~~The City and the project applicant shall work together to publish and distribute an Energy Resource Conservation Guide describing measures individuals can take to increase energy efficiency and conservation prior to the occupation of the first residential unit. The applicant shall be responsible for funding the preparation of the Guide. The City will be responsible for the distribution of the guide. The Energy Resource Conservation Guide shall be updated every 5 years and distributed at the public permit counter.~~*

c) *Installation of Light Emitting Diode (LED) traffic signals and LED street lights shall be required at the Village 7 Programmatic Portion and be constructed in accordance with City improvement standards or as otherwise approved by the Development Services Director. ~~The project applicant shall pay for an initial installment of Light Emitting Diode (LED) traffic lights in all Specific Plan area traffic lights.~~*

d) *The project applicants for projects within the Village 7 Programmatic Portion of the Specific Plan shall ensure that a tree planting program, approved by the City of Lincoln staff, provides the following:*

Streets:

Residential collector streets: 1 tree per 35 linear ft
Primary residential street: 1 tree per 35 linear ft
Major and minor paseos: 1 tree per 25 ft

Residential Units:

LDR units: 1 front yard tree
MDR units: 1 front yard tree. Some MDR units may not have front yards; however, where the front of an MDR lot is on a paseo, trees will be spaced 25 ft on center along the paseo. The exact number of trees to be planted in MDR developments will be determined during the City's design review process by the City and project applicant(s) with the goal of having one front yard or back yard tree for each residential unit.

Open Space Areas:

Mini parks   27 trees per acre
Community parks   27 trees per acre
Neighborhood parks   27 trees per acre

NOTE: The number of trees specified above is an approximate number and will be subject to adjustment for physical constraints resulting from the actual location of physical improvements (both above ground and underground) and public safety considerations, such as the need to preserve vehicle operator sight distances at all roadway intersections.
~~The project applicant shall ensure the tree planting program provides 50% tree shading within 15 years in commercial and retail lots to reduce radiation and encourage the reduction of greenhouse gases, consistent with General Plan policy OSC-3.10.~~

e) *Pursuant to the City's new 2050 General Plan, and specifically under the Energy Resources section, Goal OSC-3, "Encourage energy conservation in new and existing developments throughout the City," to address Policy OSC 3.9, "Shade Tree Planting," the project applicant shall be responsible for having prepared, by an experienced and qualified firm, or by an organization such as the Sacramento Tree Foundation, a tree information planting and care guide. The planting and care guide will be delivered to each original homeowner as a part of the move in package. The planting and care guide shall be reviewed by, and be subject to the approval of, City of Lincoln staff.* *~~The applicant shall develop a tree planting packet for distribution in the Village 7 Specific Plan to help future residents understand their options for planting trees that can absorb carbon dioxide, consistent with General Plan policy HS-3.21.~~*

f) *The City shall require that energy efficient lighting fixtures, including fluorescent lights, be ~~used in~~ installed as part of the original construction of residential ~~and commercial~~ structures within the plan area.*

g) *The City shall require light-colored roofing materials with a solar reflective value and thermal emittance value of 0.25 or better on all residential buildings.* *~~The project applicant shall include light-colored roofing materials and road materials to address "urban heat island" effect.~~*

h) *Pursuant to the City's new 2050 General Plan, and specifically under the Energy Resources section, Goal OSC-3, "Encourage energy conservation in new and existing developments throughout the City," the City shall be responsible pursuant to Policy OSC 3.14, "Early Planning for Energy Efficiency," for developing a program whereby energy planners and energy efficiency specialists will be included in pre-application discussions with a developer or builder to help identify the potential for inclusion of solar orientation and other energy efficient systems into the land plan and building practices.* ~~The City shall ensure recommendations from energy planners and energy efficiency specialists in the building permit review process are incorporated to ensure building and site design takes into account solar orientation, energy-efficient systems, building practices, and materials, consistent with General Plan policies OSC-3.8 and OSC-3.14.~~

i) *Implement all mitigation measures identified in Section 4.4, Air Quality.*

j) *Implement Mitigation Measure 4.7-4 (Urban Stormwater Pollutants) in Section 4.7, Hydrology and Water Quality.*

k) *The roadway system shall be designed to accommodate the usage of neighborhood electric vehicles (NEVs).*

l) *Provide bus turnouts and transit shelters on roadways that are to be served by bus transit in the future in accordance with City improvement standards and as otherwise directed by City's Development Services Director.*

m) *Water used during construction shall be reclaimed water*

For those mitigation measures with reductions that can be quantified for the Lewis Property portion of the Specific Plan (which is evaluated at a project level), implementation of the mitigation measures listed in Mitigation Measure 4.11-1(A) would achieve an approximately 22 percent reduction in GHG emissions. While the GHG reductions achieved by the Proposed Project can be quantified for the Lewis Property, in combination with the anticipated emissions and possible mitigation strategies for the Village 7 Programmatic Portion, this still would not achieve the necessary level of reduction that would be required to reduce the Proposed Project's contribution to GHG emissions within the cumulative context to a less-than-significant level. The impact would remain cumulatively significant and unavoidable, as stated on page 4.11-20 in the Draft EIR.

Response to Comment 9-10

Mitigation Measure 4.11-1 has been separated into 4.11-1(A) and 4.11-1(B) that apply to the Lewis Property and the Programmatic Portion of the Specific Plan area, respectively. Subparagraph (a) of each revised mitigation measure has been revised as shown in Response to Comment 9-9, but is repeated here. The timing of implementing the mitigation measure is consistent with City procedure. Mitigation Measure 4.11-1 has also been revised to incorporate the specific actions assumed in the GHG emissions reduction analysis. The complete text of revised Mitigation Measure 4.11-1 is presented in Chapter 2, Text Changes to the Draft EIR, and in Table 2-1, Revised Summary of Impacts and Mitigation Measures.

Lewis Property Mitigation Measure 4.11-1(A)(a)

4.11-1(A)(a)   *At the time of application for design review for a project of more than 10 units or a commercial development of over 50,000 square feet, the City shall require the project applicant to submit an Energy Conservation Plan.* *An Energy Conservation Plan for all commercial and residential development shall be required prior to recordation of the first small lot Final Map. The plan shall describe the techniques and programs to be employed in the development of the project to achieve* ~~energy conservation~~ *a minimum 15 percent energy efficiency above that required by the 2008 Title 24 energy efficiency regulations. These programs shall include, but shall not be limited to, either:*

    (i) Participation in the PG&E Energy Star Performance Method. This method is available to builders of single-family and multi-family homes that are at least 15 percent more energy efficient than required by the ~~2005~~ 2008 Title 24 ~~Energy Code~~ energy efficiency regulations and meet all US EPA specifications. Participating builders become part of the California Energy Star New Homes Program, and their homes earn the Energy Star label. Incremental incentives can also be earned by adding energy efficient appliances and/or lighting to homes.

    OR

    (ii) Participation in the New Solar Homes Partnership (NSHP) Performance Method. This method is available to builders of single-family and multi-family homes that are at least 15 percent more efficient than required by the ~~2005~~ 2008 Title 24 ~~Energy Code~~ energy efficiency regulations and meet all US EPA specifications. ~~A second tier of participation is available to single-family homes that exceed Title 24 by 35 percent, demonstrate a 40 percent reduction in cooling load, and include solar generation as an option for buyers. Both tiers require that all appliances provided by the builder must be Energy Star qualified. Builders may also qualify for additional solar incentives through the CEC's NSHP.~~

    OR

    (iii) Participation in the Build It Green Program, which was created by Build It Green, a non-profit organization whose mission is to promote health, durable, energy and resource efficient buildings throughout California. Using the Green Point Checklist, a home can be considered green if it fulfills the prerequisites and earns at least 50 points and meets the minimum points per category: Energy (30 points); Indoor Air Quality (5 points); Resources (6 points); and Water (9 points). Build It Green uses certified Green Point Raters to measure success with the program and verification of the measures employed to meet the requirements of the checklist.

Village 7 Programmatic Portion Mitigation Measure 4.11-1(B)(a)

4.11-1(B)(a)   *At the time of application for design review for a project of more than 10 units or a commercial development of over 50,000 square feet, the City shall require the project applicant to submit an Energy Conservation Plan.* *An Energy Conservation Plan for all residential development shall be required prior to recordation of the first small lot Final Map. The plan shall describe the techniques and programs to be employed in the development of the project to achieve* ~~*energy conservation*~~ *a minimum 15 percent energy efficiency above that required by the 2008 Title 24 energy efficiency regulations.* *These programs shall include, but shall not be limited to, either:*

(i) *Participation in the PG&E Energy Star Performance Method. This method is available to builders of single-family homes that are at least 15 percent more energy efficient than required by the* ~~*2005*~~ *2008 Title 24* ~~*Energy Code*~~ *energy efficiency regulations and meet all US EPA specifications. Participating builders become part of the California Energy Star New Homes Program, and their homes earn the Energy Star label. Incremental incentives can also be earned by adding energy efficient appliances and/or lighting to homes.*

OR

(ii) *Participation in the New Solar Homes Partnership (NSHP) Performance Method. This method is available to builders of single-family homes that are at least 15 percent more efficient than required by the* ~~*2005*~~ *2008 Title 24* ~~*Energy Code*~~ *energy efficiency regulations and meet all US EPA specifications.* ~~*A second tier of participation is available to single-family homes that exceed Title 24 by 35 percent, demonstrate a 40 percent reduction in cooling load, and include solar generation as an option for buyers. Both tiers require that all appliances provided by the builder must be Energy Star qualified. Builders may also qualify for additional solar incentives through the CEC's NSHP.*~~

OR

(iii) *Participation in the Build It Green Program, which was created by Build It Green, a non-profit organization whose mission is to promote health, durable, energy and resource efficient buildings throughout California. Using the Green Point Checklist, a home can be considered green if it fulfills the prerequisites and earns at least 50 points and meets the minimum points per category: Energy (30 points); Indoor Air Quality (5 points); Resources (6 points); and Water (9 points). Build It Green uses certified Green Point Raters to measure success with the program and verification of the measures employed to meet the requirements of the checklist.*

PCWA
water • energy • stewardship

June 27, 2009
File No. PD/Lincoln

RECEIVED

JUL 27 2009

CITY OF LINCOLN
COM'Y DEV DEPT

Rod Campbell, Director of Community Development
City of Lincoln
Community Development Department
640 5th Street
Lincoln, CA 95648

SUBJECT: Initial Study and Draft Environmental Impact Report (DEIR) for the
Village 7 Specific Plan Project

Dear Mr. Campbell:

Thank you for the opportunity to review and comment on the DEIR prepared for the Village 7
Specific Plan Project. Placer County Water Agency (PCWA) has reviewed the information and has
the following comments.

The DEIR contains a Water Supply Assessment (WSA) as Appendix H. The WSA should be
updated to reflect the figures supplied in PCWA's annual status report letter dated April 24, 2009,
copy attached. Other suggested revisions include:

- The American River Pump Station discussion, page 15, should be revised to state
  that this project has been completed and is online. The total cost of the project was
  $75 million.

- The Auburn Tunnel Pump Station Discussion, page 15, should be revised to state
  that the pumping station project is complete, however conveyance pipeline was not
  constructed. Construction of the pipeline has been delayed due to economic
  considerations. The discussion regarding the Ophir Water Treatment Plant and
  Conveyance Pipelines, page 16, should be updated to state that, due to the downturn
  in the economy, construction of the treatment plant and pipelines have been
  delayed. The current projection is for completion of construction in 2018, however
  this date is subject to change dependent upon the economy.

- The potential Sacramento River Supply discussion should be revised to state that the
  estimated completion date is indeterminate, subject to completion of the
  environmental documentation by the US Bureau of Reclamation, and identification
  of funding sources.

- Page 17 states that PCWA's Integrated Water Resources Plan projects supplying
  Lincoln with 38,055 AFA. This paragraph should note that this amount includes

10-1

6,471 AFA to be supplied by the Nevada Irrigation District. PCWA anticipates updating the IWRP in 2010 to more closely match the City's General Plan buildout water use projections.

10-1 (cont.)

PCWA obtained a permit from the US Army Corps of Engineers pursuant to Section 404 of the Clean Water Act of 1972 to construct the Ophir Water Treatment Plant, which would serve treated water to future new development discussed in the 2050 Draft Lincoln General Plan Update. The Corps permit required Section 7 consultation with the US Fish and Wildlife Service. US Fish and Wildlife Service required PCWA to provide an analysis of cumulative effects of the project that considers the effects of increased water treatment capacity on the potential to develop areas that will not be required to obtain permits from the Corps. As part of this consultation with US Fish and Wildlife Service, PCWA signed an agreement with the Service that it will not provide treated water service to new development without proof from the applicant that the applicant has consulted with the US Fish and Wildlife Service on the new development project and that the US Fish and Wildlife Service has determined that the project has satisfactorily complied with its requirements under the Endangered Species Act. The proposed Sacramento River Diversion facility permit will have these same requirements.

10-2

Although this requirement will not be implemented until the Ophir Water Treatment Plant is in service, PCWA wants to provide the City with ample notice. Prior to accepting payment of Water Connection Charges to increase the maximum delivery rate from the proposed Ophir WTP or Sacramento River Diversion facility to the City of Lincoln, PCWA will require that the City identify the specific lands proposed to be served by the increase in the maximum delivery rate and to provide proof of that land's satisfactory compliance with the Endangered Species Act.

As discussed in our comment letter for the Notice of Preparation for this project, PCWA requests that the City require the developer of this project to pay for processing the detachment from PCWA Zone No. 5 prior to receiving any domestic water service. The City will need to pay the appropriate water connection charges to secure water needed for this project. The process is outlined in the water supply contract between the City and PCWA.

10-3

PCWA appreciates the opportunity to comment. If you have any questions please call me at (530) 823-4886.

Sincerely,
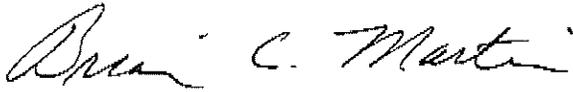
Brian C. Martin, P.E.
Director of Technical Services

BCM:HT:ns

COMMENT LETTER 10: **BRIAN C. MARTIN, PLACER COUNTY WATER AGENCY, JUNE 27, 2009**

Response to Comment 10-1

The Village 7 Specific Plan SB 610 Water Supply Assessment (WSA) was approved on August 26, 2008 by the Lincoln City Council (Draft EIR, pages 4.9-50 and 4.9-53). It was prepared as a stand-alone document as required under Public Resources Code Section 21151.9. The information included in the WSA in reference to PCWA water supplies was associated with "readily available information" available to the City during development of the WSA in spring and summer of 2008. Subsequent changes or factual updates, if not detrimental to the conclusions provided in the WSA, are not necessary. Based upon an initial review of the revisions suggested in the comment, the changes and factual updates do not affect the conclusions of the WSA. Furthermore, these changes and updates would not result in any changed conditions to the findings of the Draft EIR associated with the provision of water resources for the project.[14]

The City may consider incorporating the updates listed by the commenter at the time of issuing a certification of available water supply under provisions of SB 221 (written verification of water supply availability). This would occur as part of the tentative map approval process.

Response to Comment 10-2

The comment regarding proof of new developments' compliance with the Endangered Species Act is noted.

Response to Comment 10-3

The comment regarding new development's payment of processing charges for detachment from PCWA's Zone No. 5 and payment of water connection charges for domestic water service as per the existing agreement between the City and PCWA is noted.

---

14   Tully & Young, "Response to Placer County Water Agency Comments on City of Lincoln Village 7 Draft EIR," letter from Greg E. Young to Rod Campbell, City of Lincoln, September 10, 2009.

RECEIVED

JUL 27 2009

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Lincoln

All-America City

2006
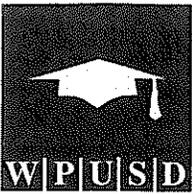
July 24, 2009

Rodney Campbell, Director
Community Development Department
City of Lincoln
600 Sixth Street
Lincoln CA 95648

Re: Village 7 Specific Plan Project Draft Environmental Impact Report

Dear Mr. Campbell:

Thank you for the opportunity to respond to the Draft Environmental Impact
Report (EIR) for Village 7 Specific Plan Project. In first review of this document,
much of the data that was utilized in the formation of the Draft EIR was done so
using antiquated information about the Western Placer Unified School District
(WPUSD). In order for future revisions of this document to be more accurate,
current data on WPUSD has been attached to this response.

11-1

To begin, we should address the probable housing units within this project itself.
As outlined in Section 4.9, Public Utilities and Service, Village 7 lists 1,698 single
family units and 772 multi family units on the Lewis Property and another 815
single family units on what is referred to as the Programmatic Portion of Village 7.
This provides a total of 2,513 single family and 772 multi family units for all of
Village 7. The total housing units proposed in the Draft EIR are 3,285. This
dwelling unit number is 386 greater than appears in the City of Lincoln General
Plan of 2008 where the number listed was 2,898 units. The question becomes,
does the Village 7 Specific Plan over ride the City of Lincoln General Plan? Which
number should be used by WPUSD for planning purposes?

11-2

After an understanding as to the proposed units has been arrived, we move to the
issue of mitigation for the impacts on WPUSD by those units. Section 4.9 for
Village 7 Specific Plan Draft EIR goes into an analysis of Proposition 1A/Senate
Bill 50. It states that the statutory requirement of SB 50 by the developer is
deemed to be full and complete mitigation. The perception that paying the SB 50
fees takes care of the school mitigation is far from accurate and is not considered
acceptable to WPUSD. An EIR, by its definition, must state the real impacts of a
project. The real impacts of Village 7 housing units on WPUSD will not be
covered by listing SB 50 and saying the project is mitigated when SB 50 will cover
less than 50% of the impacts caused by Village 7. This is like saying half a road will
mitigate the traffic, half sized sewer pipes will take care of the sewer, only 50% of
standard water usage would mitigate a household and the houses can deal with
50% of their natural gas and electrical power needs. To list SB 50 and then list
Mitigation Measures as "none required", is not in the

11-3

"A DISTRICT ON THE MOVE"

spirit or the intent of an EIR which must state the real impacts. Until these true mitigation issues are addressed, the EIR would not be found acceptable by WPUSD.

SB 50 was based on the perception that the State of California would provide school facilities money to help school districts build new schools. Historically, the State has provided about 36% of the money to help districts build new schools (not the previously touted 50%). In WPUSD that true percentage has been even less than 36% because of various costs that were incurred in the building of recent schools due to construction climate and the costs of materials at time of build. The State of California Office of Public School Construction has, or will shortly, run out of Proposition 55 school bond money. There is the possibility of a 2010 new bond measure for school facilities; however, based on the voter's feelings about the State and its financial condition, it will be very difficult to pass any State bond. This would mean that no money would be available to California schools for any percentage of reimbursement of construction costs. Is the City of Lincoln willing to gamble that the future students of Village 7 will be able to attend schools which are partly funded with State School Facilities Bond money? This is what the Draft EIR implies.

Currently, the WPUSD operates under the SB 50 program; however, within the next year the District will have exhausted all of its remaining capital outlay funding to meet the needs of incoming students for the 2009-2010 and 2010-2011 school years. At that time the District *may* qualify for Financial Hardship if, indeed, the program still exists. Schools built under Financial Hardship are typically portable in nature and due to the funding limitations imposed by the State under the program, do not include many of the components needed to provide an outstanding education. Are the City of Lincoln, the developer and home owners of Village 7 willing to settle for this type of school? Also to consider is that the State is currently rewriting the regulations for the Financial Hardship program which may result in the WPUSD not being able to qualify for the program.

11-3
(cont.)

When Village 7 is ready to come on line there will not be any State facilities money available unless a 2010 State school construction bond is passed. The Draft EIR needs to address the uncertainty of a future State bond. Even if a bond were to be successful in 2010 there will be such a backlog of projects and with the Pooled Money Investment Board's (PMIB) concern about the State's bonding capacity, funding for projects that have yet to start will be in jeopardy. The final EIR must outline a plan for school facilities mitigation which contains 100% local funding. This can be accomplished by a written mitigation agreement between the landowners and the WPUSD which spells out the 100% mitigation with a possibility of reimbursement with State funding if it becomes available.

In addition to not having guaranteed State of California school bond funds to share in the cost of new school construction, the EIR also needs to address that

not all expenses necessary to build a school to state standards are reimbursed by the State. Many items that are imperative to pre-construction and construction of a school project are expected to be paid by the school district completely. To expect that WPUSD be held 100% financially responsible for these items as well does not effectively mitigate the costs of building schools in the State of California, especially within WPUSD.

There are 3,285 dwelling units proposed for Village 7. Based on the Tables in Section 4.9 it is projected there will be 1,576 students who will need new school facilities. Houses are built for 50 plus years and so are schools. Thus Village 7 will impact and continue to impact the WPUSD for decades to come. The appropriate school facilities must be in place to serve this ongoing student population. Because students will go to elementary, middle and high schools, costs can be established on a per student basis for the many decades that the dwelling units will exist. Based on the construction costs of building the three types of new schools in 2009, the District has identified a cost per student of $46,395. Attached is **Exhibit A** which outlines how this number is determined. Also, attached is **Exhibit B** which breaks down the 2009 cost of constructing the three levels of schools utilized by the WPUSD. These figures were averaged out using construction costs on 30 different school projects from various surrounding areas to WPUSD.

11-3
(cont.)

The real impact of Village 7 on the WPUSD to provide the school facilities for the new students is $46,395 x 1,576 students = $73,118,520. This is the number which needs to be included in the Draft EIR as the real impact on the WPUSD. This number can change as the cost of land changes and construction costs inflate or deflate. If the $73,118,520 number is listed with an established mitigation agreement with the landowners to mitigate the school facilities costs of $73,118,520, then the final EIR can say for mitigation "none is required". WPUSD will continue to pursue alternate financing methods to mitigate necessary school building costs, as long as the developer understands that whatever methods are agreed upon cannot cause any financial impact to WPUSD, nor reduce in any way the full mitigating dollar amount.

Although current regulations prevent a school district in California from refusing to issue a document generally known as a "will serve letter", the WPUSD is in no position to issue any will serve letter on Village 7 until we know we can serve the students by building the appropriate school facilities. Until WPUSD has a School Mitigation Agreement in place, the landowners and proponents of Village 7 need to be aware that WPUSD cannot and should not take on any more students than the current facilities can handle.

Also enclosed is a copy of the District's narrative response to the City of Lincoln's General Plan Update of February 2008. The response further details the efforts of the District to accurately portray its needs and the steps necessary to adequately house students of future developments.

11-4

In closing, an EIR needs to cover the known and projected impacts of a project. To do anything less is not in the spirit or the intent of an EIR. WPUSD has worked hard to establish what the impacts are projected to be for the new Villages, inclusive of Village 7. The District respectfully requests that the real impacts be addressed and a realistic mitigation plan be put in place for Village 7 based on the real impacts of the proposed development.

11-5

Sincerely,

Cathy Allen
Assistant Superintendent
Facilities & Maintenance Services

Attachements:
Exhibit A
Exhibit C
Copy of written response to EIR, Lincoln General Plan Update 2008

c: Scott Leaman, Superintendent
        Paul Carras, Board President
        Ana Stevenson, Board Clerk
        Paul Long, Board Member
        Brian Haley, Board Member
        Terry Gage, Board Member
        Terri Ryland, Interim Assistant Superintendent, Business Services

EXHIBIT A

WESTERN PLACER UNIFIED SCHOOL DISTRICT
SCHOOL CONSTRUCTION MITIGATION PROGRAM

Revised WPUSD allocations are the following square footages for each student based on grade levels.

Elementary (K-5)	Middle (6-8)	High School (9-12)
72 sq. ft / student	85 sq. ft / student	106 sq.ft/ student

Based on construction in the area, the following price / square foot is being utilized for 2009

Elementary (K-5)	Middle (6-8)	High School (9-12)
$283 / square foot	$322 / square foot	$333 / square foot

Construction costs are estimated to increase a little more than CPI over the life of the plan. For this Study, the estimate will be 4% and land is estimated to inflate at 3-5% and start at $300,000 / acre in 2009

COST FOR EACH TYPE OF SCHOOL IN THE DISTRICT BASED ON 2009 CONSTRUCTION COSTS

ELEMENTARY SCHOOLS - MASTER PLAN for 800 STUDENTS

Purchase 12 acres of land in Lincoln area @ $300,000/acre	$3,600,000
Develop 12 acres with grading, drainage, roads, utilities, play fields, parking, landscaping, irrigation, fencing, ect. @$339,000/acre	$4,068,000
Construction of buildings @ $283/sq.ft. x 800 students x 72 sq.ft/student	$16,300,800
Architects, engineers, testing labs, inspectors, construction management, fees/permits	$4,277,448
Furniture, technology, major equipment	$900,000
New Elementary School Total Costs	$29,146,248
Costs for each elementary student in the school is $29,146,248 / 800 students	$36,433

MIDDLE SCHOOLS - MASTER PLANNED for 1,100 STUDENTS

Purchase 22 acres of land in Lincoln area @ $300,000/acre	$6,600,000
Develop 22 acres with grading, drainage, roads, utilities, play fields, parking, landscaping, irrigation, fencing, ect. @$339,000/acre	$7,458,000
Construction of building @ $322/sq.ft. x 1100 students x 85 sq.ft/student	$30,107,000
Architects, engineers, testing labs, inspectors, construction management, fees/permits	$7,513,000
Furniture, technology, major equipment	$1,200,000
New Middle School Total Costs	$52,878,000
Costs for each middle school student in the school is $52,878,000 / 1100 students	$48,071

HIGH SCHOOLS- MASTER PLANNED for 1,800 STUDENTS

Purchase 50 acres of land in Lincoln area @ $300,000/acre	$15,000,000
Develop 50 acres with grading, drainage, roads, utilities, play fields, parking, landscaping, irrigation, fencing, ect. @$339,000/acre	$16,950,000
Construction of building @ $333/sq.ft. x 1800 students x 106 sq.ft/student	$63,536,400
Architects, engineers, testing labs, inspectors, construction management, fees/permits	$15,292,416
Furniture, technology, major equipment	$1,600,000
New High School Total Costs	$112,378,816
Costs for each high school student in the school is $112,378,816 / 1800 students	$62,433

In order to determine the average cost for a student one needs to know the distribution of students in the WPUSD by percentage of students in each level/type of school be it elementary, middle or high school.

DISTRIBUTION OF STUDENTS BY SCHOOL TYPE IN THE DISTRICT

Percentage	K-5 = 49%	6-8 = 23%	9-12 = 28%
Costs/Student	$36,443	$48,071	$62,433

Mean Average Construction Costs per Student Based on Percentage of Enrollment is $46,395

The Established WPUSD Student Yield Rate per Single Family House is .497

The cost per house is determined by multiplying yield rate @ .497 x average cost/student

Student yield rate is .497 per house x $46,395 = a mitigation fee of $23,058/ single family house

Need for District Wide Maintenance, Storage and Transportation Facilities

Because of the significant growth the District will experience because of the City of Lincoln new General Plan and the seven Villages and two Special Use Districts, the WPUSD will need additional maintenance, storage and transportation facilities to accommodate the growth. The estimated costs of these facilities in 2009 is $6,600,000. These facilities are necessitated by the growth of students and should be paid by single family and multi family dwelling units which cause the growth. To fund these district facilities costs, which are 0.504% of the total facilities construction budget of $1.3 billion, the mitigation for these facilities would add $116 per house to the mitigation fee per single family house ($23,058 x 0.00504 = $116)   **This brings the single family house mitigation fee to $23,174**

Mitigation Fee for Multi Family Apartments

The mitigation fee for apartments can be determined by a ratio proportion equation compared to single family mitigation rates. Single family yield rate is .497 and multi-family is .29 students per unit. To determine the fee multiply the $23,174 single family rate by .29 & divide by .497 = **$13,522 per multi-family Unit.**

SCHOOL MITIGATION FEE PROGRAM FOR THE VILLAGES AND SUDS

Dwelling Units		Mitigation Fee
Projected Single Family	25,643	* **$23,174** (2009 rates)
Projected Multi- Family	8,088	* **$13,522** (2009 rates)

* These Mitigation Fees must inflate annually to stay at the increase costs of construction

It is in the best interest of the District to receive the mitigation fee per dwelling unit not by square footage because it is difficult to project and predict what the square footage of single family or apartment units will be until they are built. Developers and builders will in some cases change the square footage of a unit to match the perceived perception in the market place. This puts the District in a situation where they do not know if the money they will receive will match the money expected to pay the costs of providing new schools. In a fee per unit program, the amount of money to be received is

pre-determined. The variable becomes on projecting when the dwelling unit will be built not size of the unit. When the dwelling unit is built can be off set by inflation factors. The District cannot recover from the loss of money from smaller dwelling units which are built when larger ones were projected via a square footage rate.

CONVERTING PER DWELLING UNIT MITIGATION FEE TO SQUARE FOOTAGE FEE

As stated in the prior section the WPUSD would be best served by utilizing a per dwelling unit fee and not going to a square footage fee. This section should only be used if the developer assures the District in writing that the square footage method will get the same or more money than with the per dwelling unit method.

Based on the information available today, the estimate is the average single family house is 2,050 square feet and multi- family/apartment would be 900 square feet per unit.

Single Family Mitigation Fee $23,174 divided by 2,050 sq.ft. = * $11.31 / sq.ft.

Multi-Family Mitigation Fee $13,522 divided by 900 sq.ft.=* $15.03 / sq.ft.
* These Mitigation Fees must inflate annually to stay at the increase costs of construction

CFD or OTHER FINANCING METHODOLOGY WILL INCREASE COSTS

The current mitigation fee program continues to be inadequate to build and pay for the recently constructed schools. The future revenue from the two existing CFD's is specifically dedicated to paying down current debt.
The WPUSD must collect adequate mitigation fees from the Villages and Special Districts to pay for the construction of the necessary schools. Borrowing money should not be used as an option unless mitigation fees are increased to cover the borrowing costs. The Mitigation Fees established in this document will only pay for the costs of building schools. Loan costs will increase the fee to each house or multi-family unit.

Any costs to borrow money by CFD or other financing methods must be added to the Fee

The cost estimates used in this document have been determined by using the average of at least 30 school construction projects over the past 6 years in the greater Sacramento area.

Ronald L. Feist; Ed.D.
January, 2009

EXHIBIT B

WESTERN PLACER UNIFIED SCHOOL DISTRICT
ESTIMATED COSTS FOR NEW SCHOOLS

Standards for Square Footage per Student: K-5 = 72; Middle = 85; High School = 106

Acres Needed for School Sites: K-5 = 12; Middle = 22; High School = 50

Cost for Land per Acre is Estimated to be $300,000 in 2009

Costs for Developing the School Sites per Acre is Estimated to be $339,000

Student Size of Schools: K-5 = 800; Middle = 1100; High School = 1800

Actual Building Construction Cost/Sq.Ft: K-5 = $283; Mid = $322; High School = $333

	Elementary	**Middle**	**High School**
Land (12, 22 & 50):	$3,600,000	$6,600,000	$15,000,000
Land Development:	4,068,000	7,458,000	16,950,000
Building Costs:	16,301,000	30,107,000	63,537,000
*Support Costs:	5,177,000	8,713,000	16,892,000
Total Costs:	**$29,146,000**	**$52,878,000**	**$112,379,000**

Breakdown of Support Costs Above for the Three Levels of Schools

Architects/Engineers:	$1,952,000	$3,842,000	$8,831,000
Fees and Permits	980,000	1,591,000	3,346,000
Inspectors	175,000	215,000	350,000
C.M. and Testing	750,000	1,250,000	2,100,000
Furniture, Tec & Equip.	900,000	1,200,000	1,600,000
EIR and Planning	110,000	150,000	200,000
Buses (2, 3 & 3)	310,000(2)	465,000(3)	465,000(3)
*Total Support Costs:	**$5,177,000**	**$8,713,000**	**$16,892,000**

Average Cost/Sq.Ft:	$506	$566	$589
Average Cost/Student:	$36,433	$48,071	$62,433

Ronald L. Feist, Ed D.
Feist Education Consulting Services
Estimates Made January, 2009
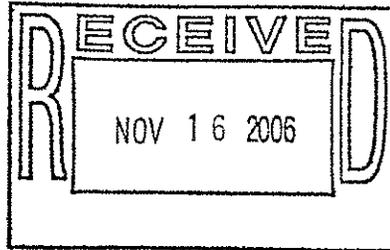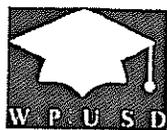
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All-America City
2006

November 15, 2006

Rodney Campbell
Community Development Director
City of Lincoln
640 Fifth Street
Lincoln, California   95648

Regarding: Written Comments on Draft EIR for New Lincoln General Plan

Dear Mr. Campbell:

The Western Placer Unified School District (WPUSD) would like to thank
you and the City of Lincoln for the opportunity to respond to the Draft EIR
for the New General Plan. It is obvious a significant amount of work and
time went into the 538 page Draft EIR. The WPUSD appreciates the thought
given in the EIR in mentioning the need for future schools in the seven
Villages and Special Districts. Public Facilities **Section 6.9** outlines past
enrollment and school facilities. The comments included in this response
will help the City update the information with current data and show our
projected enrollment and future facility needs of the District.

As you are aware, the WPUSD has been working on a new Facilities Master
Plan and has been waiting to see the number of dwelling units proposed in
the New General Plan to continue the District's planning process. Our goal
is to have the WPUSD Facilities Master completed and adopted by the
Board of Trustees by June 30, 2007. The Facilities Master Plan will include
all the students projected from the current General Plan and the New
General Plan.

Because of all the planning to date, WPUSD is in good position to respond
to the Draft EIR and provide information which should be of help to the City
of Lincoln in the planning process as the City grows to the projected
130,000 people. Attached is **Exhibit A** which utilizes the projected housing
units and the District's recent student yield rate study to establish the
anticipated number of elementary (K-5), middle school (6-8), and high
school (9-12) students for each of the seven proposed Villages and the two
Special Districts which contain dwelling units. **Exhibit A** (Total Students
Projected from Draft EIR) matrix shows a total of 18,416 new K-12 students
are projected to be generated from the 33,731 new housing units proposed in
the Draft EIR. The Project Description **Section** page **2-10** mentions schools
as being one of the key features for each Village. WPUSD appreciates the
City's acknowledgement that schools, along with other necessary public
facilities will be needed in the seven Villages.

N-1

"PURSUIT OF EXCELLENCE"

1

Response to Draft EIR
Page 2
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Exhibit B shows the relationship of the anticipated 18,416 students to the number of school sites projected to serve the estimated 34,000 new dwelling units. Twenty-four new school sites will be needed in the seven Villages to serve the 18,416 new students. These sites will require approximately 430 acres of useable land. The costs to purchase land, develop the sites and construct the schools are estimated to be $1,199,866,000 utilizing 2006 costs. Because the New General Plan spans a period of over 40 years, the actual costs for the school facilities will be substantially higher due to inflation and other economic factors that take place over time. The tremendous cost of these new school facilities needs to be a high priority in the planning process for the WPUSD, the City of Lincoln and the developers who will work in the home building arena for the seven Villages and Special Districts. Page **2-11** of the EIR discusses that *"The development and quality of life for the City is dependent on the availability of adequate public facilities and services."* The WPUSD is recommending the number of school sites and the 2006 costs of these new school facilities are included in the New General Plan to make all parties aware of the projected need for schools in order to maintain the quality of life in the City.

N-1
continued

Table 2-3 of the Draft EIR outlines the proposed increase of land to accommodate the New General Plan. The Table lists an increase of 333 acres for public use beyond the parks. The WPUSD is projecting a need of 430 usable acres just for the school sites necessary for the seven Villages and Special Districts. The 333 acres is not enough land. The District recommends that the EIR reflect the need for 430 acres in the Villages for schools.

N-2

As clearly outlined in the EIR, additional work will be necessary to plan the facilities needed in each Village to serve the public. The **Executive Summary ES-11** states, *"This EIR has been prepared as a program EIR"*. However, the analysis does not examine in detail the localized effects of potential site-specific projects that may occur under the overall umbrella of the program in future years. The Draft EIR mentions parks, fire stations, libraries, schools and other public facilities will need to be specifically located in the Villages to provide quality services for the citizens. The WPUSD stands ready to work with the City of Lincoln and the development community to locate school sites and strive to have schools built in a timely manner.

N-3

Response to Draft EIR
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The District appreciates the comments in the Draft EIR Health and Safety **Sections 8-21 & 8-22** that discuss the difficulties in getting a school site approved by the State of California because of all the restrictions. The reality is that these restrictions will only increase over time and make it even more difficult and expensive to receive approval from numerous state agencies and acquire the sites needed for the proposed build-out. The District will work with the City to make the site selection process as smooth as practical. **Exhibit C** is a preliminary attempt to indicate the school sites projected and potential acres needed in each Village. Each school site will need to be at the top of the consideration list when the Village goes through its planning and EIR process. The WPUSD will try to include in its Facility Master Plan the general location of all future school sites which should help facilitate this process. It will be very important in the planning process to protect the concept of neighboring students staying together as they move from elementary to middle school and on to high school.

N-4

In addition to the school facilities needed to accommodate the anticipated growth in the New General Plan, the District is trying to stay up with the needs of the current General Plan. The projection is that WPUSD will need to accommodate 9,456 students generated in the current General Plan before adding the 18,416 proposed in the new General Plan. Please see **Exhibit D** which outlines the District's 2006-2007 enrollment and new students still expected from the current City Plan. Without question WPUSD will at some point in time become the largest school district in Placer County. A tremendous amount of planning and financial resources will be necessary to provide the school facilities for so many students.

N-5

The Western Placer Unified School District Board and staff greatly appreciate the excellent working relationship which has been developed over the years with the City of Lincoln. The leadership of the City has been instrumental in partnering with the District to provide outstanding school and recreational facilities throughout the district. The City of Lincoln has several polices and procedures in place to help the WPUSD accommodate growth. Page **6-47** of the Draft EIR states that "*This increased population will result in increased student generation and the need for additional WPUSD elementary, junior high and high school facilities.*" The comments and Exhibits contained herein will provide additional information to the City during the EIR process in order to understand the magnitude of the impact of growth on school facilities.

N-6

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The Public Facilities & Service Element **PFS-9.9**, page **6-48**, added to the Draft EIR is greatly appreciated by WPUSD. This policy, along with PFS1-1; PFS 9.1; 9.2; 9.7; 9.8, will certainly help the City and District with the goal of meeting the needs of current and future students anticipated from the New General Plan. The statements included in **PFS-9.9** *"To the extent allowed by State law, the City will continue to ensure that future development projects mitigate impacts on school facilities,"* and *"The City will also work with the school districts, developers and public to evaluate alternatives to funding/providing adequate school facilities,"* will provide much needed assistance in achieving our goals.

N-7

Continuing in the spirit of our joint efforts of trying to fund adequate school and recreational facilities, the WPUSD is suggesting that there are concepts and strategies which would help the District and City strive to meet the challenges of the projected growth. Many of these strategies are already in place in the City of Lincoln. The following is an outline of how the City and District can continue to work together to help mitigate, manage and potentially reduce the costs of developing new schools and parks. Money for school facilities is never easy to obtain; thus the continuation and consideration of the following strategies should be considered as part of the New General Plan.

N-8

1. **Joint School and Park Sites in the City of Lincoln**

   The City and District should jointly work to plan, purchase and develop schools and parks together. It is reasonable to assume that both the City and District could reduce the total acreage needed by providing for joint use of facilities for the community. Athletic fields, multipurpose buildings, parking lots, etc. could be designed to serve the students *and* the public needs. The costs savings could be significant in land and development costs. It is feasible that the 430 aces projected for school sites could be reduced as part of this strategy.

   N-9

2. **City Working with the Development Community Provides Opportunities to Purchase School Sites Early in the Approval Process and Development of a Village**

   N-10

4

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It is anticipated land costs will escalate as development in the Villages moves forward. If school and park sites could be identified and acquired early, a significant cost savings could be realized as land costs escalate beyond normal C.P.I. type increases. The WPUSD may consider developing a Land Bank Program to provide the developer with money for school sites early in the process, provided the school site can be purchased at a reasonable price. This concept could be a win-win for the District and a specific developer who wants early cash to help in the development of the project.

N-10
continued

3. **Developer of a Village Provides the Streets and Utilities which serve the Schools and Parks**

As developers are constructing the major infrastructure such as streets, sewer, water, electricity etc. for the Villages, the infrastructure should be brought to the school and park sites. Developers can construct these items more economically than any public agency and the increase cost to the developer would, in most cases, be insignificant in relation to the infrastructure development of an entire Village. This advance work could lead to significant cost savings for the City and WPUSD when development in a plan area warrants construction of school and park facilities.

N-11

4. **City of Lincoln Requires Developers of Villages to Include Schools and Parks in their EIR**

Appropriate schools and parks must be identified in the Villages during the review of the new City General Plan. WPUSD will provide the data necessary to help establish the school sites needed in each Village. **Exhibit C** of this response will assist in the identification and location of future school sites. Once the General Plan is complete and individual Villages are being planned, the developer(s) should include the location of specific school and park sites within their projects in the development's EIR document. A Phase I review from the Department of Toxics and Substance Control (DTSC) should be completed by the developers for each school site in each Village to speed up the approval process. If schools and parks are included in the General Plan and each Village during the EIR process, WPUSD and the City will save significant

N-12

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money and time when preparing a third level EIR for a specific school and park site.

N-12
continued

5. **City of Lincoln Supports the WPUSD in Establishing and Collecting the Fees/Mello Roos/Mitigation, Bond Measures, Facilities Districts and other Funding Mechanisms Necessary to Assure that Schools are Built in a Timely Manner.**

As outlined in the Draft EIR, there will be significant financial impacts on the WPUSD by adding the seven Villages to the current City General Plan. WPUSD will continue to need strong support and guidance from the City in establishing the appropriate mitigation funding measures to provide the resources in order for schools to be constructed in a timely manner to meet the needs of the students, staff and community. Several different funding mechanisms will need to be considered in order for the District to be able to provide the facilities in the expected rapid growth environment. WPUSD will continue to seek State School Facilities money whenever it is available to help pay for the costs of providing schools within the District's boundaries.

N-13

The City needs to be commended for including Public Facilities Policies as stated on page **6-48** of the Draft EIR to address the impacts on WPUSD as the City grows. The present and future citizens of Lincoln will expect the schools to be in place as needed. It is very important that the City of Lincoln and the District continue to work together to do our best to make sure the schools are ready for the students. Clear messages need to be sent to the development community and builders that they will participate in the programs to help provide the necessary schools and parks in a timely manner. Unique strategies should be considered by the District, City and developers in an effort to accommodate the anticipated rapid growth. For example, WPUSD would be willing to consider developer-built schools under State laws that currently allow this approach to providing school facilities. It is in the best interest of home developers to have schools ready for students, which would increase the marketability of the development.

As the City of Lincoln moves forward with the approval process for the new General Plan, WPUSD stands ready and willing to work with City staff to

N-14

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help prepare for the future. It is important that the projected facilities needs of the WPUSD be included as much as practical in the EIR process and the New General Plan to provide all parties ample notice early in the planning stages. It is anticipated with the growth projected within the City of Lincoln that WPUSD will become the largest single school district in Placer County. The District looks forward to working with the City of Lincoln in providing the schools and, where practical, recreational facilities for the citizens. The excellent working relationship over the years should serve the city and WPUSD well as both agencies strive to provide the services and programs expected of a top notch City and School District.

N-14
continued

Sincerely,
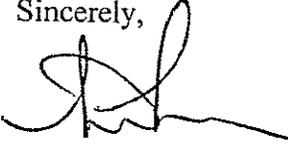
Scott Leaman
Superintendent

Cathy Allen
Director of Site Development

COMMENT LETTER 11: **CATHY ALLEN, WESTERN PLACER UNIFIED SCHOOL DISTRICT, JULY 24, 2009**

Response to Comment 11-1

Comment noted. As required by CEQA, the Draft EIR used information available at the time the NOP was issued as the baseline environmental condition for its analysis.

Response to Comment 11-2

The commenter requested clarification of the total number of residential units in the Village 7 Specific Plan area because the number of units stated in the Draft EIR differs from the total number of units estimated when the City's 2050 General Plan was adopted. The Final EIR for the City's 2050 General Plan explained that the General Plan's projected residential dwelling units were intended to represent a potential estimated range of units that could occur for each type of use proposed under the General Plan's Land Use and Circulation Diagram "Village" designation. The General Plan's policies anticipated that more precise determinations of land use and acreage would occur through development of the required specific plans for each "Village", as well as anticipated that the General Plan would be amended when specific plans for areas designated as a "Village" were adopted. Because a specific plan must be consistent with the General Plan, the approved specific plan concurrently requires the General Plan's adopted land use designations to be amended in order to achieve that consistency.

The Village 7 Specific Plan's Draft EIR is both a programmatic level EIR and a project level EIR. As such, the Draft EIR deals with the Lewis Property on a much more detailed level because it is a well-defined project with a current development proposal. The Village 7 Programmatic Portion does not have a specific development proposal being evaluated for it at this time, so the Draft EIR can only analyze its impacts on a more general level. Consequently, it is impossible for the City to provide a definitive final unit count for the residential units within the entire Village 7 Specific Plan area at this time. As the planning for the Village 7 Specific Plan area moves forward, there are revisions and changes which may alter the exact unit count as the land plans are refined. The 3,285 residential units used for purposes of analysis in the Draft EIR was the estimated maximum number of units probable at the project site and was used to ensure that the environmental analysis did not underestimate the environmental impacts of developing the overall Village 7 Specific Plan area. The Draft EIR examined an intensity of land uses which are within the range of land uses described in the Village 7 Specific Plan in order to analyze the project's impacts and inform the City Council and the public of the significant environmental impacts. This correctness of that approach was recognized in *Sequoyah Hills Homeowners Association v. City of Oakland* (1993) 23 Cal.App.4th 704, 29 Cal.Rptr.2d 182, where an environmental impact report was upheld for a project which had an approved residential density different from the originally proposed project, but within the range of residential densities analyzed in the alternatives analysis of the project's environmental impact report.

Response to Comment 11-3

Comment noted. The commenter has raised a number of policy issues with respect to the manner in which new school facilities are being funded by the State of California and the adequacy of those funding methods to pay for the cost of constructing the types of school facilities desired by the Western Placer Unified School District. Providing schools for new development areas has been an issue of statewide concern in California for many years. In order to provide new schools, the California Legislature has enacted a comprehensive statutory program for financing new schools. California law, as found in Education Code Section 17620 and Government Code Sections 65995 et seq. (commonly known as SB 50), clearly provides that the provisions of state law are full and

complete mitigation under CEQA for the impacts arising from new development on the planning, use and development of new school facilities to serve that new development. State law precludes the City from reaching any conclusion under CEQA other than one which finds that the payment of SB 50 school impact fees is complete mitigation for new development's impacts on the need for new school facilities. Consequently, the City of Lincoln is without the legal authority under CEQA to impose any fee, condition, or other exaction on the Village 7 Specific Plan for the purpose of funding new school construction other than the fees allowed by SB 50. The project will be conditioned to pay the SB 50 fees. Accordingly, impacts on school facilities have been fully and completely mitigated for purposes of CEQA. In addition, the City is expressly prohibited by statute from using the claims of the commenter as a ground for denying approvals for the development of real property [see, Government Code Section 65996(b)].

Response to Comment 11-4

Please see Response to Comment 11-3.

Response to Comment 11-5

Please see Response to Comment 11-3.
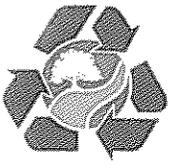
WESTERN PLACER

WASTE MANAGEMENT AUTHORITY

July 27, 2009

Rodney Campbell
City of Lincoln
Community Development Department
600 6th Street
Lincoln, CA 95648

RE: Village 7 Specific Plan, Draft EIR

Dear Mr. Campbell,

Thank you for the opportunity to review the above mentioned Draft EIR for the Village 7 Specific Plan Project. The Placer Waste Management Authority has the following comments:

Section 4.1 – Land Use

- Impact 4.4-5 Intermittent Odors – Odor mitigation measures should include the City of Lincoln's General Plan Policy PFS-5.8, *Provision of Buffers for Regional Landfill.* This policy ensures a buffer to prevent incompatible land uses which may compromise the landfill's long term operation.

- Impact 4.1-2 Incompatibility with Adjacent Land Uses – Although the landfill is not adjacent to the proposed project, the landfill buffer zone, acknowledged in both the County and City's General Plans, extends into the proposed project area and so should be considered. Land Use mitigation measures should reference Lincoln's General Plan policies PFS-5.7, *Cooperation with Western Regional Landfill Authority* and PFS-5.8, *Provision of Buffers for Regional Landfill.* These policies reflect the County's General Plan 4.G.11 which prohibits residential development within one mile of the WRSL property boundaries (including the expansion property).

12-1

- The City's General Plan reflects the landfill buffer zone in its Land Use and Circulation Diagram. The DEIR should similarly reflect the buffer zone on a land use diagram for the Lewis Property and confirm that no residential development will occur within the buffer; specifically at the southwest corner where it is unclear if the Village Low Density Areas are outside of the buffer zone.

12-2

Section 4.4 – Air Quality

- Introduction – This section focuses its analysis of off-site odors on two facilities: the City of Lincoln Wastewater Treatment and Reclamation Facility (WWTRF) and Western Regional Sanitary Landfill (WRSL). The DEIR should also acknowledge that there are other potential odor sources in the Sunset Industrial Area approximately the same distance from the proposed project.

12-3

- Page 4.4-7 – This section makes statements about odors from the WRSL that are based on anecdotal comments (see Footnote 8); the DEIR should not make conclusive statements based on anecdotal comments.

12-4

- Page 4.4-7 Corrections:

  o Spelling – Materials Recover Facility (MRF) (throughout document)

  o Location of landfill and MRF – intersection of Athens <u>Avenue</u> and Fiddyment Road (throughout document)

  o Number of Odor Complaints – "In <u>the 4th quarter</u> 2007, 24 odor complaints were received…"

12-5

- Page 4.4-33 – This section states that the City's Odor Emissions Evaluation "determined that the wider area surrounding the WWTRF was often blanketed with odors from the MRF on Athens Road." The analyses conducted in the Evaluation do not support such a broad conclusion. The Evaluation reported WRSL odors observed at levels determined to be a nuisance (Intensity Rating of 3 or above) at only three locations within ½ mile of the WRSL facility. The DEIR should not include such a statement when there is insufficient evidence to support it.

12-6

Section 4.9 – Public Utilities and Services

- Solid Waste Setting – Corrections:

  o The permitted acreage of the landfill is <u>291</u> acres; the disposal footprint is 231 acres.

  o The Solid Waste Facility Permit number for the landfill is 31-AA-<u>0210</u>.

  o The current permits were issued in <u>2008.</u>

  o The landfill has Class III and <u>Class II modules</u>.

12-7

- o The permitted closure date for the landfill is <u>2042</u>.

- o The MRF's current <u>processing capacity is 2,000</u> tons per day; the permitted maximum tonnage is <u>1,750</u> tons per day.

12-7
(cont.)

- Page 4.9-8 – The DEIR should state the source of the quoted solid waste generation of 42,600 tons in 2007.

- Page 4.9-9 – The DEIR states that "due to the solid waste diversion and recycling requirements of AB 939, future solid waste levels are not anticipated to increase dramatically in the future." Solid waste generation and disposal generally increases with population growth. Since the MRF processes garbage and recyclables, including recycling collected in blue bags and curbside green waste, diversion efforts will not significantly reduce solid waste generation related impacts to the MRF.

12-8

- Solid Waste Impacts and Mitigation Measures

  - o Methods of Analysis – It is unclear how the 7.23 pounds per dwelling unit per day was derived. The DEIR should clarify how this number was calculated as it appears lower than other published values.

  12-9

  - o Standards of Significance – The Authority considers a significant impact to include the following:

    - Impact on landfill capacity – The Authority has determined a reduction in the remaining landfill life of three percent or greater a significant impact. The anticipated closure date for the landfill is 2042; the remaining life of the landfill is estimated to be 33 years.

    - Impact on MRF capacity – The Authority has determined a reduction in the remaining MRF daily processing capacity of three percent or greater a significant impact. The MRF has a daily design capacity 2,025 tons per day (tpd) and currently utilizes on average 826 tpd; the estimated remaining capacity of the MRF is 1,199 tpd.

  12-10

  - o Impact on Landfill Capacity – The DEIR uses inconsistent methodology to analyze the impact to the landfill. The 60% diversion rate may not be a reasonable assumption based on the generation data used (refer to our earlier comment on estimating waste generation). The Authority currently achieves 30 diversion rate from the municipal solid waste stream of the solid waste received.

  12-11

○ Impacts to Materials Recovery Facility – The DEIR fails to consider impacts
to the MRF and should acknowledge that the much of the City's recyclable
waste, including curbside blue bags and green waste, is processed at the
MRF.

12-11
(cont.)

Thank you for the opportunity to respond. Please feel free to call me at (530)
886-4965 or Eric Oddo, Senior Engineer, at 916-543-3984 should you have any
questions.

Sincerely,

Chris Hanson
Senior Planner

CH/ch

COMMENT LETTER 12:   **CHRIS HANSON, WESTERN PLACER WASTE MANAGEMENT
AUTHORITY, JULY 27, 2009**

Response to Comment 12-1

Mitigation Measures 4.4-5(A) and (B) require that perpetual notices be recorded for all lots within Village 7 indicating that odors from the Western Regional Sanitary Landfill (along with other potential sources) could occur. As stated in the Draft EIR (page 4.1-21) and as noted in Response to Comment 12-2, below, the one-mile buffer has been accounted for in project design. Additional mitigation is not required. No changes to the Draft EIR are necessary as a result of this comment.

Response to Comment 12-2

During development of the Village 7 Specific Plan (2009), the one-mile buffer was taken into consideration during the planning process. Figure 2-4 (Site Context) in the Specific Plan incorporates the one-mile landfill buffer. As stated on page 4.1-21 in the Draft EIR, a one-mile buffer extends slightly into the southwest corner of the Lewis Property. The buffer is within proposed open space. No residential development is proposed within the buffer.

Response to Comment 12-3

The commenter notes there may be other potential sources of odors in the Sunset Industrial Plan area, but does not specify any particular operations. The environmental impact report prepared for the Thunder Valley Casino noted that the Inviro-Tech septage dewatering facility is located north of Athens Road and west of the Casino. However, no odor impacts were found, insofar as septage dewatering operations are conducted within enclosed tanks and a concrete containment structure and chemical treatment is used to control odors.

The description of "Existing Odor Sources" on pages 4.4-6 through 4.4-7 in the Draft EIR has been expanded to include potential additional odor sources. Page 4.4-7 has been revised to include the following before the last paragraph:

> Another odor source in the vicinity of the project site is a privately owned septage dewatering facility (Inviro-Tech). This facility is north of Athens Road and east of the WRSL, approximately one mile south of the project site. The dewatering system uses enclosed tanks and a small concrete containment structure to separate solids from septage. The process uses chemical treatment to control odor generation, and odor from the facility is neglible.[7a]

> Footnote reference 7a: United Auburn Indian Community and County of Placer Planning Department, Auburn Rancheria Gaming and Entertainment Facility [Thunder Valley Casino] Draft Environmental Impact Report, prepared by Analytical Environmental Services, June 2002, p.4.9-6.

Response to Comment 12-4

The source of information cited in footnote 8 was John Pedri, former Public Works Director for the City of Lincoln, who provided information regarding the WRSL as a source of odors in the project vicinity. Mr. Pedri stated that the Public Works staff had received phone calls about odors, which were subsequently determined to be attributable to the WRSL.

Response to Comment 12-5

The text revisions suggested by the commenter have been made. Please see Chapter 2, Text Changes to the Draft EIR. The corrections do not affect the analysis in the Draft EIR.

Response to Comment 12-6

The statement referenced by the commenter on page 4.4-33 was attributed to the Odor Emissions Evaluation Report preparer (ECO:LOGIC). It does not reflect the opinion of the Draft EIR authors, nor is it conclusory. As stated in footnote 11, a copy of the Odor Emissions Evaluation Report is available for review at the City of Lincoln.

Response to Comment 12-7

The text revisions suggested by the commenter have been made. Please see Chapter 2, Text Changes to the Draft EIR. The corrections do not affect the analysis in the Draft EIR.

As indicated in footnote 7 on page 4.9-8, data regarding solid waste and diversion rates for the City of Lincoln for 2007 were obtained from the CIWMB website, which compiles information provided by the County disposal reports via the Disposal Reporting System. For 2007, the value reported by the County to the CIWMB was 42,676 tons.

A review of the website in September 2009 shows the disposal and diversion data have been updated by CIWMB.

The Draft EIR (page 4.9-8, last paragraph, first two sentences) has also been revised as follows to incorporate current information from the CIWMB website pertaining to City of Lincoln solid waste and diversion data.

> The City of Lincoln ~~generated approximately 42,600 tons of solid waste in 2007~~.disposed of approximately 25,780 tons of solid waste in 2008. In 2006 (the latest year for which CIWMB-reviewed ~~preliminary~~ data are available), the City had a diversion rate of ~~59~~ 60 percent. Diversion rates for previous years (200~~1~~3-2005) ranged from ~~55 to 74~~ 57 to 64 percent.[7]

Footnote 7 has been revised as follows:

> California Integrated Waste Management Board, Jurisdiction Profile for City of Lincoln, ~~http://www.ciwmb.ca.gov/profiles/Juris/JurProfile2.asp?RG=C&RES=0.68&JURID=258&JUR=Lincoll~~ http://www.ciwmb.ca.gov/Profiles/Juris/JurProfile2.asp?RG=C&JURID=258&JUR=Lincoln.

City staff believes the difference between the 2008 and 2007 data is likely attributable to the decline in new construction in the city limits.

The revisions do not affect the conclusions in the Draft EIR.

Response to Comment 12-8

In response to the comment, the sentence on page 4.9-9 referenced by the commenter has been removed. Please see Chapter 2, Text Changes to the Draft EIR.

Response to Comment 12-9

CEQA gives the City the discretion to use the waste generation rate it deems appropriate in the circumstances. As stated in footnote 9 on page 4.9-10 in the Draft EIR, the solid waste generation

rate of 7.23 pounds per day was derived from the City's certified General Plan Update EIR. The Village 7 Specific Plan boundary is defined by the City's adopted 2050 General Plan and was included in the EIR for the General Plan. Thus, the 7.23 pounds per day rate is consistently applied to the Proposed Project analysis. Moreover, the City of Lincoln operates its own solid waste collection operation as noted in the General Plan's EIR and is best suited to provide specific information concerning the average amount of solid waste produced per day by City residents and businesses. (See pages 6-28 to 6-29 of the General Plan Update EIR.) The commenter did not suggest an alternate value.

Response to Comment 12-10

CEQA gives a lead agency the discretion to set the standards of significance it will use in an EIR. Those standards can be ones formally adopted by the lead agency or ones based on expert opinion developed by those preparing the EIR. [See, *Napa Citizens for Honest Government v. Napa County (2001)* 91 Cal.App.4th 342, 110 Cal.Rptr.2d 579; CEQA Guidelines Section 15064.7] While CEQA also allows a lead agency to use standards set by a regulatory agency, the lead agency is not required to do so and may use its own standards, especially where the regulatory agency has not adopted or published its standards in an ordinance, regulation, formally adopted guideline, or other published document, such as on its website. [See, *Association of Irritated Residents v. County of Madera (2003)* 107 Cal.App.4th 1383, 133 Cal.Rptr.2d 718]

Consequently, the City of Lincoln has the discretion to determine what standards of significance it will use in the EIR and can base those standards on the expert opinion of its EIR preparers. In the case of impacts on the capacity of the Western Regional Sanitary Landfill (WRSL), the standards used in the EIR must not be arbitrary and should be based on a recognized industry standard.

As stated in footnote 9 on page 4.9-10 in the Draft EIR, the numerical standards used for solid waste generation, and upon which the impact analysis was based to identify impacts on landfill capacity were derived from the City's recent General Plan Update. Moreover, the Draft EIR concluded (page 4.9-11) that the solid waste impact of Village 7 on the landfill would only be a 0.45% increase in solid waste deliveries, which is far less that the 3% standard of significance the WPWMA noted in its letter. Thus, the Village 7 project will have a less- than-significant impact on landfill capacity.

Response to Comment 12-11

The City of Lincoln's solid waste collection program diverts approximately 60 percent from the waste stream *prior to delivery* to the WRSL. The diversion rate is based on current California Integrated Waste Management Board (CIWMB)-adopted data, which are stated on page 4.9-8 in the Draft EIR. Thus, up to only 40 percent of the City's solid waste is assumed to be disposed of in a landfill. The 30 percent diversion rate noted by the commenter appears to be related to WRSL's operations *after* solid waste is received at the facility, and is assumed to reflect disposals from all sources, not just the City of Lincoln. Therefore, the 60 percent diversion rate assumption is appropriate for the analysis.

The Draft EIR (page 4.9-9) acknowledges that recyclables from the City are delivered to the Materials Recovery Facility (MRF).

MIWOK
MAIDU

United Auburn Indian Community
of the Auburn Rancheria

JESSICA TAVARES CHAIRPERSON	JOHN SUEHEAD VICE CHAIR	DAVID KEYSER SECRETARY	DOLLY SUEHEAD TREASURER	GENE WHITEHOUSE COUNCIL MEMBER

July 15, 2009

RECEIVED

City of Lincoln
Rodney Campbell, Director
Community Development Department
600 Sixth Street
Lincoln, CA 95648

JUL 2 7 20

CITY OF LINCOLN
COM'Y DEV DEPT

Subject: Village 7 Specific Plan Project - Draft Environmental Impact Report

Dear Mr. Campbell,

Thank you for requesting information regarding the above referenced project. The United Auburn Indian Community (UAIC) is comprised of Miwok and Maidu people whose traditional homelands include portions of Placer and Nevada counties, as well as some surrounding areas. The Tribe is concerned about development within ancestral territory that has potential to impact sites and landscapes that may be of cultural or religious significance. We appreciate the opportunity to comment on the proposed project.

We have reviewed the DEIR for the above referenced project. We understand that a cultural resource assessment completed by ECORP in March 2000 found no cultural resources within the project boundaries. In the event of an inadvertent discovery of prehistoric cultural resources or human burials, the UAIC would like to be contacted immediately to provide input on the appropriate course of action.

13-1

If you have any questions, please contact Shelley McGinnis, Analytical Environmental Services, at (916) 447-3479.

Sincerely,

Greg Baker
Tribal Administrator

CC: Shelley McGinnis, AES

Tribal Office • 10720 Indian Hill Road • Auburn, CA 95603 • (530) 883-2390 • FAX (530) 883-2380

COMMENT LETTER 13: **GREG BAKER, UNITED AUBURN INDIAN COMMUNITY OF THE AUBURN RANCHERIA, JULY 15, 2009**

Response to Comment 13-1

The commenter noted that the cultural resources assessment found no cultural resources within the project boundaries, and that in the event of an inadvertent discovery of prehistoric cultural resources or human burials, the UAIC would like to be contacted immediately to provide input on the appropriate course of action. As indicated in Response to Comment 4-1, the Initial Study for the Proposed Project (included in Appendix A in the Draft EIR) identified Mitigation Measure 3 to ensure such resources are protected, if found, consistent with the commenter's request. The mitigation measure requires inspection by qualified personnel, consultation with Native American representatives, provisions for discovery of remains, and disposition of recovered artifacts. The requirement for notification will be included on construction drawings and contracts involving site disturbance.

![Sierra Club logo] **SIERRA CLUB** FOUNDED 1892

PLACER GROUP
P.O. BOX 7167, AUBURN, CA 95604

July 27, 2009

City of Lincoln
Community Development
600 Sixth St
Lincoln, CA 95648

RECEIVED

JUL 2 7 2009

CITY OF LINCOLN
COM'Y DEV DEPT

Ladies and Gentlemen:

RE: VILLAGE 7 SPECIFIC PLAN PROJECT—DRAFT ENVIRONMENTAL IMPACT REPORT

Thank you for the opportunity to comment on the Village 7 Specific Plan (V7SP) Draft Environmental Impact Report (DEIR). Staff is to be especially commended for efficiency and patience in dealing with our requests.

However, the city of Lincoln is to be severely criticized for not accepting electronic submission of comments—either via email or via Fax. This is totally unacceptable and needs to be addressed for future public comment.

CEQA was passed to inform and encourage public input. The City of Lincoln did provide online access, but, unlike many other agencies, it did not break down the chapters into computer-manageable bytes. A 45 MB or larger document is too big to open, and in some cases, download. We urge the City to consider the fact that many citizens use "dial up" and cannot begin to download such a huge document. Any file over 2 MB should be broken down for all to access and download.

14-1

To circulate one DEIR for both the Programmatic and Project EIR may be economically permissible, but is not conducive to clearly allowing the public to understand the ramifications, which was the intent of CEQA. Why wasn't the Programmatic DEIR circulated for comments, and then, when all comments were addressed and the Programmatic EIR certified, then the Project DEIR circulated?

Alternatives to the Proposed Project:

One of the Sierra Club Placer Group's primary concerns is, and has been, the proposed project's impact on Placer County's many years of work to establish a Habitat Conservation Plan (HCP), known as the Placer County Conservation Plan (PCCP). Is it not premature for the City of Lincoln to be forging ahead with a development proposal when the PCCP is at such a critical point?

At this time, two alternatives for the V7SP are preferred: "No Project/No Action" or "Off-Site" alternatives would be best until the PCCP is finalized and approved. What is the rush during this economic down turn to approve a project which may seriously derail a PCCP, which, when finalized will bring stability and more certainty to future developments?

14-2

Contrary to the No Project/No Action alternative description attributed to it (that it would not create a sense of place—7.0 Alternatives, page 7-7), we respectfully disagree.

Placer County's agricultural roots have indeed already created a "sense of place" being one of farms, livestock, produce, and sustenance and sustainability for the region. If anything destroys this sense of place in agricultural areas, it is unnecessary development. How is "sense of place" applicable here? What about the sense of place that Placer Grown promotes, that agriculture tours and other activities promote? What are the impacts to those aspects of the existing sense of place?

The use of the words "connectedness to existing City of Lincoln development" (page 7.7), to justify extending Village 7 to the Lincoln Waste Water Treatment Plant (LWWTP) boundary, seems rather spurious. Many cities own/operate parcels outside of, or not adjacent to, their boundaries, but they do not use that geographical separation to justify extending their boundaries for an arbitrary or capricious "connectedness." Can Sacramento's boundaries extend to connect their parcel ownership in Camp Sacramento?

But even more troubling with the "connectedness" justification claim is a recollection of the discussion back in 1997, when Lincoln needed new facilities and build out was projected to be around 50 million in the year 2010. The location of the LWWTP was chosen more for its isolation and remoteness often associated with acceptance of such a plant. To most of the public, the location of the LWWTP was not intended to be a magnet to bring the city adjacent to its boundaries.

The reports that the $85 million Lincoln Wastewater Treatment plant was built through a public-private partnership between the city and private developers, going on line in 2004, was met with a great deal of hand shaking and back patting. However, that financing arrangement now appears to be not just an accommodation of growth, but rather a possible sprawl-inducing maneuver, with Village 7 now falling into the fold. Was this the plan all along? By using the "connectedness" as justification, does this type of action (buy a parcel far and away from the city's boundary lines, and then justify growth under the "connectedness" umbrella) become growth inducing? Or become the modus operandi? Please explain how "connectedness" carries any justification leverage under CEQA, especially in this case.

The last point made in this alternatives section, "would not address the significant future anticipated growth...the surrounding Placer County region" is misleading. This is exactly why we suggest that this plan not proceed until the PCCP is completed. There may **not** be any development in the surrounding Placer County region; thus, it is premature to proceed. Please analyze the impacts to the PCCP in greater depth than what is presented in this DEIR.

14-2
(cont.)

Transportation and Circulation

The Mitigation Measures (MM) are inadequate. Fees for road upgrades must be collected or placed in trusts or bonds **before** groundbreaking begins. What stipulations are in place for applicants who face either bankruptcy or an inability to perform? This is not an unreasonable or idle speculation—there are plenty of incidences where public agencies are currently owed millions of dollars in fees, but have no way to collect. Lincoln's own Twelve Bridges development with the promised high school is an example of unfulfilled promises with no capacity to deliver.

Right now in Placer County, there are proposed projects that proceeded with their entitlements, proceeded to inflict a great deal of environmental damage to the project landscapes, but now have had to abandon those projects, owing not only millions of dollars

14-3

to subcontractors but also to public agencies. What solid financial guarantees or insurances are being provided to back up the applicant(s)'s obligations? If economic infeasibility can be used by the applicant to avoid certain mitigation, then please analyze the economic costs to the city of Lincoln upon project failure.

The referenced "timing," or "development of the threshold triggering use" is not acceptable in terms of being able to collect from a insolvent applicant. Please require an upfront performance bond or other economic stipulations to ensure payment regardless of whether the project is completed or not.

14-3 (cont.)

MM 4.3-13, 14 and 15, all with significant impacts, imply applicants shall pay "...provided that..." and "...if..." other funding mechanisms or plans are in place or adopted. If there are no such plans or mechanisms for improving these roadways, then please consider requiring the applicants to pay at a full build-out rate into public transportation funds. Why are public transportation requirements NOT considered here to reduce the level of significance?

Impact 4.3-8 implies enough public transit facilities to "accommodate" "planned transit demand." This is the equivalent of not providing public transit at all. The public transit and transportation facilities and design must be incorporated and built into the project in the earliest stages of construction. Lincoln's Land Use Element Policies are weak with the words, "will promote" (page 4.1-13); the V7SP project needs to use language such as "shall provide residents with transportation choices...."

14-4

MM 4.3-8 implies that because the City will provide adequate transit service ("based upon demand and funding"—p. 4.4-30) that the impact is less than significant. Since we don't know what "adequate" means, and can only assume it may mean "none needed"; since demand is often created by an in-place system; and since funding will probably be non-existent, then a public transit studies needs assessment must be conducted. As it stands, neither the applicant nor the City need to address this issue at all. This is not reasonable in an era when cutting fossil fuel use and air quality concerns are paramount. Please conduct the necessary studies and allow for public input.

Generalities in dealing with public transit may be appropriate in a Programmatic DEIR, but for the Project DEIR, the public needs to know how public transit will be addressed? Where will the public stops be? This is the problem with co-mingling the two types of DEIRS and expecting the public to figure out which one is being addressed.

Hydrology and Water Quality

We seem to be left with MM's that state, "Assuming the regional facility has been constructed...." which is an unknown. How can we determine adequate mitigation of the impervious surfaces, if all are couched in terms of "If" and "Assuming"?

14-5

Low Impact Development (LID) principles must have a much stronger presence in the MM with a greater degree of specific steps that must be taken. Storage capacity is no longer the end all in terms of solutions to impervious surfaces and the ever-increasing critical problems of water quality (and flooding). LID is given somewhat cursory mention on page 319 ("city required to incorporate LID alternatives...*may* include....") and a couple of other spots later in this DEIR, but the operative word "may...." provides no mandate. What are the specifics for implementation of LID principles as a requirement? What are the consequences for failure to implement LID principles? Who will monitor?

14-6

<u>Biological Resources</u>

<u>Ratios</u>. With the applicant's wetland delineation, is any attempt being made to compare it to similar surveys conducted for the PCCP in the same areas? Although it is stated in the DEIR that the ratio of compensation will be determined in consultation with the Corps and US F&WS as part of the 404-permit process, this is of little help to the public for commenting purposes. Regardless of what is required with the 404 permit, there needs to be public assurance that a minimal ratio will be imposed. "No net loss" requires at least a 2 to 1 ratio. Why is that not set as a minimum? Better yet, why isn't a 3 to 1 ratio being required for the types of natural resources being destroyed?

14-7

<u>Wetland buffers</u>. Wetland buffers are to be provided, but we have no idea what the city of Lincoln or applicant has in mind—10 feet? 50 feet? 100 feet? Larger? Without this data, we, the public, are at a loss as to how reasonable, effective, or appropriate the buffer will be. Please provide this information and allow public comment.

14-8

<u>Vernal pools</u>. With regard to vernal pool crustaceans, of note is the sentence, "No focused surveys for vernal pool crustaceans have been conducted to date in the Village 7 Programmatic Portion of the project site.15" With crustaceans listed as either threatened or endangered, with vernal pools declining to less than 97% of previous occurrences, this is not the time to omit any studies. We urge full, in-depth, studies using proper protocol and respectively ask why they have not been conducted. When will the public have an opportunity to comment on these studies?

According to one California Native Plant Society vernal pool specialist and expert, "Vernal pools need another name to separate California's from others around the world that are similar but don't contain the same biodiversity as the ones in this state. Some 200 species of plants have been found in California's vernal pools, which stretch mostly along grazing land in the Central Valley, but 100 of those species exist exclusively in vernal pools." Recent studies indicate that vernal pool roots, leaves, invertebrates and crustaceans are a key seasonal food for migrating waterfowl as well as year-round bird populations. (Auburn Journal, April 2, 2009)

14-9

According to Placer County's Placer Legacy documents,

"Prior to the 1950s the primary threats to vernal pools were grazing, water impoundments, and conversion to agriculture. More recently, urbanization, industrial development, and infrastructure construction **have resulted in losses as high as 97 percent**. The few remaining pools have been damaged or disturbed, and they continue to face a variety of threats including livestock grazing, off-highway vehicle use, watershed alteration, and trash dumping. (Peter F. Brussard, http://www.placer.ca.gov/Departments/CommunityDevelopment/Planning/PlacerLegacy-edia/cdr/Planning/PlacerLegacy/PlanChapters/AppFEcologZones%20pdf.ashx -Bold. added.)

This amount of loss borders on disastrous. Any vernal pool displacement, especially with the V7SP, must be mitigated at a minimum of 3 to 1 ratio. Restored or reconstructed vernal pools do not have an acceptable success rate. We request that reconstructed vernal pools as mitigation not be allowed.

We find no reference in this DEIR of any type of survey for the California Black Rail—a species that is reportedly a Federal species of concern and is listed as threatened by the California Department of Fish and Game. As a part of The Black Rail Project of the University of California Sierra Foothill Research & Extension Center (a collaboration between Jerry Teckliln, and others), studies indicate that the Black Rail habitat is indeed possible if not probable in the project area. "In fact, they are quite common in many foothill wetlands formed by springs and irrigation water run-off or leaks; areas most landowners find too wet to use and often

14-10

just leave alone for 'wildlife' use." (Source: http://nature.berkeley.edu/~beis/rail/News.......er-v2n1.pdf).

Furthermore, in their document, the researchers provide a map and state, "We are fairly certain that a perennial water source is the most important factor for supporting rails. But it needn't be a whole lot of water – just enough to flow over the surface to a depth of 1-2 inches, with drier patches here and there to create a soggy surface. Drying up of an occupied wetland can lead to rapid abandonment of it, but the birds are resilient and may rapidly recolonize once a permanent water source is reestablished."

The mapping is primarily of Nevada, Yuba, and Butte Counties, but the newsletter notes that Black Rail have been found in Placer County (the Black Rail has been discovered in Rocklin). Thus, the likelihood of the V7SP project also having Black Rail is high and must not be dismissed. Because they are so reclusive, protocol for research of this almost invisible bird must be followed precisely: time of year, time of day, repeated processes over days, specific calls, etc. Were such strict studies conducted, and if so, by whom, when, with within what parameters? If not, please conduct proper research and allow public comment.

14-10 (cont.)

Open Space

Unless we have misunderstood, it appears that the term "open space" has been redefined to force feed it into the façade of General Plan compliance. It is with shock and awe that we read that "linear parkway" and "major paseos" are being counted as open space designations (page 2-12, 4.9-35, and elsewhere). This is unacceptable and not an appropriate concept of what "open space" means.

Ask 100 citizens and we'd venture not one would agree that "open space" means a road way, a median, a parking lot, "paseo," etc., any more than counting the air and atmosphere above a project/development is figured into the "open space" numbers for General Plan compliance. By any reasonable definition, open space refers to **an area of land that is valued for natural resources—wildlife, agriculture, active and passive recreation—predominantly open and undeveloped**. Open spaces may be preserved, enhanced, and/or restored with the term "undeveloped" meant to omit manmade structures. How does this usual and common definition of "open space" embrace this project's "linear parkways" and median strips? Will there be "paths" to the median strips? Will resting in the center of a parkway bring an "open space" experience to citizens?

Please explain how such an aberration of the term is being justified in its use here; please explain how this is appropriate? Can this type of application be used for the open space above the roof of a building?

Figure 2.8 gives acreage on all but the "Linear Parkway" and "Natural Open Space." Please provide meaningful calculations for comparison purposes. Please require V7SP to comply with intended General Plan Open Space requirements.

14-11

Mitigation Measures

Whenever a MM specifies "maintenance" but then defers it to the City and/or the local home owners association (MM 4.8-2(B)d), it is problematic. Home owner associations, especially when financially strapped, will make maintenance a very low priority. With the City facing financial challenges, this MM measure is of little use. What are the consequences for non-compliance? Non maintenance? Please require an endowment by the applicant to ensure all MM will have adequate funding to comply with the requirement.

14-12

<u>Water Issues</u>

PCWA may or may not be able to serve the project's total water needs, especially with developments related to the Delta and Sacramento diversion issues. PCWA's obligation is only on a "first, come first serve" basis, as long as water is available. Isn't the term "anticipated" only as reliable a the PCWA's "will serve" which will have conditions and no guarantees of water delivery?

14-13

Emergency water supplies using municipal groundwater wells "on and adjacent" may look good in print, but the reality is that Lincoln's elephant in the room is the perchorlate plume from Alpha Explosives. It is slowly moving, and although the current movement appears to be east (unfortunate for Lincoln), it is also moving northerly, which would indicate V7SP might not be impacted. However, the plume so far defies predictability with regard to its movement.

Partial results from the October 2008 semi-annual groundwater monitoring event at the site state that the groundwater flow direction is northwest to west, consistent with previous monitoring data; that the groundwater elevations for the 2008 sampling events are consistent with historical ranges (Most wells showed declines from the comparatively high groundwater elevations exhibited in 2007.); that ammonia nitrogen concentrations remain elevated near the Mix Building, with concentrations ranging from 28 to 68 mg/L at wells MW-2, MW-3, MW-18, and MW-19; and that the highest nitrate + nitrite and perchlorate concentrations continue to be in groundwater near the Mix Building (e.g., MW-3, MW-18 and MW-19) and former Evaporation Pond (e.g., MW-6). Please address this perchlorate contamination and its potential impact on V7SP.

14-14

Due to time constraints, we have not commented in as much depth as we would have hoped, but look forward to the responses.

Cordially,

Marilyn Jasper, Chair

marilyn.jasper@mlc.sierraclub.org

COMMENT LETTER 14: MARILYN JASPER, SIERRA CLUB PLACER GROUP, JULY 17, 2009

Response to Comment 14-1

The City of Lincoln made the Draft EIR available to the public in several ways. The Draft EIR was available online at the City's website (http://www.ci.lincoln.ca.us/pagedownloads/DEIR.pdf), and contact information (including a fax number) was provided on the website. City staff did respond to the commenter's requests promptly and efficiently, as noted by the commenter. Electronic copies (CDs) of the document were also available free-of-charge from the City upon request. The City of Lincoln made the Draft EIR available to the public in accordance with CEQA Guidelines Section 15087(g) by distributing a copy of the Draft EIR to the City Library. CEQA does not require documents be made available online, although it is common practice with many agencies. The commenter's experience with the size of the electronic file on the website is noted.

At the time the Draft EIR was under review, CEQA did not require that lead agencies must accept email comments. City staff will accept email comments for future environmental documents.

The purpose of the EIR is to disclose the significant environmental effects of a project and to inform the decision-making process. CEQA provides for project- and program-level EIRs, as stated on page 1-1 in the Draft EIR. CEQA does not prescribe which type of document a Lead Agency should prepare, nor does it preclude combining both types into a single document. The City of Lincoln has an obligation to comply with CEQA, and whether some economic efficiency can be achieved by combining two types of EIRs into a single document is not relevant.

The Village 7 Specific Plan (Proposed Project) guides development of approximately 703 acres that would be annexed into the City of Lincoln. The boundary of the specific plan area was defined in the City's adopted 2050 General Plan. A specific plan is required to comprehensively plan land uses and associated infrastructure and services for the entirety of Village 7.

The Proposed Project is the result of an application submitted by Lewis Planned Communities, the project applicant (Draft EIR, page 2-23). The Lewis Property portion of the Village 7 Specific Plan project would develop approximately 516 acres of the 703-acre specific plan area for which specific land uses, development intensities, and backbone infrastructure have been identified. A project EIR examines the environmental impacts of a specific development project (CEQA Guidelines Section 15161). Thus, it is appropriate for the Draft EIR to evaluate the impacts of the Lewis Property portion at a project level. An application has not been submitted to the City for the remaining 187 acres of the Village 7 Specific Plan (Village 7 Programmatic Portion) of the Specific Plan, so specific development details are unknown. Thus, potential impacts are evaluated at a broader, programmatic level. This approach is consistent with CEQA Guidelines Section 15168. Development applications for the Village 7 Programmatic Portion will require subsequent environmental review, which will fully disclose environmental impacts of those proposals. Taken as a whole, the Draft EIR comprehensively discloses all significant effects of the Proposed Project, as required under CEQA, to fully inform the public and decision-makers.

Response to Comment 14-2

Several issues are raised by the commenter with respect to the merits of the Proposed Project. These concerns generally address the need for the Proposed Project, its location relative to agricultural activities, and the location of the Wastewater Treatment and Reclamation Facility (and relative location of the Proposed Project to the WWTRF). The comment also expresses an opinion that the alternative preferred by the Sierra Club is the No Project/No Action or Off-Site Alternatives. The City Council will consider these comments during the decision-making process.

With regard to the analysis in the Draft EIR, the commenter requests that the impacts of the Proposed Project on the Placer County Conservation Plan (PCCP) be evaluated. The proposed PCCP is a Habitat Conservation Plan under the Federal Endangered Species Act and a Natural Community Conservation Plan under the California Natural Community Conservation Planning Act. The City of Lincoln is one of the cities in the County actively participating in the PCCP process and is supportive of the PCCP's goals to create a reserve system containing between 50,000 and 60,000 acres and improve mitigation through large scale land conservation and better monitoring. Those reserves are in addition to the existing 8,782 acres of existing preserves in Placer County. The PCCP reserve system would implement conservation at a regional/landscape level and would provide for the perpetual conservation and management of habitat and open space areas in western Placer County that will be of benefit to the 34 special-status species protected by the PCCP, as well benefit the hundreds of other species that are dependent on the same habitat. It has been estimated by the PCCP that the reserve system would preserve approximately 50 percent of the County's remaining vernal pool ecosystems, as well as preserving alfalfa fields, pasture lands, orchards, vineyards, rice fields, natural woodlands, riparian zones, grasslands and oak savannahs.

As of the date of publication of the Draft EIR (June 2009) and this Final EIR (December 2009), the PCCP had not been adopted by the local government agencies or approved by the State and federal resource agencies, but a draft has been prepared and is under review by Placer County and the participating cities. As indicated in a map dated August 5, 2009 (see also Response to Comment 8-2), an area west of the existing Orchard Creek Conservation Bank adjoining the Proposed Project southern boundary is proposed as a "Reserve Designation Area," for the preservation of wetlands and wildlife habitat. The Village 7 Specific Plan proposes open space in the southwestern portion of the project site that adjoins the proposed Reserve Designation Area in order to buffer that area, which would not be an incompatible use.

Because development of the Proposed Project would not have a *physical environmental impact* related to the County's adoption and establishment of the PCCP, analysis and disclosure in the Draft EIR is not required under CEQA. For purposes of this response, however, City staff assumes the comment is referring to potential inconsistencies with the draft PCCP.

CEQA Guidelines Section 15125(d) and (e) establish the requirements under which a project's potential inconsistency with an adopted plan should be disclosed in the environmental setting for the EIR. Section 15125(d) limits the evaluation to general plans and regional plans. If it were adopted, the PCCP would meet the criterion for a regional plan. However, because it has not been adopted there is no requirement under CEQA Guidelines 15125(d) to evaluate consistency.

Notwithstanding that there is no requirement under CEQA to evaluate potential inconsistencies with a draft plan that is not yet adopted, in accordance with CEQA Guidelines 15125(e), "where a proposed project is compared with an adopted plan, the analysis shall examine the existing *physical condition* [emphasis added] at the time the notice of preparation is published." The NOP was published in June 2006. As of the date of the NOP and the publication of the Draft EIR (June 2009), no actions implemented under the PCCP that could be physically affected by the Proposed Project had been undertaken. The second requirement under 15125(e) would also not apply (potential future conditions) because the draft PCCP has not been adopted. As such, it would be speculative and inappropriate for the Draft EIR to evaluate how the proposed Village 7 Specific Plan project would or would not be consistent with the goals of the draft PCCP.

The commenter expresses disagreement with the City's conclusion regarding the No Project/No Alternative achievement of project objectives. However, the comment's reference to "sense of place" is taken out of context. The specific objective reads: foster a sense of place through the creation of distinctive residential neighborhoods surrounding a centralized recreational and retail core (Draft EIR, pages 2-23 and 7-1). It is not an objective of the Proposed Project to create a

sense of place associated with the "County's agricultural roots." The No Project/No Action Alternative would not establish neighborhoods with a centralized recreational and retail core. The analysis presented in the Draft EIR is correct and factual.

The Draft EIR appropriately evaluates changes in land use and agriculture resources (Section 4.1, Land Use), biological resources (Section 4.8), and aesthetics (Section 4.10). Such resources contribute to "sense of place". The Draft EIR establishes the existing natural resources context for the evaluation of environmental impacts on these resources, both from a site-specific and regional perspective. With regard to land use, the project site has historically been used for grazing and non-irrigated crops. While there is an existing "sense of place" that is based on agriculture, adjoining land includes existing urban development on the east, areas designated or proposed for natural resources preservation to the south, a wastewater treatment plant to the west, and Auburn Ravine to the north.

Finally, with regard to the "Waste Water Treatment Plant" (i.e., the Wastewater Treatment and Reclamation Facility [WWTRF] on FIddyment Road, west of the project site), the comment questions how the Draft EIR justifies the boundaries of the Village 7 Specific Plan project near the WWTRF make it "have a connectedness to the existing City of Lincoln." However, the quote from Page 7-7 of the Draft EIR is taken out of context. The "connectedness" evaluation refers to creating the "sense of place" discussed above. It does not have any relevance to the WWTRF. To the extent that the comment questions whether the WWTRF itself was growth inducing, that comment is not relevant to this Draft EIR, as construction of the WWTRF is complete and is not an element of the Village 7 Specific Plan project.

No additional analysis or changes to the Draft EIR are necessary as a result of this comment.

Response to Comment 14-3

The commenter suggests that fees for road upgrades be collected or placed in trusts before groundbreaking begins.

CEQA requires the identification of feasible mitigation measures for significant impacts. Feasible is defined as being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors. CEQA does not require concurrency of impacts and mitigation measures. With regard to the timing of development impact fee payments, the City requires payment of development impact fees when authorized to do so by California law. By requiring the mitigation fees specified in Mitigation Measures 4.3-13 and Mitigation Measures 4.3-14 to be paid prior to issuance of building permits, the City will be requiring fee payment before construction begins. Consistent with California law, the Draft EIR requires the payment of all mitigation fees before project construction begins; there is no deferral of the payment of mitigation fees in the Draft EIR until after a project's physical construction has commenced. With regard to the commenter's request to analyze the economic impacts on the City of Lincoln that might arise from a developer's bankruptcy, CEQA does not require the analysis of a project's economic impacts; it only requires an analysis of a project's impacts upon the environment. [See, CEQA Guidelines, Section 15064(e)] The Draft EIR fully analyzes and discloses all significant environmental impacts of constructing and operating the project. It is only when such a project is constructed that its impacts on the environment, which are identified in the Draft EIR, arise. If a project is never built, then it has no physical environmental impacts. Nor does CEQA require analysis of purely speculative events. There is no evidence to suggest that Lewis Planned Communities or any other future developer who submits an application may enter bankruptcy. Thus, there is no reason to require a trust or bond.

The commenter also expressed concerns with the adequacy and feasibility of Mitigation Measures 4.3-13, 4.3-14 and 4.3-15 to mitigate the identified regional roadway impacts. As noted in the Draft EIR (pages 4.3-37 through 4.3-39), the impacts on the identified roadway segments that are outside of the city limits of the City of Lincoln will remain significant and unavoidable even with the proposed mitigation measures. On its own, the City of Lincoln has no ability to plan, design, and construct roadway improvements in another jurisdiction; its only feasible mitigation is totally dependent upon coming to an agreement with such other jurisdictions on the City's fair share of the costs to pay for the construction of roadway improvements planned by the other jurisdiction. Any such agreement will require the City of Lincoln and the other jurisdiction to agree on the exact scope, nature, and extent of the roadway improvements needed. Without any agreement on the scope, nature, and extent of the specific roadway improvements and their cost, there is no foundation upon which the City can determine the nexus for a mitigation fee that may be imposed on the Proposed Project to pay for those improvements. Further, even if the applicant paid a "full build out rate," as requested by the commenter, there would be no guarantee that the other jurisdictions would implement the necessary improvements. Due to the uncertainty over the ability of the City of Lincoln to implement the off-site, out-of-jurisdiction roadway improvements identified as proposed mitigation in the Draft EIR, the impacts on those roadways from the Proposed Project were considered significant and unavoidable. As noted in the Draft EIR, given the absence of a plan or program for improvements adopted by the other agencies with jurisdiction over the roadways, there is no reasonable basis for the Draft EIR to definitively conclude that mitigation measures requiring the payment of a fair share fee at the time of building permit issuance would reduce the project's traffic impacts to a less-than-significant level; hence the conclusion in the Draft EIR that the impacts must be considered significant and unavoidable in the absence of an adopted fee. Fees as mitigation measures to reduce traffic impacts to a less-than -significant level have only been held valid CEQA mitigation measures in instances where the agency with jurisdiction over the impacted roadway has adopted a plan or program for the improvement of that roadway and the fee is related to the project's fair share cost of making the identified improvements. [See, *Tracy First v. City of Tracy,* 2009 DJDAR 12885 (8-27-2009), 2009 WL 2623319; *Save Our Peninsula Committee vs. Monterey County,* 87 Cal.App.4th 99, 104 Cal.Rptr.2d 326 (2001); *Anderson First Coalition vs. City of Anderson*, 130 Cal.App.4th 1173, 30 Cal.Rptr.3d 738 (2005); *City of Marina vs. Board of Trustees*, 39 Cal.4th 341, 46 Cal.Rptr.3d 355 (2006).] Mitigation through public transportation funds is discussed in Response to Comment 14-4.

The commenter also suggested a bond be posted by the developers to secure implementation of the mitigation measures. In the absence of a quantifiable financial obligation, bonding is not an available mechanism for assuring performance by the developers, so it would not be feasible to require bonding as a CEQA mitigation measure, in this instance, for roadway impacts outside of the City's jurisdiction.

Response to Comment 14-4

The commenter requests more information about planned transit improvements and states a transit needs assessment should be conducted.

In response, commenter is referred to the City of Lincoln's Final Short Range Transit Plan, published in April 2009. This document (http://www.ci.lincoln.ca.us/index.cfm?page=653016) describes existing Lincoln Transit Service (LTS), existing and forecast increases in ridership, goals and objectives, and funding. LTS has expanded fixed-route bus service to new specific plan areas (e.g., Lincoln Crossing, Twelve Bridges, Foskett Ranch) in response to demand. Ridership increased 48 percent between FY2003/2004 and FY2007/2008, with a commensurate increase in operating costs. LTS pursues funding for transit capital and operating improvements through federal, state, and local sources. The commenter is referred to Chapter 12 of the City's Short Range Transit Plan for specific funding sources. The City's PFE includes approximately $3.5 million in funding for transit services,

including additional transit vehicles and a "bus barn". The proposed Village 7 Specific Plan project, by virtue of paying its PFE fees, will be contributing a fair share toward these transit improvements. Transit improvements planned in a particular phase will be constructed when the phase is developed. This approach ensures that the transit improvements are present when the demand occurs (i.e., when residences or businesses are constructed.) Thus, the Draft EIR appropriately concluded that the impact is less than significant.

Please see Response to Comment 14-1 regarding the appropriateness of combining the project-level and program-level analyses for the Proposed Project into a single EIR.

Response to Comment 14-5

Although the comment does not reference a specific mitigation measure, it is assumed it is referring to Mitigation Measure 4.7-2(A). The comment misstates the measure, and it fails to note that there is a menu of options. The measure correctly provides that if the regional facilities are not built, then alternative facilities that meet a specific performance must be built. Specifically, Mitigation Measure 4.7-2(A) on page 4.7-17 in the Draft EIR identifies specific actions that would reduce stormwater runoff impacts. It contains a performance standard that must be achieved (78.0 acre-feet of storage) for the Lewis Property and a range of options to achieve that standard. Mitigation Measure 4.7-2(B) addresses the Programmatic Portion. The options that are available are explained on page 4.7-17, and include the existing Stormwater Retention Facility (SRWF), the Lakeview Farms Volumetric Mitigation Facility (for which contracts and permits for construction have been issued), and on-site storage, or a combination thereof. If the Proposed Project uses storage in one of the off-site facilities, it will be required to fund its fair-share of costs associated with operation, maintenance, and management of regional facilities. This mitigation measure satisfies CEQA requirements for mitigation measures. Specifically, it identifies a performance standard (CEQA Guidelines Section 15126.4(a)(1)b). It will be enforceable through permit conditions (Section 15126.4 (a)(2)). Because the applicant would be required to fund its fair-share of costs to offset the project-generated increased stormwater volume, it is consistent with CEQA Guidelines Section 15126.(a)(4), which requires an essential nexus between the mitigation measure and a legitimate government interest, and it establishes rough proportionality.

Response to Comment 14-6

The commenter desires to see specific steps for Low Impact Development (LID) in a mitigation measure and asserts that LID is given a cursory mention on Page 319 of the Draft EIR. There is no page 319 in the Village 7 Specific Plan EIR; however LID principles and requirements are discussed in detail in the Draft EIR, and are required specifically by Mitigation Measures 4.7-4(A) and 4.7-4(B).

As stated on page 4.7-13 in Section 4.7, Hydrology and Water Quality, in the Draft EIR, Implementation Measure 3.0 of the adopted Public Facilities and Services Element of the 2050 General Plan requires the City to incorporate low impact development (LID) alternatives for stormwater quality control into development requirements. LID alternatives may include, but are not limited to, the following: (1) conserving natural areas and reducing imperviousness; (2) runoff storage, (3) hydromodification to mimic pre-development runoff volume and flow rate; and (4) public education.

Impact 4.7-4 on page 4.7-20 in the Draft EIR describes how the Proposed Project would increase urban pollutants in stormwater runoff that discharges from the project site into local waterways, and that Best Management Practices (BMPs) would be required to mitigate that contribution. Contrary to the commenter's assertion, storage capacity is not proposed to mitigate water quality impacts, nor is the mitigation measure vague (i.e., the phrase "may include" is not used).

The first element of Mitigation Measure 4.7-4(A) and 4.7-4(B) specifically states: (a) Project Conditions of Approval shall specify that appropriate Best Management Practices (BMPs) be incorporated into project design to reduce urban pollutants in runoff, consistent with goals and standards established under federal and State non-point source discharge NPDES regulations and Basin Plan water quality objectives, the City's Post-Construction Stormwater Runoff Control Ordinance No. 826B, *and Low-Impact Development (LID) alternatives for stormwater quality control per Public Facilities and Services Implementation Measure 3.0 of the adopted 2050 General Plan*. [emphasis added]. Mitigation Measures 4.7-4(A) and (B) further mandate that: (b) the proposed water quality facilities shall be identified and designed in a Stormwater Management Plan prepared in accordance with Section 8.60.40 of the City's Municipal Code for City review and approval; (d) the project applicant shall submit a site-specific BMP plan showing the on-site locations and effectiveness of the BMP facilities proposed for long-term water quality impact reduction prior to project approval. The plan shall include a method or methods for financing the long-term maintenance of the proposed site-specific facilities; and (e) the City shall make the final determinations as to the appropriateness of the BMPs proposed for the Proposed Project and the City shall ensure future implementation, operation, and maintenance of the BMPs.

With this mitigation measure, LID measures are clearly required as a condition of project approval, and the City will be responsible for monitoring and ensuring compliance with the mitigation requirements.

No additional analysis or changes to the Draft EIR are necessary as a result of this comment.

Response to Comment 14-7

The commenter inquires whether the wetland delineations conducted in the Village 7 Specific Plan area were compared with the draft PCCP's wetland identification efforts. The City is not aware of any comparisons that have been made between wetland assessment data assembled for the draft PCCP planning effort and the jurisdictional wetland delineations performed in the Village 7 Specific Plan area. To the City's knowledge, the draft PCCP wetland information for this area was the result of aerial photograph interpretation, without any field data collection and without verification of conclusions based upon a site inspection. The Village 7 project applicant's wetland delineation was conducted according to U.S. Army Corps of Engineers' protocol, which involves extensive field data collection and mapping standards. As a consequence, it is much more accurate that the aerial photograph interpretation method generally used for the draft PCCP. It is important to note that the approved wetlands delineation for the Lewis Property was forwarded by the developer to both the City and Placer County for their use in preparing the draft PCCP. Other developers in Placer County are known to have done likewise, but the City is not aware how the preparers of the draft PCCP have handled that information.

The commenter also requested use of a standard mitigation ratio for wetland losses. Mitigation ratios are determined by federal and state resources agencies according to the specific resources and species being affected. Those agencies are required to base mitigation ratios accordingly in order to meet their jurisdictional mandates (e.g., "no net loss" and mitigation for incidental take of listed species.) Because not all mitigation ratios are programmatic in nature, stating actual required ratios in the Draft EIR prior to any detailed impact analysis would be presumptive, if not speculative. Further, such ratios are ultimately to be determined by the state and federal resources agencies in the exercise of their regulatory powers.

Response to Comment 14-8

The commenter states that the size of the buffer must be provided for public comment. As discussed in Response to Comment 14-7 above, Mitigation Measure 4.8-1(B) is subject to a

performance standard – no net loss - and wetland buffer distances will be determined by the state and federal agencies through the 404 permit process and may vary based on the wetland type and habitat. The buffers will be subject to the "no net loss" standard and must be approved by the state and federal resource agencies and the City of Lincoln.

Response to Comment 14-9

The commenter questions why studies have not been performed to determine whether vernal pool crustaceans are present in the wetlands in the Village 7 Specific Plan area. Current U.S. Fish and Wildlife Service (USFWS) guidelines and practice allow a project applicant either to conduct multi-year surveys according to strict USFWS protocols for vernal pool crustaceans or to simply assume they are present in the subject area's wetland features. Many projects in western Placer County have not conducted focused surveys for listed vernal pool crustaceans due to their substantial prevalence in the wetlands found in this part of Placer County. Those projects have been approved and moved forward through the Clean Water Act's Section 404 permitting process with the assumption of the species' presence, and the projects' impacts were mitigated in accordance with USFWS guidelines and regulatory requirements. Suitable habitat for vernal pool crustaceans is present in the Village 7 Specific Plan site and occurrences of vernal pool fairy shrimp (*Branchinecta lynchi*) are documented on surrounding properties, including the Orchard Creek mitigation bank and the Lincoln Crossing open space areas.

The commenter's concern with the historic loss of vernal pools in Placer County is noted and is one of the motivations for the creation of the draft PCCP, which the City of Lincoln supports and in which it is an active participant. Commenter also opines that vernal pools should be mitigated at a minimum ratio of 3:1 and that restored or reconstructed vernal pools should not be allowed as mitigation. The mitigation ratio for vernal pools is determined by the state and federal resources agencies. It is within the discretion and professional judgment of the resources agencies to best determine the nature of that mitigation, which oftentimes requires restoring or reconstructing vernal pools and other wetland habitat features, in addition to requiring the preservation of existing vernal pools and other types of wetlands. Mitigation for impacts to wetlands and endangered species habitat will occur in strict accordance with U.S. Army Corps of Engineers' and USFWS requirements and regulations. The USFWS typically requires both the restoration and construction of wetland habitat at an appropriate mitigation site. The commenter cites an unsubstantiated claim regarding the unacceptable success rate for restored vernal pools and requests that reconstruction of pools not be allowed. The USFWS has identified restoration and creation of vernal pools and vernal pool systems as an important conservation strategy for the recovery of vernal pool species, and compensation for the loss of vernal pools is an accepted regulatory practice. Moreover, the Lewis Property will conform to the existing Biological Opinion for the site from the USFWS.

The Biological Opinion for the Lewis Property (USFWS No. 1-1-05-F-0079) issued on March 15, 2006, specifies that mitigation for the loss of wetlands and endangered species habitat will take place at an overall ratio of 4:1 for all direct impacts to vernal pool aquatic habitat (3:1 preservation and 1:1 creation) and at a 3:1 ratio for indirect impacts to vernal pools (3:1 preservation). For other properties in the Village 7 Specific Plan area, the USFWS will make the final determination regarding necessary mitigation requirements when those properties develop, and the USFWS will likely include both compensation and preservation elements in keeping with its mitigation guidelines.

Please see also Response to Comment 14-7.

Response to Comment 14-10

The commenter requests information concerning studies of the Village 7 Specific Plan area for the presence of the California black rail (*Laterallus Jamaicensis coturniculus*), an elusive bird species

typically found in saltwater and freshwater marshes. No specific surveys for the California black rail were conducted in the Village 7 Specific Plan area.   The Black Rail Project mentioned by the commenter has identified the types of habitats inhabited by the black rail in the nearby foothill regions. Emergent marsh vegetation present within the Village 7 Specific Plan area may provide potential habitat for black rails. The Draft EIR (page 4.8-17 and Table 4.8-1) has been revised to include information about black rail. Please see Chapter 2, Text Changes to the Draft EIR.

Insofar as the California black rails are migratory birds, they are protected by the federal Migratory Bird Treaty Act (Title 50 Code of Federal Regulations, Section 10.13). The Draft EIR evaluated impacts associated with migratory birds (Impact 4.8-5 on pages 4.8-30 through 4.8-31). The project applicant will conduct, at a minimum, a habitat assessment of the site prior to construction, in consultation with a biologist knowledgeable about the black rail, to determine the likelihood of species occurrence and whether focused surveys are warranted.

Mitigation Measures 4.8-5 (A)(a) and (B)(a) have been revised as follows to provide for black rail surveys and nest avoidance measures:

> 4.8-5(A)(a) & (B)(a)   *If construction is to occur between March 15 through August 30, the project applicant, in consultation with the City of Lincoln and CDFG, shall conduct a preconstruction breeding-season survey of the project site within 30 days of when construction is planned to begin. The survey shall be conducted by a qualified biologist (who is also knowledgeable about the California black rail) to determine if any protected raptors or migratory birds (including, but not limited to the California black rail) are nesting on or directly adjacent to the project site.*

Response to Comment 14-11

The commenter states that "open space" should not include the "linear parkways" and "major paseos." However, the adopted 2050 Lincoln General Plan establishes the features that comprise the Open Space (OS) land use designation.   These include public parks, playgrounds, and parkways; vista areas, wetlands, wildlife habitats and outdoor nature laboratories; floodplain areas; stormwater facilities; and buffer zones separating urban development and ecologically-sensitive resources. The Draft EIR presents this information on page 4.1-6.

Page 2-12 in the Draft EIR describes the types and acreages for open space and park features. Tables 4.9-13 and 4.9-14 also present this information, with narrative information within the impact text and footnotes that explain the calculations that were used to determine acreages. As explained on page 4.9-35 in the Draft EIR, the Proposed Project meets the specific City requirements for park land and open space.

Response to Comment 14-12

The commenter expresses concern that maintenance that is deferred to a homeowner's association or the City is problematic and requests that an endowment for maintenance be required. Funding requirements for maintenance activities would be established at the time of Tentative Map approval, through a Lighting and Landscape District or other City-approved funding mechanism.

Response to Comment 14-13

The commenter expresses concern that PCWA may not be able to serve the Proposed Project's water needs. However, a Water Supply Assessment (WSA) for the Village 7 Specific Plan was prepared as required under Public Resources Code Section 21151.9 and found that a sufficient water supply was available.   The Draft EIR, pages 4.9-38 through 4.9-62 in Section 4.9, Public

Utilities and Services, incorporates the conclusions of the WSA with regard to the ability of PCWA to serve the Proposed Project's water needs. The WSA is also included in Appendix H in the Draft EIR. The commenter is referred to those sections of the Draft EIR for additional information. The WSA was approved on August 26, 2008 by the Lincoln City Council (Draft EIR, pages 4.9-50 and 4.9-53). The WSA concluded (Draft EIR, Impact 4.9-17, page 4.9-53) that sufficient water supplies will be available to meet the demands of the Proposed Project. The City has complied with the requirements for evaluating water supply availability in accordance with CEQA.

Response to Comment 14-14

The commenter expresses concern regarding the potential impact from the perchlorate plume at Alpha Explosives on the Village 7 Specific Plan area. The City is aware of the contaminant plume associated with the Alpha Explosives property north of the City and north of Markham Ravine. Based on an array of geophysical investigations into the aquifers in and around the City over the last decade and on-going communications with the Regional Water Quality Control Board staff responsible for monitoring cleanup of the documented contamination at the site, the City is confident that contaminants will not flow to areas south of the Auburn Ravine, and, therefore, would not have an effect on the Proposed Project. The City also routinely monitors the quality of water from all of its wells as part of on-going consumer confidence activities and reports the results annually. The City will continue monitoring the conditions as they may impact current or future City wells in the area around Markham Ravine.

No additional analysis or changes to the Draft EIR are necessary as a result of this comment.

LINCOLN CROSSING

July 27, 2009

Mr. Rodney Campbell
City of Lincoln
Community Development Department
600 6th Street
Lincoln, CA 95648

Re: Comments on Draft Environmental Impact Report for the Village 7 Specific Plan Project
State Clearinghouse No. 2005062001

Dear Mr. Campbell,

The Lincoln Crossing Community Association (LCCA) consists of more than 2800 homes and borders the proposed project. (see Figure 1-1 of document). We have reviewed the DEIR for the Village 7 Specific Plan and have the following comments.

| 15-1

We note that your document did not reference the Lincoln Crossing Nature Preserve Plan (revised December 16, 2003 and created as a condition of the U.S. Army Corps of Engineer Section 404 N26 permit (Regulatory 199101113 (199100770)). We believe your construction activities will have an impact upon the Preserve by noise, dust and earth movement that will disturb the Preserve and wildlife. Furthermore, without the installation of fencing, the Project's creation of access to walking areas along the Preserve will encourage trespass into the actual Preserve. Page 3-2 of the DEIR states there is no conflict with any existing habitat conservation or nature community conservation plans, yet we do not see a discussion regarding the Lincoln Crossing Nature Preserve.

| 15-2

1. SCHOOLS

Our community is experiencing serious issues with school capacity. The DEIR states:

4.9-13 The Proposed Project would require school facilities and includes a K-5 school with capacity for 900 students with the Village 7 Specific Plan, which would accommodate project demand. Middle school and high school demand would be met with schools that would be operational before project buildout. Project applicants would be required to provide proportional funding for middle and high school construction in compliance with SB 50.

| 15-3

4.9-14 The Proposed Project, in combination with other development, would result in the need for additional schools, which could result in the construction of new or physically altered school facilities.

LCCA disagrees with a finding of Less than Significant for schools. The City of Lincoln must ensure that the elementary school proposed in the DEIR is built and operational during the first phase of the project. Additionally, the Project Applicant states that *"Middle School and high school demand would be met with schools that would be operational before project build out"*, but we assert that this statement is not based upon substantial evidence. The Western Placer Unified School District (WPUSD) has been in dire straits for the past 3 years due to failing to account for the service of debt when borrowing millions of dollars through risky certificates of participation. In fact, an audit that WPUSD had accomplished found that WPUSD needed to make sure it understood how it would service debt prior to actually obtaining the debt. WPUSD at that time, was $189 million in debt. As a result, the Twelve Bridges High School project which was counted upon to be operational by many of our home owners to meet demand, has been on hold much to the frustration of many homeowners in the City.

Furthermore, WPUSD was not going to open Lincoln Crossing Elementary School (LCES) on time until a very large group of homeowners attended the Board meeting arguing that there were not enough spaces in the existing schools for our children. Lincoln Crossing residents also offered to help move all the furniture into LCES and the School Board agreed to open the school with some construction on-going. The Superintendant later stated that he was surprised that the school was at capacity on opening day. Our homeowners were not surprised at all and the educational facilities for the students of Lincoln continue to be a battle.

15-3
(cont.)

WPUSD is also supposed to purchase two school sites in Lincoln Crossing from SunCal Development Corporation. The sites are located on Groveland Lane and on Brentford Circle. The Groveland Lane site is scheduled to be a middle school with a joint use park. The Brentford Circle site is scheduled to be an elementary school with a joint use park. WPUSD has not purchased either site at this time due to their financial disaster. Lincoln High School keeps growing by population and buildings. Unfortunately, the "buildings" are portable buildings that keep getting placed on campus grounds. WPUSD just spent $3 million more on portable buildings.

In order not to further negatively impact our serious school problems, the project applicant must be required to build and ensure operation of the proposed elementary school during phase one of construction.

2. PARKS

Our City also struggles with the construction and maintenance of parks and the Project will have negative impacts to our existing facilities.

15-4

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On page 2-12 of the DEIR there is a discussion of parks. *"Within the Village 7 Specific Plan there are a total of 18 parks that include small pocket parks to larger community parks, ranging in size from approximately 0.5 to 20.5 acres. The larger passive parks would be located throughout the entire specific plan area to ensure access from each of the proposed residential neighborhoods. Park accessibility would be enhanced by an integrated system of on-street and off-street bicycle paths and pedestrian linkages connecting each park and open space area. In addition, within the Lewis Property a neighborhood park would be located adjacent to the proposed 12-acre elementary school site. Figure 2-8 shows the park and open space areas proposed under the Village 7 Specific Plan."*

The DEIR also states that:

4.9-15 *The Proposed Project would generate a demand for park and recreation facilities, which could require the construction of new or expansion of existing recreational facilities. Village 7 Programmatic Portion*

4.9-15(B) *The project applicant shall pay all applicable fair-share fees to the City pursuant to the established Public Facilities Element requiring 6 acres of parkland per 1,000 residents for the provision of recreational facilities to meet demands created by the Village 7 Programmatic Portion.*

4.9-16 *The Proposed Project, in combination with other development, could require the construction of new or expansion of existing parks and recreational facilities.*

As stated in the discussion above regarding schools, since the parks were to be joint use parks and the City did not fund appropriately for construction of the parks in Lincoln Crossing, LCCA families and residents are still waiting for the completion of three large parks that are just dirt and weeds now. We do not have any anticipated dates for these parks from the City.

Therefore, the City needs to mandate that the Project Applicant actually construct the parks for the Project so as to not take any potential future park funds from parks still awaiting construction.

The City should also mandate as a community enhancement and per paragraph 4.9-16, that the Project Applicant construct at least one of the three planned parks in Lincoln Crossing.

15-4
(cont.)

3. TRAFFIC/ROADS

3.1 Pg 2-7 of the DEIR states that *"As a primarily residential community, the resulting circulation plan emphasizes neighborhood oriented streets with a North South Collector street running through the center of the community (see Figure 2-4). The primary external access to the property would be from the future extension of Ferrari Ranch Road through the central portion of the site. This road would extend through the development in an east/west direction,*

15-5

3. TRAFFIC/ROADS (Cont.)

originating from the Sorrento and Lincoln Crossing developments in the east, to Moore Road in the west, which ultimately intersects with Fiddyment Road. Fiddyment Road would be a significant north-south collector road for the project site."

Pages 3-2 and 3-4 discuss traffic circulation as does 4.3-1 through 4.3-6 and 4.3-12 , 4.3-13. LCCA is concerned with the impacts that are going to occur on Ferrari Ranch Road from the proposed project.

15-5
(cont.)

The DEIR states that the project will *"Temporarily worsen unacceptable operations on State Route 65 in downtown Lincoln under existing plus project conditions, until the SR 65 Bypass is completed."* As stated below, LCCA does not think that the DEIR properly analyzed the project's traffic impacts on Ferrari Ranch Rd to downtown Lincoln or upon Ferrari Ranch Rd as traffic proceeds to the new SR 65 highway interchange. We do not find any discussion regarding the new Sorrento Parkway which was recently opened and brings traffic from two developments on Moore Rd to Ferrari Ranch Rd; traffic that used to travel on Moore Road to Joiner Parkway and now is a substantial addition of traffic on Ferrari Ranch Rd between Joiner parkway and Caledon Circle.

3.2 LCCA is also concerned with the analysis pertaining to the comment on page 4.3-23 of the DEIR which states *"Figure 4.3-6 shows the 24 intersections within Lincoln selected for analysis under cumulative conditions. The lane configurations, assumptions, and analysis methodologies used to evaluate these intersections in the City's 2050 General Plan were also assumed for this analysis."*

The 2050 General Plan assumes there will be a south bound ramp to SR 65 from north bound Ferrari Ranch road. However, the traffic study does not seem to account for the City of Lincoln's poor decision to postpone (by possibly10 years) the construction of the south bound slip entrance from Ferrari Ranch Rd on to SR 65. The City wants to add a left turn lane just past Caledon Circle and have traffic line up to make the left turn going north which then will wrap around to go south on SR 65 vice simply constructing the south bound slip now while the entire interchange is currently under construction. Doing the construction now would delete the left turn lane to gain access to southbound SR 65 and just allow traffic to easily enter SR 65 from the right hand lane of Ferrari Ranch Rd to proceed southbound on SR 65. Again, the DEIR does not present an adequate discussion of the Projects impacts to Ferrari Ranch Road or the intersection of Caledon Circle and Ferrari Ranch Rd, or the impact as a result of the City's poor and incorrect decision to delay the southbound on ramp from the right lane.

15-6

3.3   LCCA does not believe that the traffic counts in the DEIR are reasonably current. The DEIR on page 4.3-7 states that *"Fehr & Peers performed traffic counts at the majority of the study intersections and roadways in February and March 2005. Schools were in session at the time of the counts. Streets such as Ferrari Ranch Road, Fiddyment Road, and Industrial Avenue, which had been subject to temporary construction-related closures, were open to traffic at the time of the counts. Updated traffic counts on SR 65 north of SR 193 were collected in April 2006 and are reflected in the existing volumes."*

However, Lincoln Crossing Elementary School was not even open during the timeframe, the LCCA had much less homes, and Sorrento Parkway was not open bringing traffic to Ferrari Ranch Road. Simply put, the data is not reasonably current because peak hour flows are not adequately captured now that school children are being dropped off, several hundred homes have been constructed, more commercial facilities are in place and Sorrento Parkway has brought new trips to Ferrari Ranch Road.

15-7

3.4   Page 4/3-15 of the DEIR states that *" Travel time studies were necessary to estimate the relative usage of Moore Road versus the Ferrari Ranch Road-to-Joiner Parkway route to access destinations on Joiner Parkway north of 1st Street. Figure 4.3-4 shows that the relative usage of Moore Road and Ferrari Ranch Road changes based on the location of uses within the project. Most residents in the south portion of the project will use Ferrari Ranch Road to access Joiner Parkway. Conversely, residents in the most northerly villages will likely use Moore Road."*

The language concerns us because more traffic may utilize Ferrari Ranch Rd once the intersection to SR 65 is completed.

15-8

Further, we disagree with paragraph 4.3-12 which states that the impact on City of Lincoln roads would be less than significant. As stated above, we believe the additional traffic from the Project and Sorrento Parkway, coupled with the delay of the south bound slip will have a significant impact on Ferrari Ranch road traffic conditions.

4. WATER RESOURCES

The DEIR states on page 2-11 that *"Development of the Proposed Project also includes numerous opportunities for the use of reclaimed water from the City's WWTRF. These opportunities include irrigation for landscape medians, landscape corridors, parks, and parkways."*

15-9

LCCA believes that the statement above lacks substance and is incomplete. The Project must be mandated to use reclaimed water for landscape irrigation.

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5. DRAINAGE

The DEIR states on page 2-12 states *"As part of the project's drainage plan, Ingram Slough has been enhanced to meet the drainage and water quality needs of the development, as well as the adjacent Lincoln Crossing development. These enhancements include the deepening and widening of the existing slough as it passes through the property. The proposed drainage improvements for the Proposed Project are shown in Figure 2-7."*

LCCA is concerned with the water quality impact from more impervious surfaces due to the project and the drainage that will be deposited into Ingram Slough. We are concerned with the deepening and widening of the existing slough upon the water volume in the Lincoln Crossing Nature Preserve ponds and lakes. We do not find any discussion of the volume of water or flow of water through the Preserve before and after the Project.

15-10

6. Wetlands/Vernal Pools/Preserve Areas—Biological Resources

LCCA has several concerns regarding Wetlands and biological resources. As stated below, these sensitive areas must be protected and we have serious concerns with the City of Lincoln's failure to manage these valuable resources.

6.1 On page 3-6 of the DEIR it states that:

4.1-1 The Proposed Project could result in internal land use incompatibilities.

Lewis Property 4.1-1(A) a) The applicant shall construct fencing and/or post signs to inform the public of sensitive wetland/wildlife areas within the open space areas and in the Orchard Creek Wetlands Preserve that borders the Lewis Property on the south. b) The applicant shall design its specific project to comply with all setback and buffer requirements required by any Clean Water Act Section 404 permits, incidental take permits and Streambed Alteration Agreements.

Village 7 Programmatic Portion 4.1-1(B) a) The applicant shall construct fencing and/or post signs to inform the public of sensitive wetland/wildlife areas within the open space areas. b) The applicant shall design its specific project to comply with all setback and buffer requirements required by any Clean Water Act Section 404 permits, incidental take permits and Streambed Alteration Agreements.

15-11

LCCA absolutely disagrees with allowing just a sign to inform the public of a sensitive wetland/wildlife area. These areas **must have fencing in place** to prevent the public from trespassing and destroying the area. The City of Lincoln has yet to enforce the "No trespass" stipulation located in the Lincoln Crossing Nature Preserve plan and the public has created at least a hundred different trails into the Preserve from the designated asphalt walking paths. Trespassers have put small boats in the water and fished from the small boats and the banks of

6. Wetlands/Vernal Pools/Preserve Areas (Cont.)

the Preserve. Trespassers have even been observed swimming in the waters and urinating on the banks and in the water while fishing. LCCA has brought these concerns to the City of Lincoln numerous times and yet the City has ignored their responsibilities for the Preserve. LCCA is attempting to work with the City to get a post and cable fence installed to keep the public out of this sensitive wetland/wildlife Nature Preserve and to stop the significant degradation of the Preserve. Fencing, as well as signs, need to be installed around sensitive areas within the project and also around/along the project's border with the designated Lincoln Crossing Nature Preserve area.

6.2 Paragraph 4.8-1 on page 3-41 also states that *"The Proposed Project would result in the filling or adverse modification of jurisdictional wetland/ other "waters of the U.S."* In Section (B) it states *"d) Prior to any construction activities on the site, a protective fence shall be erected at the boundaries of the wetland preserves in the areas of construction. This fence shall remain in place until all construction activity in the immediate area is completed. No activity shall be permitted within the wetlands preserve except for those expressly permitted by the US Fish and Wildlife Service."*

We are pleased to see that the protective fence shall be erected in the areas of construction but we disagree with the contention that once the construction is complete that no protective fencing will be in place. Once again, for the same reasons articulated above, the LCCA states that it is imperative for the actual protection of these sensitive areas that a permanent protective fence be installed.

15-11
(cont.)

6.3 Paragraph 4.8-2 on page 3-42 and 43. *Development of the Proposed Project could result in the loss of special-status vernal pool crustacean and amphibian species and degradation and/or loss of their habitat.*

LCCA is pleased to see that the need for the permanent fencing for these resources has been identified. Paragraph 4.8-2 states that *"After construction, fencing around open space areas containing wetlands or other sensitive habitats shall be replaced by permanent fencing that will be maintained by the City, and/or the local home owners association."*

However, this Fencing Plan needs to clearly identify that the fencing will be installed to keep trespassers on the walking paths and out of the sensitive areas. The fencing needs to be installed between the walking paths and the sensitive areas. We have the same concern regarding the language on Page 4.1-18 regarding the Lewis property and possible impacts to sensitive areas from people intruding.

6.4 The DEIR discusses wildlife such as the western pond turtle. *4.8-4 The Proposed Project could result in the loss and/or degradation of western pond turtles and its habitat.*

b) If individual western pond turtles are discovered during the survey on the project site, or immediately adjacent area, the project applicant or their agent shall initiate consultation with the CDFG to formulate and implement minimization measures, which could include capture and relocation of individuals found on-site.

If said turtles are found in the project area and relocation is recommended by CDFG, LCCA encourages CDFG to relocate to the Lincoln Crossing Nature Preserve.

15-12

6.5 We are concerned with possible impacts upon migratory birds. The DEIR states in paragraph 4.8-5: *The Proposed Project could result in the direct loss or disturbance of nesting migratory birds, including raptors (birds-of-prey).*

"d) The project applicant, in consultation with the City of Lincoln and CDFG, shall avoid all protected raptor and migratory bird nest sites located in the project site during the breeding season (approximately March 15 through August 30) while the nest is occupied with adults and/or young. This avoidance could consist of delaying construction in close proximity to the nest during the nesting season. Any occupied nest shall be monitored by a qualified biologist to determine when the nest is no longer used. If the construction cannot be delayed, avoidance shall include the establishment of a non-disturbance buffer zone around the nest site. The size of the buffer zone will be determined in consultation with the City and CDFG. The buffer zone shall be delineated by highly visible temporary construction fencing."

15-13

Please elaborate as to what a "non-disturbance buffer zone around the nest site" means. In the same paragraph, it states that delaying construction in close proximity could be instituted to protect the adults and young birds but then goes on to say that if construction can't be delayed, avoidance will be done by "non-disturbance". Wouldn't "non-disturbance" mean no construction in the area? Same discussion and questions for the rest of paragraph 4.8 that plans to use "non-disturbance", i.e., 4.8-7.

6.6 The DEIR discusses foraging habitat loss for raptors. **4.8-6** *The Proposed Project could result in the loss of foraging habitat for Swainson's hawk, white tailed kite, burrowing owl and other raptors.*

"4.8-6(A) The project applicant shall ensure that at least an appropriate number of acres (as approved by the City and CDFG) of annual grasslands or other suitable raptor foraging habitat are preserved based upon project impacts of 363 acres (0.75:1 ratio). Preservation may occur through either: a) Payment of a mitigation fee to the City of Lincoln through a negotiated agreement between the City, the project applicant, and CDFG. The monies will be held in a trust fund, and used to preserve mitigation land through the purchase, monitoring, maintenance, and remediation of lands that support suitable raptor foraging habitat (consistent with CDFG

15-14

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6. Wetlands/Vernal Pools/Preserve Areas (Cont.)

guidelines); or b) Purchase of conservation easements or fee title to suitable raptor foraging habitat to protect the habitat from urban development; or c) Participate in Placer County Natural Community Conservation Plan/Habitat Conservation Plan, once adopted."

LCCA disagrees with option "A" and strongly advocate for a combination of option "B" and "C". Option B is a concrete identifiable preservation action that actually occurs. Option "A" could let the City hold on to the money for years without taking any action or any significant action to meet the intent.

15-14
(cont.)

6.7 The DEIR discusses modification of stream corridors and disruption of the associated habitat.

4.8-8 The Proposed Project would result in the modification to stream corridors, disrupting the associated habitat.

4.8-8(A) In addition to pre-construction surveys for special status species, as described in Mitigation Measures 4.8-3, 4.8-4, and 4.8-7, the project applicant shall obtain all necessary permits to alter Ingram Slough, including a CDFG Streambed Alteration Agreement, a Corps Section 404 permit, a Regional Water Quality Control Board Section 401 Permit and a SWPPP and any FESA/CESA take permits, should special-status species be identified.

15-15

LCCA strongly hopes that the CDFG and Army Corps of Engineers will consider the impact of any alterations on the sensitive areas such as wetland and ensure that those wetlands, vernal pools and other sensitive areas are indeed protected from human trespass. Encouraging the use of signage alone is insufficient to protect the sensitive areas as actual fencing (such as post and cable) must be installed.

7. High Density Residential (HDR) Buildings

See figure 2-3 and paragraph **4.10-1** *Development of the Proposed Project could alter views and scenic quality in the City of Lincoln.*

The DEIR states that regarding HDR *"The purpose of this designation is to allow for multi-family housing at densities greater than other residential designations. This designation is intended to allow for those structural forms that promote moderate and higher density living styles. This designation provides for condominiums, townhouses, triplexes, fourplexes, multi-family residential units, group quarters, and similar and compatible uses. Residential densities shall be in the range of 13.0 to 20.0 units per gross acre."*

15-16

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7. <u>High Density Residential (HDR) Buildings</u> (Cont.)

LCCA is against any such buildings being placed along the Lincoln Crossing Nature Preserve as it will take away from the visual impact of the current Preserve. We think that such visual impacts would be significant. Per Figure 2-3, it appears that HDR designation has been given to property along the Preserve.

15-16
(cont.)

8. <u>Noise</u>

Para 4.5-1 on page 3-25 and 4.5-5 discuss noise impacts from construction. LCCA has homes that border the construction site and the DEIR states that construction hours will be from 7 a.m. through 7 p.m. Monday through Friday unless a special use permit is granted. We want to decrease the impact on the quality of life for our homeowners during the construction phase. LCCA does not want heavy equipment construction noise before 7:30 a.m. or after 6:00 p.m. and encourages the City to be concerned about the families living close to the construction zone. LCCA also opposes the use of unlimited special use permits that allow for heavy duty equipment construction noise outside of the stated time frames. Our homeowners have been horribly adversely affected by the late night construction activities involved with the Lincoln Bypass project on SR 65. We do not want the same conditions to occur for our homeowners due to the Village 7 project construction activities.

15-17

9. <u>Stormwater:</u>

9.1 Paragraph 4.7-2 discusses runoff into Ingram Slough due to impervious surface additions from the project and identifies the need for 78 acre feet of storage capacity. We are concerned with stormwater runoff impact and note the DEIR states that *"if at the time the final map is approved, the regional facilities are not available or operational, or if additional capacity is required, the Applicant shall create on-site storage capacity, or through a combination of on-site and off-site capacity to fully mitigate the 78.0 acre-feet."*

LCCA is concerned with the lack of discussion as to where the location of the proposed retention site is should the regional facilities not be available? We do not want any negative impacts to Ingram Slough.

15-18

9.2 Paragraph 4.7-4 states that maintenance of the water quality facilities will be done by the City of Lincoln. The City has severe budget issues and the maintenance of these facilities and the cost to maintain them should be borne by the developer until build out.

15-19

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10. **Public Utilities:**

LCCA has concerns with the lack of mandated use of alternate energy sources by the City or the voluntary use of those sources by the Project Applicant. The DEIR states:

Paragraph 4.9-8 The Proposed Project, in combination with other development in the City of Lincoln, would not exceed the electrical or natural gas supply and transmission capabilities.

4.11-1 Development of the proposed project could potentially result in a cumulatively considerable incremental contribution to the significant cumulative impact of global climate change

15-20

LCCA strongly encourages the City to mandate that at least 50 percent of the energy required for the residences and commercial facilities come from solar power which will greatly reduce the Green House Gas emissions from the Project's operation. See page 3-3 of the DEIR regarding Climate Change.

11. **Mitigation Monitoring Report/Plan**

LCCA request to have a member of our Association participate in addressing impacts to the Lincoln Crossing Nature Preserve.

15-21

We appreciate the opportunity to comment upon the Draft Environmental Impact Report for the Village 7 Specific Plan Project; State Clearinghouse No. 2005062001. LCCA asserts that there are significant impacts that have not been properly mitigated. LCCA welcomes the opportunity to meet with the Project Applicant and discuss the issues noted above.

15-22

Sincerely and On Behalf of the
    Lincoln Crossing Community Association
        and the Board of Directors,

Richard Daino, Director

COMMENT LETTER 15: **RICHARD DAINO, LINCOLN CROSSING COMMUNITY ASSOCIATION AND BOARD OF DIRECTORS, JULY 17, 2009**

Response to Comment 15-1

The comment states the Lincoln Crossing Community Association consists of more than 2,800 home and borders the Proposed Project. The Draft EIR (Figures 1-1, 2-1 through 2-8) shows the location of Lincoln Crossing relative to the Village 7 Specific Plan. The Draft EIR (pages 2-1, 2-8, and 4.1-2, to name a few) describes the adjacency of the Proposed Project to Lincoln Crossing. Please see also Response to Comment 15-22 regarding outreach efforts of the applicant.

Response to Comment 15-2

The Lincoln Crossing Nature Preserve Areas were established to avoid and mitigate for unavoidable impacts on wetlands associated with the Lincoln Crossing mixed-use development project. Mitigation included the construction of 5.98 acres of vernal pools in Lincoln Crossing, preservation of 38.88 acres of existing wetland features within Lincoln Crossing, and the purchase of wetland mitigation credits. The Lincoln Crossing Preserve Areas Operations and Management Plan (O&M Plan) was developed to ensure compliance with the federal Clean Water Act Section 404 Nationwide 26 Permit #199101113 (1999100770) issued by the U.S. Army Corps of Engineers to the project developer. The Lincoln Crossing Preserve Areas Operations and Management Plan defines the specific methods to accomplish long-term operations and maintenance of the Lincoln Crossing Nature Preserve Areas, including allowed uses, prohibitions and restrictions, and management activities, consistent with federal permits. The Lincoln Crossing Preserve Areas O&M Plan is the only document that guides management of the wetlands within Lincoln Crossing; there is no "Lincoln Crossing Nature Preserve Plan."

CEQA Guidelines Section 15125(d) establishes the types of plans that should be considered to determine whether there are inconsistencies between a project and a plan: general plans and regional plans. The applicable general plan is the adopted 2050 Lincoln General Plan. CEQA Guidelines 15125(d) provides examples of the types of "regional plans" that should be considered. These include habitat conservation plans and natural community conservation plans, among others. The Lincoln Crossing Nature Preserve O&M Plan was created specifically to fulfill a requirement under the Corps permit for the Lincoln Crossing project. It is not an adopted regional habitat or natural community conservation plan subject to analysis under CEQA.

The commenter expresses a concern for the construction impacts of the Proposed Project on adjoining areas, including the Lincoln Crossing Nature Preserve, in particular. Mitigation Measures 4.4-1(A) and (B) are designed to reduce the impacts arising from the emissions of PM10 and PM2.5 during grading and other earth-disturbing activities, which will similarly reduce any dust impacts at the Lincoln Crossing Nature Preserve. Construction noise will be reduced by observing the requirements of Mitigation Measures 4.5-1(A) and (B), which limit the hours of construction activities and require mufflers on all construction equipment and stationary noise sources. Mitigation Measures 4.8-1(A) and (B), 4.8-2(A) and (B), 4.8-3(A) and (B), 4.8-4(A) and (B), and 4.8-8(A) will reduce or avoid any impacts on special-status species and their habitats in the Village 7 Specific Plan area and vicinity during construction by requiring the installation of protective fencing around wetland areas before any construction begins; confining construction to areas permitted by the U.S. Fish and Wildlife Service; creating buffers with restricted uses around wetland areas; using erosion control techniques to protect water quality in wetland preserves and by extension the watershed; controlling landscape irrigation runoff so it enters the wetlands preserve in accordance with the 404 Permit or Streambed Alteration Agreement; limiting mowing and maintenance activities to those detailed in the 404 Permit or Streambed Alteration Agreement; replacing the temporary construction fencing with permanent fencing after construction activities are completed; giving construction

personnel instruction on the presence of listed species and on avoiding impacts on the species and their habitat; prohibiting activities that are inconsistent with the maintenance of vernal pool habitats and their watershed; and conducting surveys for special-status plant species and providing mitigation for any that are harmed.

Response to Comment 15-3

The commenter has expressed a concern concerning the lack of adequate school capacity to serve the new students that would be generated by the Village 7 Specific Plan area and the Draft EIR's conclusion that this would be a less-than-significant impact of the Proposed Project. A lack of substantial evidence to support that conclusion was also suggested. The commenter also expressed frustration with the Western Placer Unified School District's (WPUSD) failure to acquire new school sites and construct new schools to serve the new students generated by the existing Lincoln Crossing development.

Providing schools for new development has been an issue of statewide concern in California for many years. In order to provide new schools, the California Legislature has enacted a comprehensive statutory program for financing new schools. California law, as found in Education Code Section 17620 and Government Code Sections 65995 and 65996, provides that the provisions of state law are full and complete mitigation for the impacts arising from the planning, use and development of new school facilities to serve new development to the exclusion of all other measures, financial or nonfinancial, on the subject. (See, Government Code Sections 65995 and 65996).

For purposes of CEQA, the provisions of Government Code Sections 65996 through 65998 are expressly deemed to provide full and complete school facilities mitigation. Consequently, the City of Lincoln is without the authority under CEQA to impose any fee, condition or other exaction on the Village 7 Specific Plan area for the purpose of funding new school construction. However, should a school district determine that the school facility fees imposed by Section 65995 are inadequate to fund the school district's needs, then the school district is authorized by Government Code Sections 65995.5 and 65995.7 to perform a school facility needs analysis and establish school facility fees for the purpose of funding new schools.

The commenter's disagreements with the WPUSD's use of portable buildings on school campuses as school facilities, and with WPUSD's failure to purchase two new school sites on Groveland Lane and Brentford Circle, are noted. Such decisions are within the sole jurisdiction of the WPUSD.

Response to Comment 15-4

The commenter expresses a concern that parks have not yet been constructed in the Lincoln Crossing area and asks that the project applicant be required to build one of the parks in the Lincoln Crossing area. This comment also relates to the timing of the City's implementation of the capital improvement program for parks, and not to the environmental impacts of the Proposed Project. The Proposed Project will be required to pay its fair share of the City's costs to build the necessary parks through Public Facilities Element (PFE) impact fees assessed by the City on all new developments. The City has no legal nexus for requiring the project applicant for Village 7 to build a park to serve the residents of the Lincoln Crossing area. The timing or phasing of parks being funded with PFE fees is a not a CEQA matter but a decision made when the City Council approves the timetable in the capital improvement construction program for the PFE fees.

Response to Comment 15-5

The commenter asserts that the Draft EIR did not properly analyze Ferrari Ranch Road as it proceeds toward downtown Lincoln and as traffic proceeds to the new SR 65 highway interchange, and that there was no discussion of the recently opened Sorrento Parkway adding traffic to Ferrari Ranch Road.

The Draft EIR analyzed project impacts on Ferrari Ranch Road at Joiner Parkway, SR 65, and SR 193 under both "existing plus project" and "cumulative plus project" conditions (see Tables 4.3-6 and 4.3-9 on pages 4.3-16 and 4.3-23, respectively). At the time the existing conditions analysis was completed, Sorrento Parkway was not yet constructed. The analysis of project impacts under cumulative conditions does consider its construction along with the cul-de-sac of Moore Road on either side of the SR 65 Bypass.

Previous environmental analyses (e.g., Aitken Ranch Draft EIR, 2003) indicated that the intersections of Ferrari Ranch Road with Caledon Circle and Sorrento Parkway would operate acceptably under cumulative conditions. As such, those intersections were not studied in this Draft EIR. Nevertheless, in response to the comment, this Final EIR includes the analysis of these intersections under "cumulative with project" conditions.

For the Sorrento Parkway/Ferrari Ranch Road intersection, the volume/capacity ratio is estimated to be 8 seconds/vehicle and Level of Service (LOS) A conditions. For the Caledon Circle/Ferrari Ranch Road intersection, the volume/capacity ratio is estimated to be 25 seconds/vehicle and LOS C conditions. These are acceptable LOS.

Therefore, project impacts to Ferrari Ranch Road have been properly analyzed in accordance with City procedures. The results of this analysis do not result in any new significant impacts not previously disclosed in the Draft EIR.

Response to Comment 15-6

The commenter suggests that the Draft EIR traffic analysis should have accounted for the decision to postpone the construction of the diagonal on-ramp from eastbound Ferrari Ranch Road onto the southbound SR 65 Bypass. In lieu of this movement, motorists would need to make a signal-controlled left turn.

To be consistent with the General Plan, the Draft EIR traffic impact analysis correctly assumed the diagonal southbound on-ramp to be in place under the cumulative condition.

According to engineering drawings for the SR 65 Bypass/Ferrari Ranch Road interchange, the eastbound left-turn lane onto the southbound loop on-ramp will be over 400 feet in length, which provides storage for 16 vehicles. Given this amount of storage and the three-phase operation of the traffic signal (i.e., fewer phases allow more green time for subject movement), this configuration will function acceptably for a lengthy period of time.

The commenter's suggestion that construction of that improvement should be accelerated is noted. However, this interchange is the jurisdiction of Caltrans and, therefore, subject to that agency's approval. The City has not delayed, nor does it have the authority to direct when the improvement would occur. When the interchange and on-ramp no longer function acceptably, Caltrans, as the lead agency, and the City of Lincoln, as the sponsoring agency, will initiate implementation of the diagonal on-ramp. For these reasons, no analysis beyond that presented in the Draft EIR is necessary to address the commenter's assertion the Draft EIR should have studied the "impact as a result of the City's … decision to delay [the on-ramp]."

It is important to note that although this on-ramp is not being built as part of the initial interchange construction, it is reasonable to assume that the next/ultimate phase of the interchange will be constructed between now and 2050. The City's Public Facilities Element (Public Facilities Element Fee Nexus Study, EPS, 2006) is collecting fees from new development to help fund interchange improvements on the SR 65 bypass at Ferrari Ranch Road. The process of phasing interchange improvements as funding allows is similar to recent improvements made at the SR 65/Pleasant Grove Boulevard interchange in Roseville. Fees collected from new development enabled construction of a loop on-ramp onto southbound SR 65, thereby eliminating a heavy signalized left-turn movement.

Response to Comment 15-7

The commenter asserts that the existing conditions analysis in the Draft EIR is no longer valid because of the age of the traffic counts, recent opening of Lincoln Crossing Elementary School, construction of additional homes and commercial development, and completion of Sorrento Parkway.

The analysis of project impacts under cumulative conditions considered the opening of Lincoln Crossing Elementary School and construction of Sorrento Parkway. It assumed build-out of the Lincoln Crossing Specific Plan along with all planned roadway improvements. The study intersections along Ferrari Ranch Road were each identified to operate at an acceptable LOS C or better under cumulative plus project conditions.

The comment asserts that traffic volumes from adjacent development may be greater than traffic counts assumed in the Draft EIR, but no data were provided to support that assertion. Page 4.3-1 of the Draft EIR states why traffic counts from 2005-06 were used in as the baseline for the traffic impact analysis.. The 2005-06 counts were used because they represented conditions that existed at the time the NOP was issued. CEQA Section 15125(a) specifies that "an EIR must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published. Section 15126(a) further states that "in assessing the impact of a proposed project on the environment, the Lead Agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation was issued." The 2005-06 data accurately establish a baseline for "existing plus project" impacts because, as explained on page 4.3-1 in the Draft EIR, traffic patterns have changed somewhat in the study area since 2005-2006. Although traffic levels have likely increased on some streets, they may have decreased on others as a result of the economic downturn and dramatic reductions in housing-related construction. In addition, some new roadway network improvements have been implemented that did not exist in 2005-2006. As a result of economic conditions, updated infrastructure, and based on the observations of local officials, current traffic levels at study intersections are expected to be similar to levels observed in 2005-2006. Therefore, the 2005-2006 data was used for analysis purposes because it is similar to current conditions.

The impacts of traffic from subsequent developments since the date of the NOP, such as the Lincoln Crossing Elementary School, additional homes and commercial development, and the completion of Sorrento Parkway, were correctly examined in the Draft EIR as part of the cumulative plus project traffic condition.

The analysis of project impacts remains valid, and no changes to the Draft EIR are necessary as a result of this comment.

Response to Comment 15-8

Please see Responses to Comments 15-5 and 15-6.

Response to Comment 15-9

The Proposed Project would use reclaimed water. The Village 7 Specific Plan (Figure 7-3) identifies the reclaimed water system for the project. Development will be required (through adoption of the Specific Plan and related Conditions of Approval) to connect to the City's recycled water transmission mains and to install service laterals to parks, open space, landscapes, and paseos.[15]

Response to Comment 15-10

The commenter is correct that the statement on page 2-12 of the Draft EIR reads as described in the comment letter. The second paragraph on page 2-12 of the Draft EIR concerning "Drainage" will be revised to clarify any confusion concerning the Village 7 Specific Plan project's impacts on Ingram Slough as follows:

> ~~As part of the project's drainage plan, Ingram Slough has been enhanced to meet the drainage and water quality needs of the development, as well as the adjacent Lincoln Crossing development. These enhancements include the deepening and widening of the existing slough as it passes through the property.~~ <u>The channel of Ingram Slough was previously enhanced through deepening and widening performed by the developers of the Lincoln Crossing project in the past. Their work included increasing the capacity of Ingram Slough so it also would be able to satisfy the future drainage requirements for the Village 7 Specific Plan area when the Village 7 Specific Plan area was developed. The work the Lincoln Crossing developers did on Ingram Slough consisted of deepening and widening the existing north and south sloughs where they pass through the area. Developers of the Village 7 Specific Plan will construct water quality drainage swales outside of the existing channel of Ingram Slough to treat the project's stormwater run-off. The Village 7 project will also be constructing two stormwater detention basins in upland areas.</u> The proposed drainage improvements for the Proposed Project are shown in Figure 2-7.

The existing channel of Ingram Slough contains the customary storm event flows. Larger stormwater flows spread out over the Slough's floodplain or overbank area. The Village 7 Specific Plan Project does not propose to perform any work within the existing Ingram Slough. Instead, the Village 7 developers will excavate water quality swales and features to treat the Proposed Project's stormwater runoff. Those water quality swales and features will be located within the 100-year floodplain of Ingram Slough. There will be no excavation or deepening or widening within the existing North or South channels of Ingram Slough. Figure 4.7-2 (Post-Project Drainage and Floodplain) on page 4.7-5 in the Draft EIR has been replaced with a revised figure that has references to "proposed Ingram Slough channel improvements" and "improved channel location" removed, as such modifications are not part of the Proposed Project. The revised figure is included in Chapter 2, Text Changes to the Draft EIR.

The Draft EIR (Impact 4.7-3 on page 4.7-19) evaluated the potential hydraulic effects of improvements to Ingram Slough within the project site to accommodate the Proposed Project. This would involve the placement of fill in some upland locations. However, the area along the slough would remain in open space. The flow line of Ingram Slough would be maintained with no alteration to the low-flow channel. Based on the Ingram Slough hydrologic and hydraulic study prepared for the Village 7 Specific Plan area, there will be a negligible increase in water surface elevations

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15   Village 7 Specific Plan, 2009, p.7-8 and Figure 7-3.

associated with Ingram Slough. Specifically, there will be no change in the volume or flow of water associated with the Lincoln Crossing Nature Preserve ponds and lakes which are located upstream of the Village 7 area. The results of hydraulic modeling, which are summarized on page 4.7-20 in the Draft EIR showed there would be no changes in water surface elevations for the 100-year and 500-year events. Therefore, there would not be adverse effects on the volume of water flow or flow of water through the Lincoln Crossing Nature Preserve.

Impact 4.7-4 on page 4.7-20 in the Draft EIR describes how the Proposed Project might increase urban pollutants in stormwater runoff that discharges from the project site into local waterways such as Ingram Slough, and that Best Management Practices (BMPs) would be required to mitigate that contribution. A comprehensive set of mitigation measures consistent with the City's requirements and federal and state laws and regulations has been identified to mitigate potential impacts (Mitigation Measures 4.7-4(A) and (B)). Those mitigation measures reference the requirements and regulations at the federal, State, and local level that must be followed. Those references also include specific measures that would be incorporated into a project, including a stormwater management plan that outlines all proposed LID facilities for the project and compliance with NPDES Phase 2 regulations. That stormwater management plan will be approved and implemented by the City of Lincoln. Controlling the contribution of urban pollutants into Ingram Slough from the Proposed Project in accordance with established regulations would reduce the likelihood of adverse water quality impacts in ponds and waterways in Lincoln Crossing to a less-than-significant level, as determined in the Draft EIR.

No additional analysis or changes to the Draft EIR are necessary as a result of this comment.

Response to Comment 15-11

The commenter expresses concerns with the protection of wetlands and biological resources in the preserves that would be established in the Village 7 Specific Plan area and the use of the terms "and/or" in Mitigation Measures 4.1-1(A) and (B) concerning fencing and signage at the preserves. The preserved wetlands area at the Lewis Property is being created pursuant to the requirements, terms and conditions of the Biological Opinion issued by the U.S. Fish and Wildlife Service, No. 1-1-05-F-0079. In reaching its decision, the U.S. Fish and Wildlife Service (USFWS) considered many of the various concerns raised by the commenter as part of its analytical process. In order to address those types of concerns, the Biological Opinion required a USFWS-approved operations and maintenance plan be prepared, which includes provisions for the ongoing monitoring of the wetland preserve. Pursuant to the Biological Opinion, the funding mechanism for the operations and maintenance plan will also provide for a USFWS-approved preserve manager who will have the responsibility of implementing the operations and maintenance plan and the ongoing monitoring to ensure that the wetland preserve is functioning as intended.

With regard to the commenter's concerns about Mitigation Measures 4.1-1(A) and (B), the mitigation measures have been revised as shown below to provide that both fencing <u>and</u> signs will be required at the preserved areas of the Lewis Property and Village 7 Programmatic Portion:

Lewis Property Mitigation Measure 4.1-1(A):

a) *The applicant shall construct fencing and/or post signs <u>that incorporate Section 12.20.80 of the Lincoln Municipal Code and Section 602.8 of the California Penal Code</u> to inform the public of sensitive wetland/wildlife areas within the open space areas <u>near</u> in the Orchard Creek Wetlands Preserve that borders the Lewis Property on the south <u>and at the other wetland/wildlife areas within the open space areas at the Lewis Property.</u>*

Village 7 Programmatic Portion Mitigation Measure 4.1-1(B):

a) *The applicant shall construct fencing and/or post signs that incorporate Section 12.20.80 of the Lincoln Municipal Code and Section 602.8 of the California Penal Code to inform the public of sensitive wetland/wildlife areas within the open space areas.*

In addition, Mitigation Measure 4.8-2(B)(d) requires the installation of permanent fencing around open space areas containing wetlands in the Village 7 Programmatic Portion after construction activities are completed.

Response to Comment 15-12

The commenter requests that if western pond turtles are found in the Proposed Project during pre-construction surveys and relocation is recommended by CDFG (Mitigation Measure 4.8-4) they be relocated to the Lincoln Crossing Nature Preserve. It would be premature to identify where western pond turtles should be relocated. Locations would need to be determined in consultation with CDFG staff.

Response to Comment 15-13

"Non-disturbance" refers to an area in which no construction can occur.

Response to Comment 15-14

The commenter expresses a preference for mitigation to address loss of raptor foraging habitat (Mitigation Measure 4.8-6(A) and (B)) that would require purchase of conservation easements or fee title, or participating in the PCCP, once adopted, or a combination thereof. The commenter's suggestion will be considered by the City Council during the decision-making process. Project conditions of approval will state which mitigation(s) must be implemented.

Response to Comment 15-15

Implementation of the Lewis Property portion of the Proposed Project would directly affect 6.87 acres of on-site jurisdictional wetlands, of which 0.78 acres in Ingram Slough. The applicant has consulted with the appropriate regulatory agencies (USFWS and Corps) and received appropriate authorizations, so these agencies are aware of potential issues. Construction of the Proposed Project would not directly impact sensitive ecological areas within the adjacent Lincoln Crossing development. Please see Responses to Comments 14-7, 14-8, and 14-9 regarding mitigation for sensitive habitats. Please see Response to Comment 15-11 regarding signage.

Response to Comment 15-16

High-density residential (HDR) is proposed north of Ferrari Ranch Road, along a portion of the north-south collector south of Ferrari Ranch Road, and east and west of the southern portion of the north-south collector where it would be surrounded by medium-density residential (MDR), as shown on Figure 2-3. No High-Density Residential (HDR) units are proposed immediately adjacent to the Lincoln Crossing Nature Preserve. For example, open space is proposed along the eastern boundary of Village 7 between Ferrari Ranch Road and Ingram Slough, which comprises the greatest linear extent of the boundary between Village 7 and the nature preserve. To the west of open space is a combination of MDR, park, and a small area of HDR. Ingram Slough forms a natural boundary between the southwest corner of Lincoln Crossing where the preserve is located and proposed MDR and very low density residential (VLDR) uses. There is a proposed linear park

along the south side of Ingram Slough as well. No HDR is proposed. To the north, Ferrari Ranch Road establishes the northern boundary of the preserve.

The proximity of proposed HDR uses, combined with the natural alignment of Ingram Slough and provision of open space and park land within Village 7 along the eastern boundary where it adjoins the preserve, would not adversely affect the aesthetics of the preserve.

Response to Comment 15-17

The City of Lincoln does not have an ordinance that regulates construction noise. For that reason, the Draft EIR identifies Mitigation Measure 4.5-1(A) and (B), which establishes construction hours and equipment operation.

Section 10.14 of the Municipal Code requires that off-road equipment (which would include construction equipment) must not idle at any location for more than five consecutive minutes. This idling requirement is included in Mitigation Measure 4.4-2(A) and (B), as it pertains to reducing air emissions from construction equipment, consistent with Placer County APCD requirements.

In response to the comment, Mitigation Measure 4.5-1(A) and (B) has been revised to adjust the limitation on hours of construction, and to include the idling requirement consistent with the Municipal Code and air district standards. The revised Mitigation Measure is:

4.5-1(A)(B) *The City shall ensure construction contractors comply with the following:*

- *Construction hours shall be limited to 7am to ~~7pm~~ 5pm Monday through Friday and on Saturdays from 8am to 4pm, with no construction on Sundays and holidays (unless extended by a special permit).*

- *All heavy construction equipment and all stationary noise sources (such as diesel generators) shall have manufacturer-installed mufflers.*

- *Equipment warm up areas, water tanks, and equipment storage areas shall be located in an area as far away from existing residences as is feasible.*

- *Construction equipment operators shall shut off equipment when not in use to avoid unnecessary idling. Vehicle idling shall be kept below five consecutive minutes in accordance with Lincoln Municipal Code Section 10.14 requirements.*

These requirements will be set forth in the project Conditions of Approval and noted on improvement plans and contract specifications.

Response to Comment 15-18

City staff assumes the comment is referring to Impact 4.7-2 and Mitigation Measures 4.7-2(A) and (B), which identify the amount of volumetric (retention) storage the Proposed Project would require to mitigate stormwater impacts.

Mitigation of stormwater runoff is a function of providing storage within a watershed; it does not require that storm flows be directed to a particular facility or site. Three options for mitigation project runoff are identified in the Draft EIR. The options could be implemented separately or in combination to achieve the necessary amount of retention, as explained on page 4.7-17 in the Draft EIR. There is one existing facility (SWRF) and one under construction (Lakeview Farms). Fair-share funding would be used for maintenance and operation of these facilities. If the applicant elected to do so, some storage could also be provided on-site (although that is not included in the

current proposal), with supplemental storage at the SWRF or Lakeview Farms. Either or both of these would have capacity for flows generated by the Lewis Property portion of the Proposed Project. There is no uncertainty regarding the availability of sufficient regional capacity at off-site locations to accommodate flows from the Lewis Property, so Ingram Slough would not be adversely affected. For the Village 7 Programmatic Portion, because its flows need to be considered in combination with the Lewis Property flows, additional storage would likely need to be developed in the watershed.

Response to Comment 15-19

City staff assumes the comment is referring to Mitigation Measure 4.7-4(A)(c), which could be interpreted that the City would be responsible to maintaining the water quality facilities. The City would be responsible for ensuring a funding mechanism is in place that would provide for long-term maintenance. The funding requirements for maintenance activities would be established at the time of Final Tentative Map approval, through a Lighting and Landscape District or other City-approved funding mechanism established for project.

Response to Comment 15-20

The comment references Impact 4.9-8, which evaluates whether the Proposed Project's demand on electricity and natural gas. PG&E provides both electricity and natural gas to the City, which includes the project site. PG&E obtains electrical power from a variety of sources. The City does not have the authority to direct which energy sources PG&E uses or to mandate how much energy should be derived from a specific source, such as solar. There are, however, current efforts being made at the state level that will require electricity providers, such as PG&E, to obtain electrical power from renewable energy sources.

The City of Lincoln has adopted energy conservation and alternate energy policies in the 2050 General Plan. These policies, which are listed on page 4.11-13 in the Draft EIR include, OSC-3.1, OSC-3.7, OSC-3.11, OSC-3.13, OSC-3.14, OSC-3.15, and PFS-6.3. Policy OSC-3.15 provides a mechanism for the City to offer incentives to property owners and developers who exceed California Title 24 energy efficiency standards. However, the City does not currently have a policy mandating that at least 50 percent of energy required for residences and commercial uses come from solar power to help reduce greenhouse gas emissions. The City cannot impose this requirement on the applicant. However, the Proposed Project would incorporate numerous features that, in combination, would reduce project GHG emissions, as described on page 4.11-19 in the Draft EIR. In addition, Mitigation Measure 4.11-1(a) requires an Energy Conservation Plan that would achieve a minimum of 15 percent energy efficiency above that required by the most current Title 24 Energy Code, and 4.11-(g) requires site design take into account solar orientation and energy-efficient systems.

Response to Comment 15-21

Comment noted.

Response to Comment 15-22

The project applicant (Lewis Planned Communities) has actively solicited input from the LCCA regarding the Proposed Project and will continue to do so regarding the Village 7 Specific Plan through the approval process. For example, the applicant made presentations at a regular monthly meeting of the homeowners association (HOA) and Board of Directors on May 14, 2009. That was followed by two additional "neighborhood presentations" to residents on August 5 and August 26, 2009. All members of the HOA were notified by sending out 2,000+ letters/postcards of each

meeting date separately. All of the owners of the Hawk Landing neighborhood were included in the second mailing. The applicant is planning additional meetings to meet with the individuals who submitted comment letters on the Draft EIR to discuss their concerns in greater detail.

The applicant has also met with the Lincoln open space committee during its meetings on June 10, 2009, July 8, 2009, August 11, 2009, and October 14, 2009. In addition, the applicant conducted a site visit for the committee on September 8, 2009.

Ray + Darla Campbell
1206 Hillwood Loop
Lincoln, CA. 95648

July 27, 2009

Rodney Campbell
City of Lincoln
Community Development Dept.
600 6th St.
Lincoln, CA. 95648

Re: comments to Draft Environmental
Impact Report on the Village 7 plan

Mr. Campbell

Being a resident of Lincoln Crossing
my family will be directly affected by
the proposed village 7 in a number
of aspects.
I have a few comments for your
consideration.

16-1

1) Reviewing the Village plans I see
no pedestrian access to the improvements
of south Ingram Slough from Lincoln
Crossing as all are within village 7
exclusively. Residents of both communities
should have access to all improvements
to Ingram Slough.

16-2

2) There is much concern about the fragile habitat in and around the slough and ponds. Currently these ponds provide nesting and nursery areas for geese, ducks, beaver, muskrat etc not to mention fish. These sensitive areas must be protected from constant human intrusion or all effected species both mammal and water fowl will leave the area, and with it the enjoyment ~~of~~ wild-life viewing will be gone.

16-3

3) Reimbursement for infrastructure put into place by current Lincoln Crossing residents that will be used by the future Village 7 development.

16-4

4) The continued erosion and decline of high yield agriculture land to speculative housing projects. Seems to me these projects should be developed in marginal ag areas. I understand the economic gains, how ever agriculture is at least as important to us all as housing growth,

16-5

Thank

Ray Campbell

COMMENT LETTER 16:   RAY AND DARLA CAMPBELL, LINCOLN, JULY 27, 2009

Response to Comment 16-1

The commenters state the Proposed Project would affect their family. The comment does not specifically address the analysis in the Draft EIR.

Response to Comment 16-2

This comment expresses an opinion that pedestrian access from Lincoln Crossing to South Ingram Slough within the proposed Village 7 Specific Plan is not provided. This is incorrect. A pedestrian bridge is planned at Ingram Slough where it exits Lincoln Crossing and enters Village 7. As described in the Specific Plan, the bridge is intended to facilitate pedestrian mobility within Village 7 and between Lincoln Crossing and Village 7. Overall there will be three street crossings of Ingram Slough and two bike/pedestrian-only crossings over Ingram Slough as part of the Village 7 Specific Plan area's traffic and trail circulation system. Because Ingram Slough is a wetland habitat area that is being preserved, the City has determined that it needs to minimize the number of bridges at Ingram Slough, yet still provide for an effective trail system with a reasonable number of crossings. That determination is consistent with the City's General Plan Policy LU-12.4, which provides that public access to creeks, wetlands, and other open space areas for pedestrians and bicycles should be allowed only where feasible and where it will not cause a significant impact to the natural resources. Adding a third bike/pedestrian crossing to Ingram Slough in the location requested by the commenter would be a new significant environmental impact that the City has determined should be avoided.

This comment is not directed to the analysis in the Draft EIR, but will be considered by the City Council during the decision-making process.

Response to Comment 16-3

The commenters express concern about Ingram Slough habitat. This comment is not directed to the analysis in the Draft EIR. Please see also Response to Comment 15-11, which addresses the Lincoln Crossing Community Association (LCCA) concerns about Ingram Slough habitat and potential effects from human intrusion. The Village 7 Specific Plan provides for the preservation of the Ingram Slough area and its buffering from nearby uses. Such buffering has been designed to be consistent with General Plan Policy LU-1.4, which provides that the City shall require buffer areas between development projects and significant watercourses, riparian vegetation, and wetlands. The Draft EIR also provides a number of Mitigation Measures for the minimization of the project's direct and indirect impacts to Ingram Slough. See Mitigation Measures 4.8-1, 4.8-2, 4.8-3, 4.8-4, 4.8-5, 4.8-6, and 4.8-7.

Response to Comment 16-4

The commenters request that the City require the Village 7 Specific Plan area to pay for a share of the infrastructure previously built in the Lincoln Crossing development. The infrastructure in the Lincoln Crossing area consists of the local subdivision improvements and those improvements serving a larger city-wide area. Local improvements are often-times financed by a community facilities district (CFD) which spreads its cost over an area of benefit created and approved by the voters within that area of benefit when the CFD is approved for formation. Other improvements which serve a larger city-wide area are typically financed by way of the development impact fees the City charges on all new development pursuant to its PFE Program, and includes major infrastructure facilities serving the Lincoln Crossing development as well as the entire City. By requiring new development to pay the PFE Program's impact fees, the City requires new development to pay its

fair share of the costs of infrastructure which serves a larger area. CEQA is an environmental information statute whose purpose is to describe and disclose to the public and to the decision-makers the significant effects on the environment of a project. For purposes of CEQA, the "environment" is defined as: "the physical conditions which exist within the area which will be affected by a proposed project including land air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance." (California Public Resources Code Section 21060.5) As a result of this statutory requirement, only changes to the physical environment will trigger the need for analysis in an environmental impact report; social or economic impacts alone will not do so because they are not changes in physical conditions. This principle is reflected in Public Resources Code section 21080(e) and 14 California Code of Regulations section 15054(f)(6) which provide that evidence of social or economic impacts that do not contribute to, or are not caused by, physical impacts on the environment are not substantial evidence of a significant effect on the environment. Consequently, in the absence of any substantial evidence that the project's economic effects would cause a physical change in the environment, CEQA only requires the Draft EIR to examine the environmental impacts of the project.

Response to Comment 16-5

This comment addresses the merits of the Proposed Project, but does not specifically address the analysis in the Draft EIR. The City Council will consider this comment during the decision-making process.

As noted throughout the Draft EIR, the Village 7 Specific Plan project site is dominated by grasslands that historically have supported non-irrigated grain crops and grazing. Attempts at irrigated, higher yielding productive crops have had limited success due to poor soils (please see Response to Comment 3-1). Further, while the California Dept of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program's map determined that there are several hundred acres of Prime Farmland and Farmland of Local Importance on the site, a closer examination of the soils present raise significant doubt about the accuracy of those classifications (please see Response to Comment 6-3). There is no "high-yield" agricultural land on-site that would be adversely affected by the Proposed Project.

The commenters are of the opinion that the City should protect high yield agricultural lands and only allow new development on marginal agricultural lands. The Draft EIR determined that the agricultural soils in the Village 7 Project area are very poor and are not considered high yield or highly productive agricultural lands. As noted in the Draft EIR, four soil types make up the majority of the soils on the Lewis Property [Draft EIR, pages 4.1-30 to 4.1-35]: Cometa-Fiddyment complex, Cometa-Ramona sandy loam, Kilaga loam, and San Joaquin Sandy loam. The Cometa-Fiddyment complex soil has a Storie Index of 34 and the San Joaquin Sandy loam soil has a Storie Index of 31, which indicate that these are poor soils for agricultural uses. Cometa-Ramona sandy loam soil has a Storie Index of 50 and Kilaga loam soil has a Storie Index of 54, which are both Grade 3 soils that are suited to few crops and require special management. The Draft EIR also noted that the reminder of the soil types at the Village 7 project site are made up of: Alamo-Fiddyment complex soil with a Storie Index of 22; Fiddyment loam soil with a Storie Index of 27; Ramona sandy loam soil with a Storie Index of 65; and Xerofluvents, frequently flooded, with a Storie Index of 36. Consequently, of all the soil types present at the project site, only one located at the Lewis Property has a Storie Index rating of 60 or higher that could be considered suitable for agricultural production. That is the Ramona sandy loam which is situated in a small area at the southwest portion of the property adjacent to Ingram Slough. The remaining soils on the Lewis property have Storie Index ratings which indicate that there are limitations on their agricultural use. Taken as a whole, the Lewis property is not considered a productive agricultural area. A similar situation is found with the poor quality soils in the Village 7 Programmatic Portion of the Project. The soils in the Programmatic Portion are made up of Cometa sandy loam soil with a Storie Index rating of 39, Cometa-Fiddyment

complex soil with a Storie Index of 34, San Joaquin Sandy loam soil with a Storie Index of 31, and Xerofluvents with a Storie Index of 36. Soils with a Storie Index rating greater than 60 are generally considered best for agricultural production, since they have few limitations. Soils with a Storie Index rating of less than 60 are progressively less suited for agricultural production as the Storie Index rating decreases. Consequently, the soils in the Village 7 Programmatic Portion are not considered very productive for agricultural uses due to their low Storie Index ratings and limited agricultural viability.

Further, the Proposed Project would not encourage conversion of nearby productive agricultural lands to urban uses by virtue of its location. As stated on page 5-3 in the Draft EIR, undeveloped areas west and north of Moore Road are designated as Farm-Building Site (F-B-X) 80-acre minimum. This area is in the C1 Extended Approach/Departure zone for the Lincoln Regional Airport (see Figure 4.1-3 in Section 4.1, Land Use). According to the Compatibility Guidelines for Specific Land Uses (Appendix D, Placer County Airport Land Use Plan, 2002), the types of residential development in a C1 zone would be limited to rural residential and rural estate; the densities proposed in the Specific Plan would be precluded. The area south of Moore Road and east of Fiddyment Road to the west of the project site contains the City's Wastewater Treatment and Reclamation Facility. Property immediately south of the site is a 632-acre wetland mitigation area (Orchard Creek Conservation Bank) and Open Space. A portion of the area to the southwest is currently proposed as "Reserve Designation Area" in the draft Placer County Conservation Plan (see Response to Comment 8-3). This designation is intended for the preservation of wetlands and wildlife habitat, which would preclude development in that area, if adopted.

Public Comment on Development Plans for Village 7
Lincoln, CA
July 22, 2009

Rodney Campbell
City of Lincoln
Community Development Department
600 6th Street
Lincoln, CA 95648

As concerned residents of Lincoln, we would like to comment on the proposed plan
submitted by the Lewis Group, developers for Village 7. We were fortunate enough to be
present when Mr. Bill Mellerup of the Lewis Group gave a presentation to the Lincoln
Open Space Committee last week where the details of the open space component of the
plans were detailed and discussed.

17-1

Mr. Mellerup was very gracious with his time and gave forthright answers to our
questions. For that we wish to thank him and the Lewis Group and we look forward to
further discussions as the project goes forward.

The presentation raised various concerns about the plan as it concerns open space
matters.

17-2

The first concern is the roadside landscape areas along the major thoroughfares. These
have been termed 'linear parkways' ranging from 50 to 75 feet in most areas to over 100
feet along Ferrari Ranch Rd. Part of their purpose is to serve as a road noise buffer
between the street and the homes in lieu of sound barriers and also to create a visually
pleasing landscape zone for the transportation corridor. We had no problem with this
design feature and find it a great way to eliminate the need for a sound wall and create an
attractive roadside environment.

We do not, however, believe that this roadside landscaped area can be counted towards
the 40% open space requirement for Village 7. The newly approved general plan clearly
states which areas are considered open space (public recreation areas such as parks and
golf courses; natural areas such as streams, wetlands, trails, open space, utility corridors).
It also states which areas are CAN NOT be counted as open space including roadway
medians, right-of-ways, and pocket parks.

17-3

According to the Lewis Group, these landscape borders account for 46 acres of land,
which is enough land to account for 6.5 % of the Village. These 46 acres if added to the
existing natural open space habitat would increase the land available for wildlife from
170.6 acres to 216.6 acres.

There is also the matter or the pocket parks, which seem to have been termed 'paseos' by
the Lewis Group. There are a number of these parks in the project, accounting for 0.8%
of the Village total, or 5.8 acres. The general plan is very specific that pocket parks are
not considered open space and will not contribute to the 40% requirement.

The total acreage of roadside landscaping and pocket parks in this plan accounts for 7.3% of the total land (51.8 acres). We believe that the current plan as submitted requires that 51.8 acres of open space needs to be added to the project in order to meet the 40% requirement set forth in the general plan. Of course, we would prefer that these 51.8 acres be added to the natural type of open space. That would bring this type of habitat from 170.6 acres currently, to 222.4 acres.

Independent of the details of the general plan, which we cannot overlook, is the intent of the 40% open space. At the planning commission meeting where the general plan was approved there was a lengthy discussion of the definition of open space. It was made very clear at that hearing that roadside landscaping would not be considered open space, and the City was looking for areas that would serve for habitat preservation and recreational use. These roadside landscape corridors and pocket parks serve as neither.

17-3
(cont.)

Another area of concern is the plans for open space around Ingram Slough.
We liked the width and setbacks planned for the western section of Ingram Slough. This space allows for adequate corridors for wildlife and riparian habitat. There is also space for walking or biking trails to allow for residents of Lincoln to enjoy this space.
This is in sharp contrast to the eastern section of Ingram Slough, which only allows for a narrow strip of habitat between the southern edge of Lincoln Crossing and developed edge of Village 7. We believe that creating this straight channel virtually eliminates this section as a corridor for either wildlife or residents. We recommend that additional open space be placed along the waterway, especially if there is 51.8 acres of open space still required to meet the 40% requirement of the general plan.
We are also not sure if there is a proposal by the Lewis Group to take this existing waterway and channelize it, thereby eliminating any natural creek form and turning it into little more than a large drainage ditch.
Over the last decade or so we have learned our lessons about what type of open space works and what type doesn't, not only from an ecosystem perspective, but from an economic one. Wide corridors of open space are much less expensive to maintain then small, isolated zones, and heavily landscaped spaces. Wide corridors can be maintained with grazing animals such as goats, allow for habitat to recover from flooding due to high water flow or beaver activity, and allow space for trails. Narrow corridors, on the other hand, require intensive management, are unstable when flooding occurs and are expensive to rehabilitate, do not allow for general public access, do not serve as proper wildlife corridors or proper habitat, and easily become blighted with trash and graffiti. We have the opportunity to create a model open space corridor along this entire section of Ingram Slough and ask that the plans be revised to reflect this goal.

17-4

The final area we would like to comment on is the isolated wetlands area in the center of the Village. The wetlands are shown with development completely surrounding it, with almost no connection to other open space. We are concerned that this sort of isolated open space will be a real liability to the City. Because of it's isolated character it will have little true habitat value and will also have to be intensively maintained to keep it

17-5

from becoming an eyesore. This is just the sort of thing the City should avoid to keep costs down. We recommend that this area be connected with additional open space so that a broad contiguous space will be established. If this is not viable then the area should be mitigated and the open space added to areas that would have some habitat value.

17-5
(cont.)

This is the first major project to come through the planning commission since the adoption of the general plan and will be an important bellwether for future village development. Our intent is not to oppose the development of Village 7, but to clarify the open space issues that we feel conflict with the general plan and sustainable, viable open space. With a few changes as explained above, we feel that Village 7 will be a great addition to Lincoln that will reflect our commitment to open space and our residents quality of life.

17-6

We look forward to your reply.

Sincerely,

Paul Denzler
1593 Green Ravine Dr., Lincoln

Joan Brant-Love
2048 Fallen Leaf Lane, Lincoln
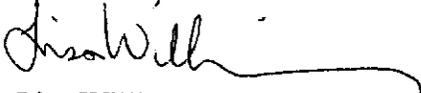
Lisa Williams
345 M Street, Lincoln

Cecilia Uselmann
3701 Rockwell Lane, Lincoln
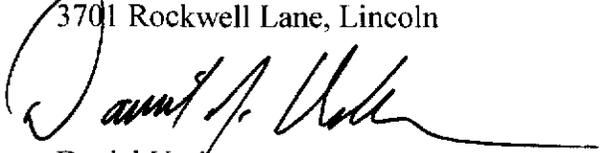
Daniel Uselmann
3701 Rockwell Lane, Lincoln
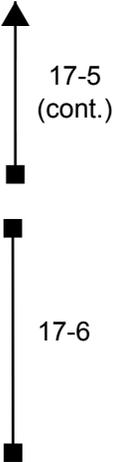
COMMENT LETTER 17: **PAUL DENZLER, ET AL., LINCOLN, JULY 22, 2009**

Response to Comment 17-1

The comment expresses appreciation for the applicant's efforts to meet with members of the Lincoln open space committee to present and discuss the details of the Proposed Project's open space elements. The applicant has also met with the committee during its monthly meetings on June 10, 2009, August 11, 2009, and October 14, 2009. The applicant conducted a site visit for the committee on September 8, 2009.

Response to Comment 17-2

The comment letter raises several issues pertaining to open space components and design features of the Proposed Project, which are addressed in Responses to Comments 17-3 through 17-5.

Response to Comment 17-3

The commenter is opposed to the linear parkways and paseos counting toward the 40% open space requirement. The linear parkways in Village 7 are not part of the roadway right-of-way dedication. Linear parkways, just like trails and buffers, may be counted as open space because they are outside of the area dedicated as roadways. In lieu of building masonry sound walls adjacent to the major roadways, the linear parkways will serve as both sound buffers and visual buffers for the residential development in the Village 7 Specific Plan area. Policy LU-15.14 of the General Plan does not prohibit counting them toward fulfillment of the 40% open space requirement in the General Plan. Policy LU-15.14 specifically provides that land within buffer areas can be used to satisfy the open space requirement. In addition, in explaining Policy LU-15.14, the General Plan states that areas in excess of required rights-of-way may be counted toward meeting the open space requirement. The linear parkways are far in excess of the City's standard road right-of-way requirements and are, therefore, eligible to be counted as open space.

With regard to paseos, it is important to note that not all paseos will count toward fulfilling the 40% open space requirement. The Village 7 Specific Plan provides that only major paseos, 35 feet or more wide, will count as open space for fulfilling the 40% open space requirement. The paseos are connections between the City's parks and trail system and provide an essential element of physical connectivity in off-street locations. As such, paseos are not to be considered "pocket parks" but are akin to extensions of the overall city park and trail system. General Plan Policy LU-15.17 contains a number of criteria for determining when land can be counted toward meeting the 40% open space requirement and specifically states that land utilized for trails can be used for satisfying the open space requirement. Please note that smaller paseos, those less than 35 feet in width, will not be counted for purposes of meeting the 40% open space requirement.

Response to Comment 17-4

The commenter has expressed an opinion that the buffer along the eastern side of Ingram Slough between the Village 7 Specific Plan area and the existing Lincoln Crossing Development is too small. The commenter is also concerned about plans to channelize this eastern segment of Ingram Slough. The Village 7 Specific Plan provides for the preservation of the Ingram Slough area and its buffering from nearby uses. Such buffering has been designed to be consistent with General Plan Policy LU-1.4, which provides that the City shall require buffer areas between development projects and significant watercourses, riparian vegetation, and wetlands. The Draft EIR also provides a number of mitigation measures for the minimization of the project's direct and indirect impacts to Ingram Slough. See Mitigation Measures 4.8-1, 4.8-2, 4.8-3, 4.8-4, 4.8-5, 4.8-6, 4.8-7, 4.8-8 and

4.8-10.   With regard to channelizing Ingram Slough, there are no plans to do so.   Please see Response to Comment 15-10, which clarifies proposed drainage improvements.

Response to Comment 17-5

The commenter questions the wisdom of having a wetland preserve in the Village 7 Specific Plan area at the Lewis Property. The preserved wetlands area at the Lewis Property is being created pursuant to the requirements, terms and conditions of the Biological Opinion issued by the U.S. Fish and Wildlife Service, No. 1-1-05-F-0079. In reaching its decision, the U.S. Fish and Wildlife Service (USFWS) considered many of the various concerns raised by the commenter as part of its analytical process. In order to address those types of concerns, the Biological Opinion required a USFWS-approved operations and maintenance plan be prepared, which includes provisions for the ongoing monitoring of the wetland preserve. Pursuant to the Biological Opinion, the funding mechanism for the operations and maintenance will also be approved by the U.S. Fish and Wildlife Service. There also will be a USFWS-approved preserve manager who will have the responsibility for implementing the operations and maintenance plan and the ongoing monitoring to ensure that the wetland preserve is functioning as intended. With regard to the connectivity issue raised by the commenter, the wetland preserve will be connected to other open space areas by way of the City's paseo and park system.

Response to Comment 17-6

The comment states the Lincoln open space committee does not oppose the Proposed Project, but would like clarification and possible modification of Village 7 Specific Plan open space elements. Please see Responses to Comments 17-3 through 17-4.

Comments to the Draft EIR for Village 7, Lincoln, CA

July 26, 2007

Comments by:

John Fett
Lincoln Resident
1230 Hillwood Loop
Lincoln, CA

(916) 759-0817

O. John Fett, III
1230 Hillwood Loop
Lincoln, CA 95648

July 26, 2009

Rodney Campbell
City of Lincoln
Community Development Department
600 6th Street
Lincoln, CA 95648

Re: Comments to the Draft Environmental Impact Report on the Village 7 Specific Plan

Dear Mr. Campbell,

Thank you very much for making the above referenced document available on line for
public review. I live in Lincoln Crossing and (other than the future residents of Village
7), I may be personally impacted to a greater degree than anyone else involved in this
planning process. I hope you will weigh my comments accordingly. I do believe we are
very fortunate have a responsible developer like Lewis Homes seeking the approvals to
develop this project within our city. I wish I could say the same about Sun Cal
Properties, the developer of Lincoln Crossing.

I have 4 comments to address relative to the EIR:

1) Nature Habitat Continuity, Development and Maintenance
2) Infrastructure Cost Sharing and Reimbursement
3) Housing Density relative to Open Space and Parks
4) Future Commercial Projects Viability and Timing

18-1

Nature Habitat Continuity, Development and Maintenance:

It appears the Village 7 specific plan will continue and improve upon the integrity of the
South Ingram Slough Nature Habit (see page 43, figure 2-8 of the Draft EIR). We need
continuity to cross to and from both sides of Ingram Slough. People seeking to traverse
the south side of Ingram Slough will: 1) Walk thru the wetlands and wade through the
creek or, 2) Ride or walk along Ferrari Ranch Road (with ultimate traffic counts exceding
50,000 cars per day).

It appears there will be two street bridges and one pedestrian bridge over Ingram Slough,
but only within Village 7 itself. This provides no pedestrian continuity to the rest of
Lincoln. The developer should redesign the plan installing more pedestrian bridges
across Ingram Slough. One bridge should be at the very Eastern point of the
development, where the power and gas line easements create a major open space corridor
intersecting the Nature Habitat. The other one should be at the delta where the Ingram

18-2

Slough empties into the last downstream lake, between Lincoln Crossing and Village 7 (see the "Proposed Bridge Placement Map"). It is a natural desire of humans to circumnavigate the Nature Habitat, particularly walking around the lakes. Currently, people are crossing the stream at grade level, destroying the habitat and waterway (see photos of Wetland Degradation).

The Army Corp of Engineers is reportedly quite unhappy with the current stewardship of the Nature Habitat and the City is Lincoln is subject to fines of up to $25,000 per day for lax and or improper administration. I am a city resident and am displeased at the level of (dis)service the City of Lincoln provides to maintain the habit.

It is my understanding the City of Lincoln was paid hundreds of thousands dollars in habitat trust funds to use for the benefit of the Nature Habitat. The city has evidently spent those funds and can not account for them. The vision for the habitat is languishing unsupported. Trust funds dedicated by Lewis Homes for the habitat preservation should be deposited with a responsible and accountable third party, not paid to the City of Lincoln.

18-2 (cont.)

The pedestrian and bicycle paths Lewis Homes will create along Ingram Slough are not clearly shown. The plan "implies" trails will be built along both sides of the Nature Habitat all the way to Orchard Creek. It is important to build trails on both sides. Ultimately, the master plan should call for pedestrian and bicycle paths all the way to Orchard Creek, and ultimately to Sutter and Sacramento Counties, similar to the American River bike paths in Sacramento. It is a legacy issue for our future generations. Do not deny this opportunity so early in the process. This is a unique opportunity to set a wonderful standard. It will be difficult, if not impossible to create this at a later date.

The final issue relating to the Nature Habitat concerns the southern boundaries of the Village 7. Currently, we observe coyotes, Snowy Egrets, Blue Herons, Swainson's Hawks and many other species on the Village 7 land. The EIR has not addressed the loss experienced by the displacement of these species. We currently enjoy watching these animals with great interest and excitement (see photos of wildlife). It is very important Lewis homes continue the pedestrian and bicycle paths around the south side of their development, so we may observe the wildlife on the upland range. I encourage the construction of covered viewing stations particularly on the elevated areas. This will provide excellent overviews to the 1800 acre wetland preserve to the south and we will invest countless hours watching the wildlife, just as we do today.

On a more facetious note, we will also be able to view the beautiful 27 story Thunder Valley Hotel and Casino, which we ironically see as an island of greed, corruption and "wild life", surrounded by an ocean of natural habitat supporting a more fundamental "wildlife". It is another experience for our present and future generations to observe and learn.

18-3

Infrastructure Cost Sharing. Park Improvements and Reimbursement:

When Lincoln Crossing was developed, the residents of our community funded the infrastructure needed for the development and also that for future developments. We invested a total of $92,000,000 and assessed it among our 3,000 homes. This investment included sewer lines, water lines, major roads, park improvements and the Joiner Parkway overpass. The Mello Roos bond payments of $300-400/month in Lincoln Crossing are some of the highest in the state of California.

The EIR should address the economic environment and delineate the fiscal benefits Village 7 is gaining from our capital expenditure to create the existing infrastructure. Lincoln Crossing should be reimbursed for the infrastructure costs which serve Village 7. The funds can be used to pay down the exorbitant Mello Roos bonds and payments endured by Lincoln Crossing homeowners. I calculate this to be about $19,500,000. We can create a more detailed study as we move forward with this issue.

18-4

Additionally, the residents of Lincoln Crossing paid the City of Lincoln over $17,000,000 for improvement to Lincoln Crossing parks. This cost was included in the Mello Roos bonds noted above. This results in the Lincoln Crossing residents paying about $30 every month for our wonderful parks.

There is only one problem: The City of Lincoln has yet to built any parks in Lincoln Crossing (see Park Photos). The fees were paid in 2004. In the last 5 years, the City of Lincoln policy has evidently been to use fees from current developments and pay for parks in prior developments. Thus it is only fair for Lewis Homes to pay $17,000,000 in park fees, to be used by the city to specifically complete parks within Lincoln Crossing.

Housing Density Relative to Open Space and Parks:

The current Lewis Homes plan calls for 37.4 acres of high density residential units (772 units) in reasonable proximity to 5.6 acres of parks. The low and medium density residential development (1691 units) has 33.8 acres of parks (see table 2.1, page 30 of the Draft EIR). It seems you have this relationship completely backwards. You and the long term residents are better served to put 30 acres of parks near the high density developments and 10 acres of parks among the low density units. This will create a more balanced and attractive development ensuring long term compatibility relative to project densities.

18-5

Commercial Projects Viability and Timing:

The Lewis homes project anticipates developing 12.2 acres of commercial property. The larger 9.2 acre site will most likely be used for a neighborhood shopping center with a grocery store anchor (see map of Village 7 Commercial Land). It takes about 17,000 residents to support a grocery store, so it is unlikely this commercial property will be viable and anytime before 2025, and more likely it will take until 2030.

18-6

Conversely, Lincoln has a new Highway 65 bypass being constructed thru the middle of Lincoln Crossing, yet there is no land approved for any commercial services adjacent to the new freeway. Additionally, the people of Lincoln Crossing need a service station and a place to by a quart of milk after business hours. Target and Home Depot have C.C. & R.'s (covenants, codes and restrictions) preventing these uses within the Lincoln Crossing Village Shopping Center. There is no other commercially zoned land in the area.

The solution is for the City of Lincoln to swap 2 or 3 acres of park land from parcel 021-340-077 (see the map showing "Community Park 103"), trading it to Lewis Homes in exchange for a couple of acres of their land as a replacement for the park property. Community Park 103 is undeveloped (and the city evidently has no funds to improve it) located adjacent to a regional freeway. The local residents and freeway travelers need commercial services. The proximity of this land next to the freeway makes commercial services are a much better use for this land than a park. Additionally, the Lewis Homes property in Village 7 is further from the freeway and more suitable for a park. Let's see: a Community Park bordering 100,000 cars per day traveling at 60 mph, or a neighborhood park bordering a Nature Habitat with over 35 species of wild animals to observe. This is not a tough decision.

18-6 (cont.)

This land swap will provide a nice profit for Lewis Homes, who paid approximately $7500 acre for their property. A viable highway commercial property ready for development is worth at least $500,000 an acre, perhaps more. Lewis Homes should keep the profit of approximately $2,500,000 to offset the development costs in Village 7. Furthermore, Lincoln Crossing will get the additional payment of 22 equivalent dwelling units/acre for Mello Roos and HOA payments bringing in as much as $250,000 a year in extra bond payments and $90,000 a year to the HOA. The City of Lincoln could achieve over $100,000 a year of additional sales tax revenue and even more in property tax revenue.

As a resident of Lincoln Crossing I hope you will use this opportunity to correct multiple planning oversights and provide a win/win scenario for Lewis Homes, the residents of Lincoln Crossing, the future residents of Village 7, the wild life, the wildlife, and the City of Lincoln. I look forward to working with you over the next few years to affect an appropriate plan to serve all of us well.

18-7

Thank you,
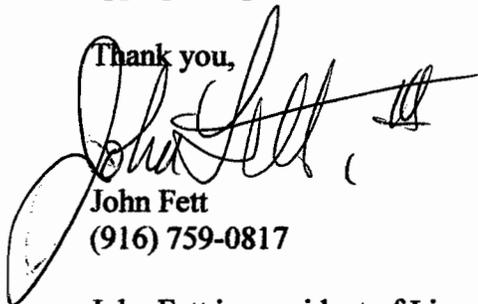
John Fett
(916) 759-0817

John Fett is a resident of Lincoln Crossing since 2006. He is a graduate of the U.C., Berkeley School of Environmental Design and has a B.A. degree in Architecture.
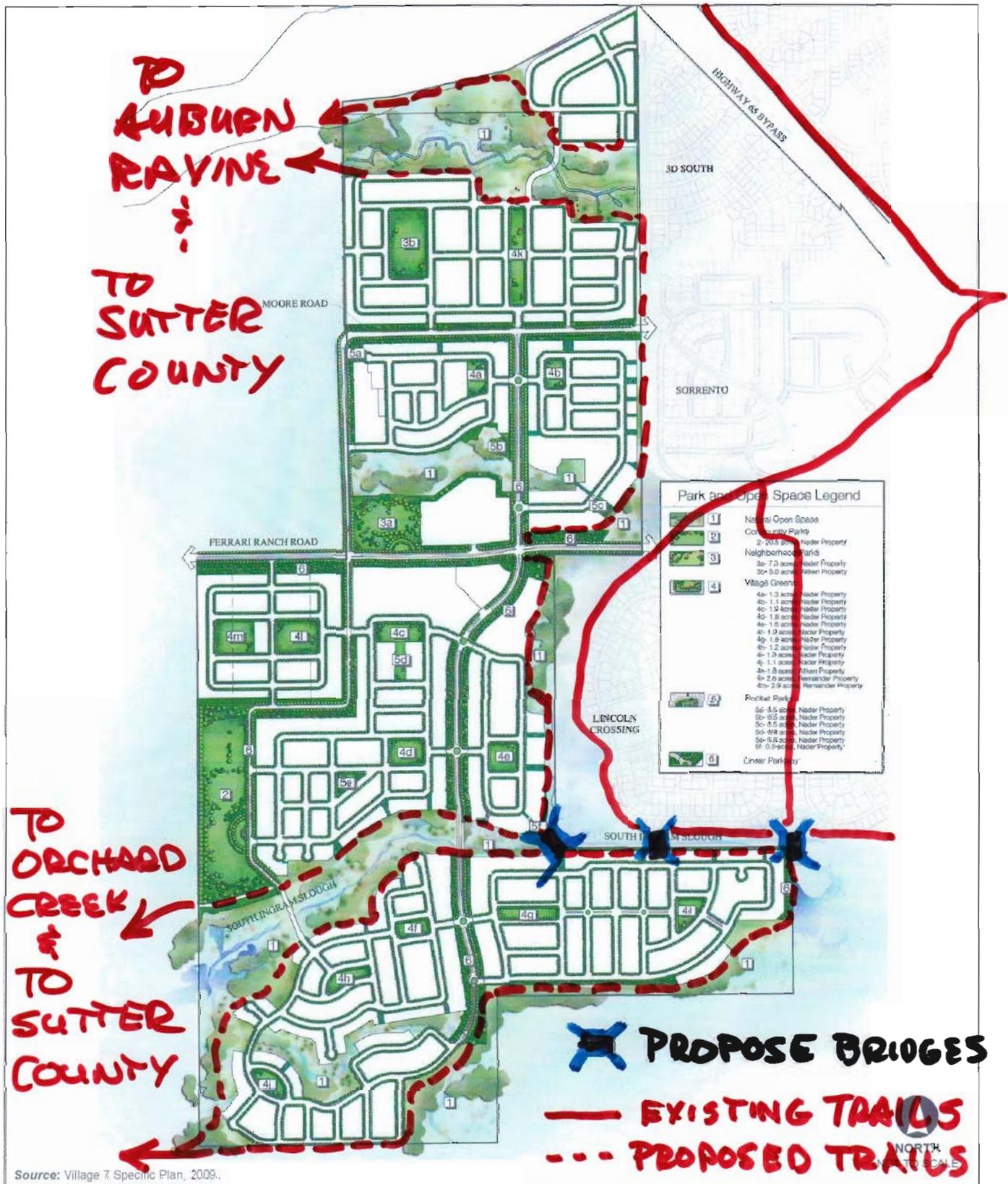
TO AUBURN RAVINE & TO SUTTER COUNTY

TO ORCHARD CREEK & TO SUTTER COUNTY

PROPOSE BRIDGES

EXISTING TRAILS

PROPOSED TRAILS

Park and Open Space Legend

MOORE ROAD

FERRARI RANCH ROAD

3D SOUTH

SORRENTO

LINCOLN CROSSING

SOUTH INGRAM SLOUGH

NORTH NOT TO SCALE

Source: Village 7 Specific Plan, 2009.

FIGURE 2-8
Park and Open Space Plan

PBSJ

South Ingram Slough: Proposed Pedestrian Bridge Placement Map.

Wetlands Degradation Caused by Lack of a Pedestrian Bridge.
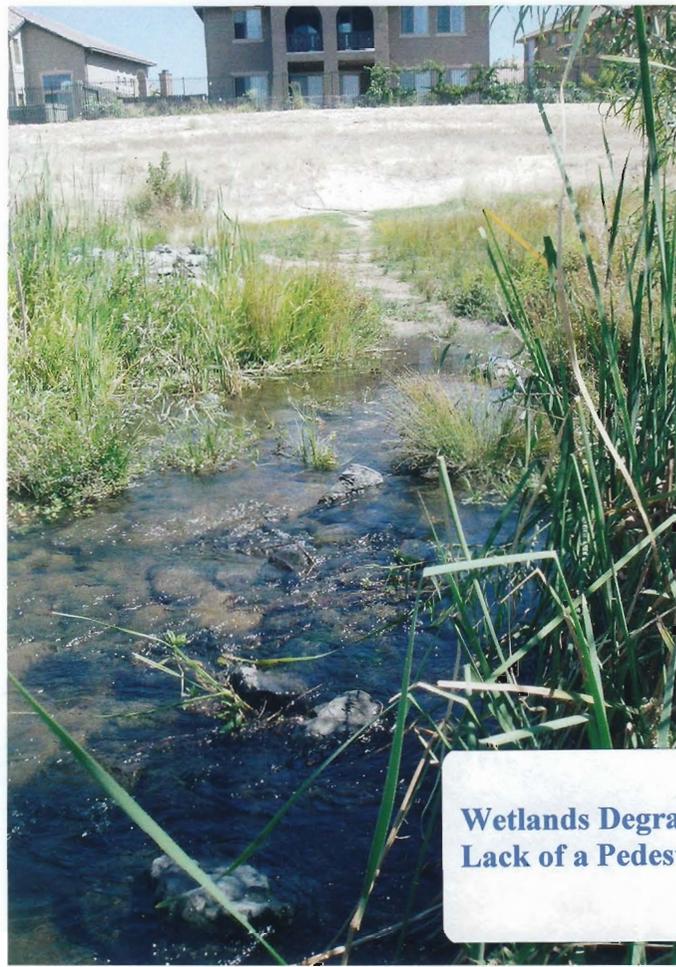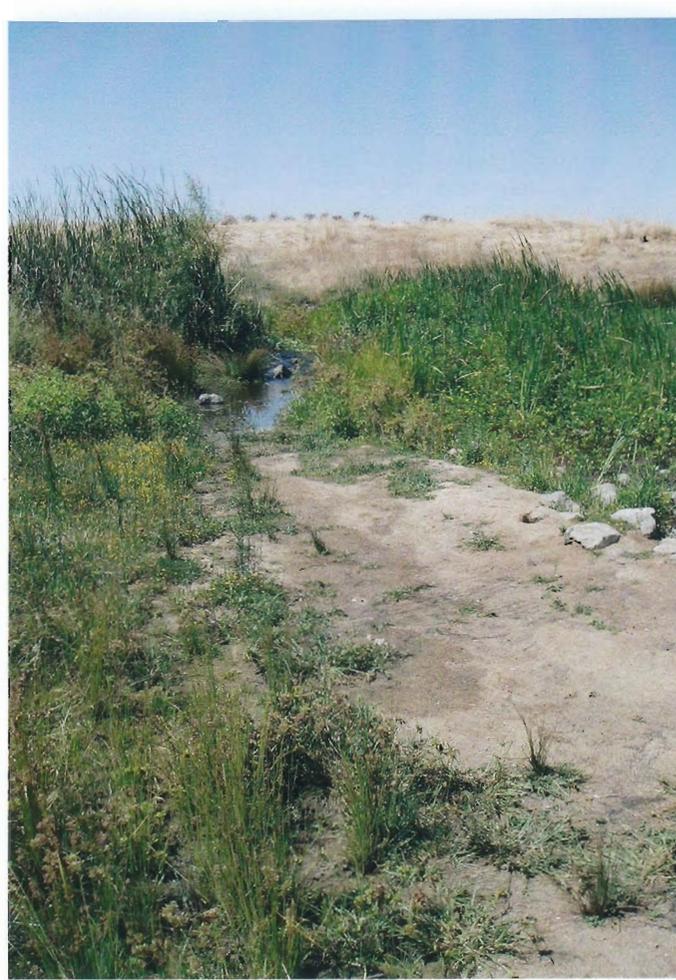
Wetlands Degradation Caused by Lack of a Pedestrian Bridge.
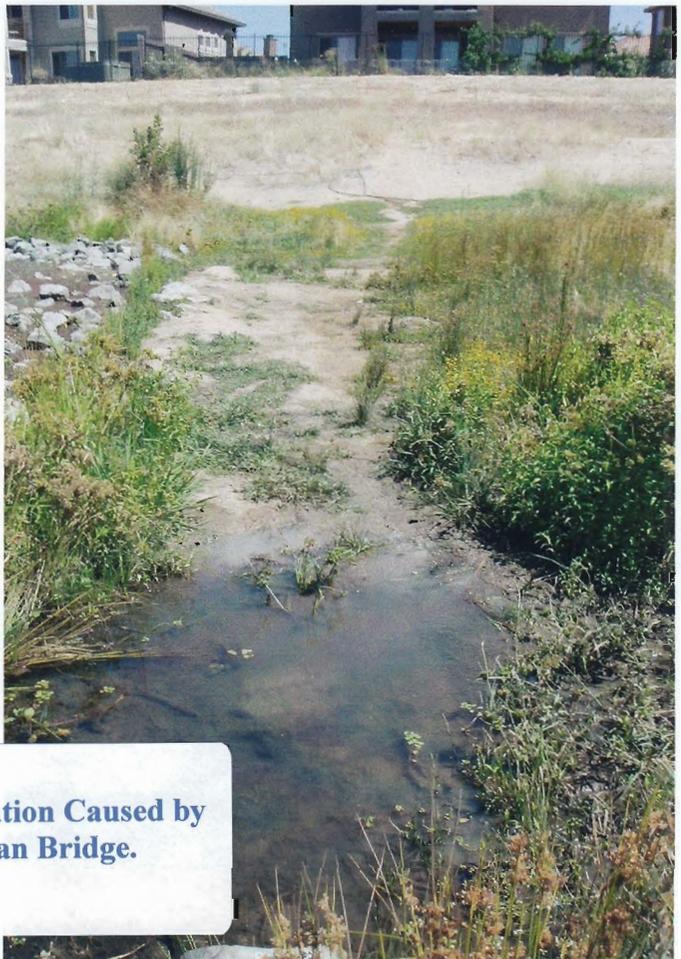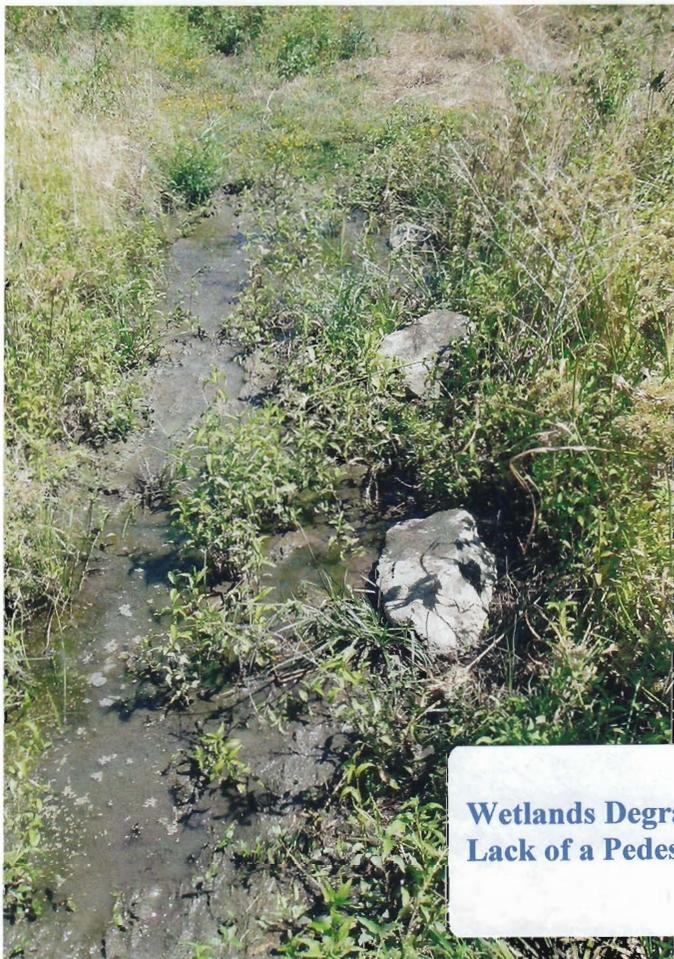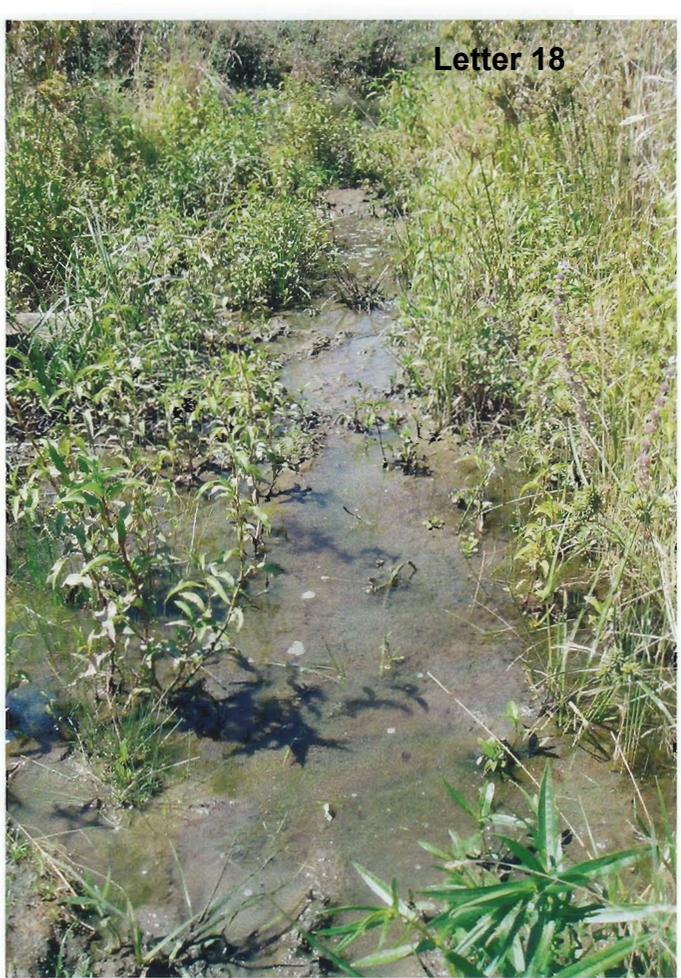
Wetlands Degradation Caused by
Lack of a Pedestrian Bridge.
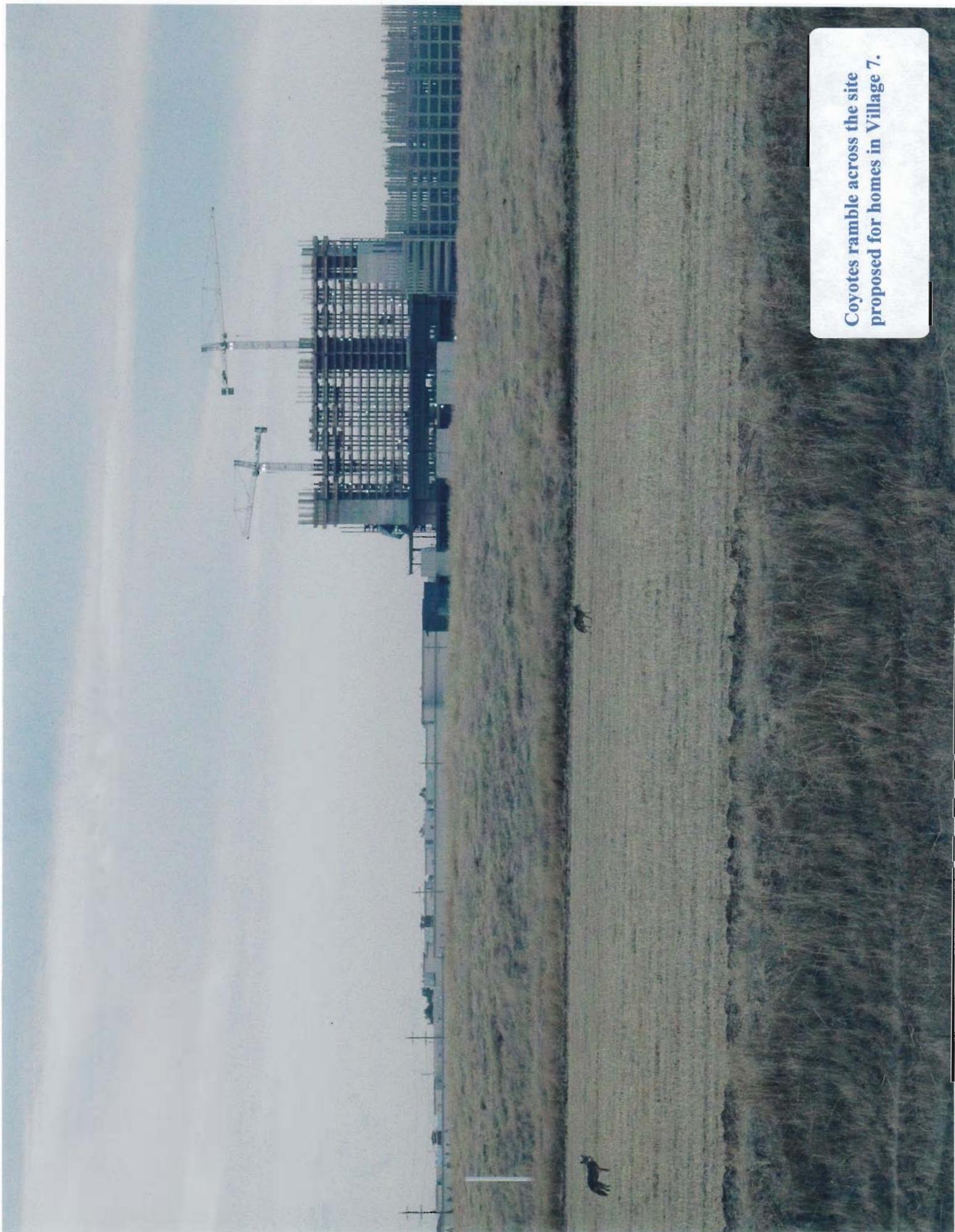
Coyotes ramble across the site proposed for homes in Village 7.
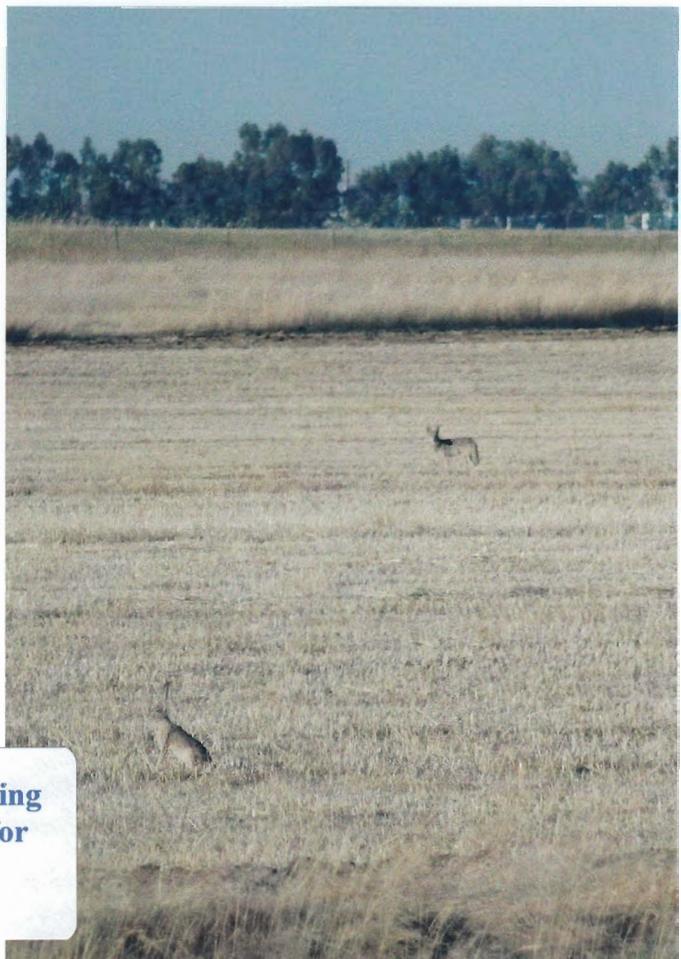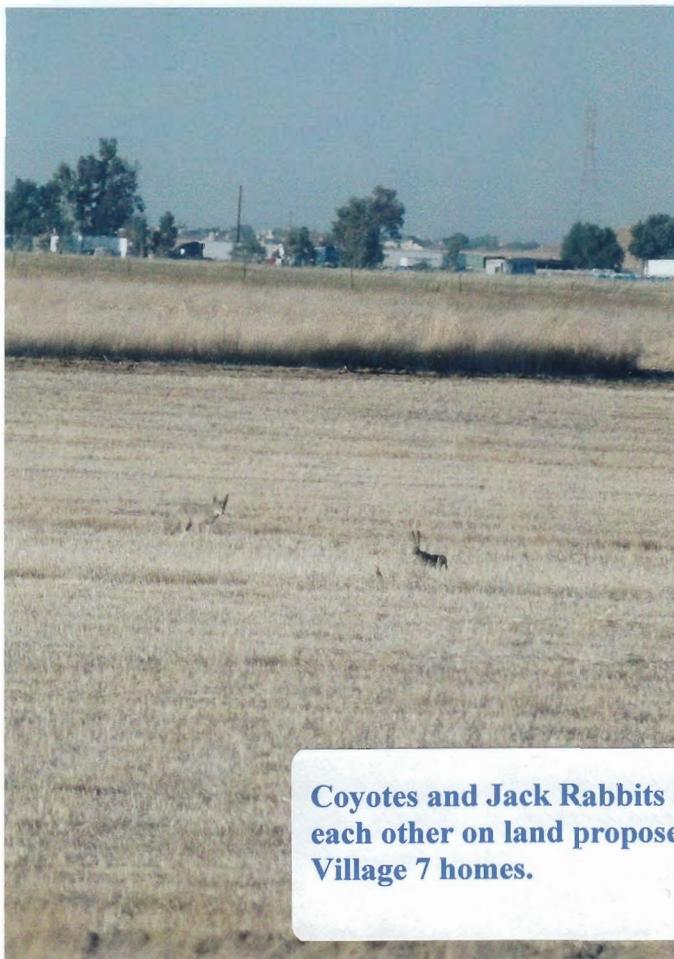
Coyotes and Jack Rabbits eyeing each other on land proposed for Village 7 homes.
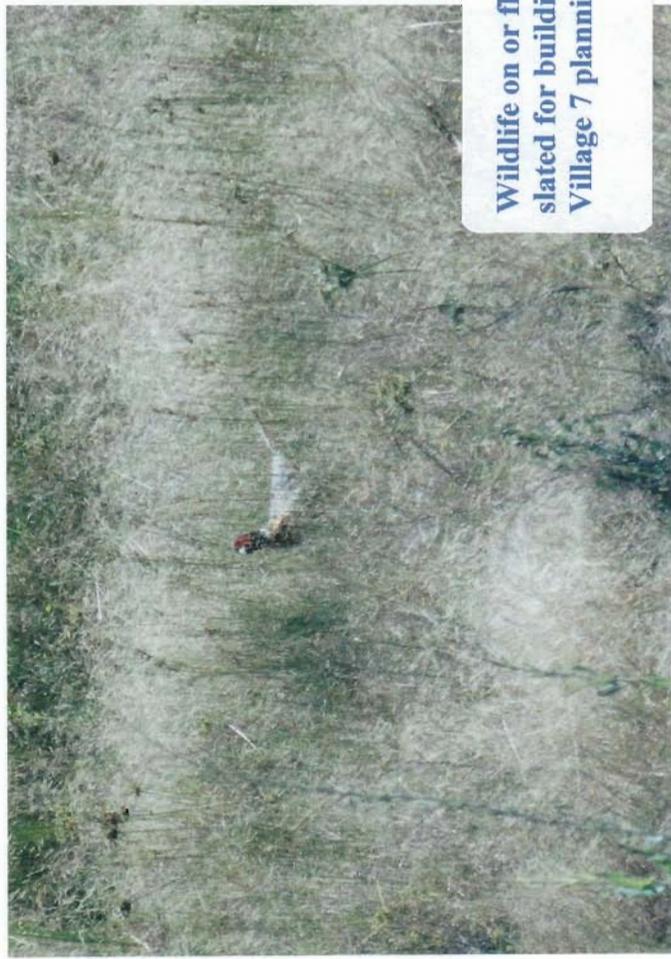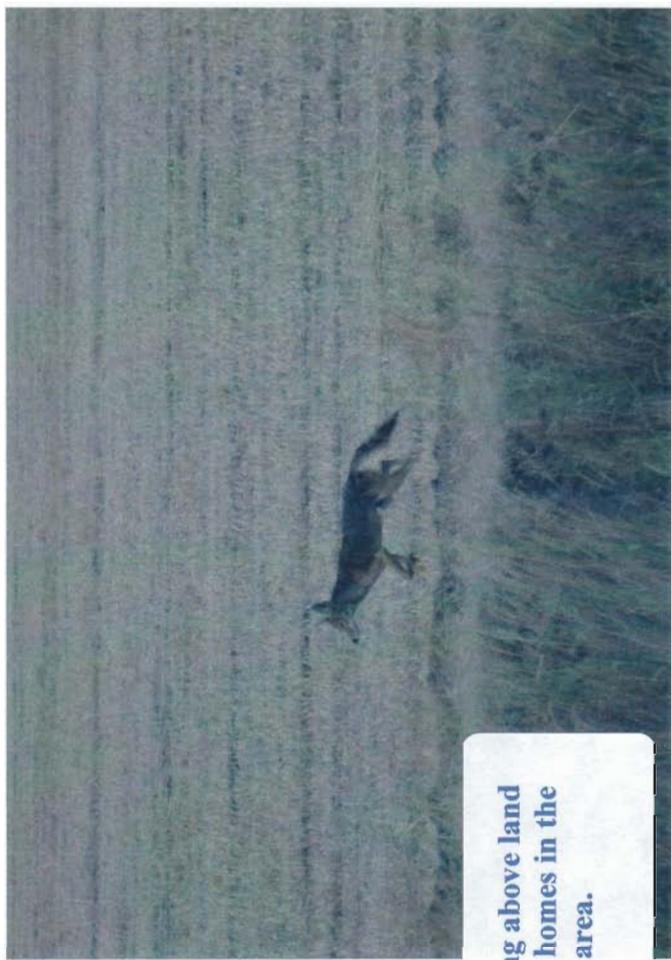
Wildlife on or flying above land slated for building homes in the Village 7 planning area.

A pheasant forages on land slated for development in Village 7, while a Casino hotel rises in the background.

A pheasant struts his stuff in the common area adjacent to the proposed Villlage 7 development.
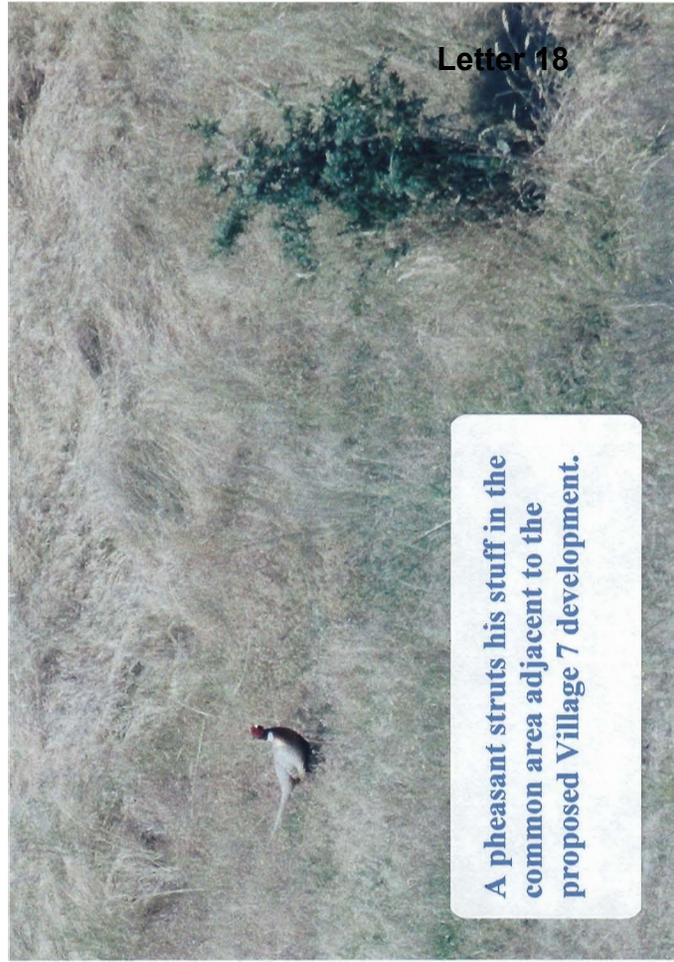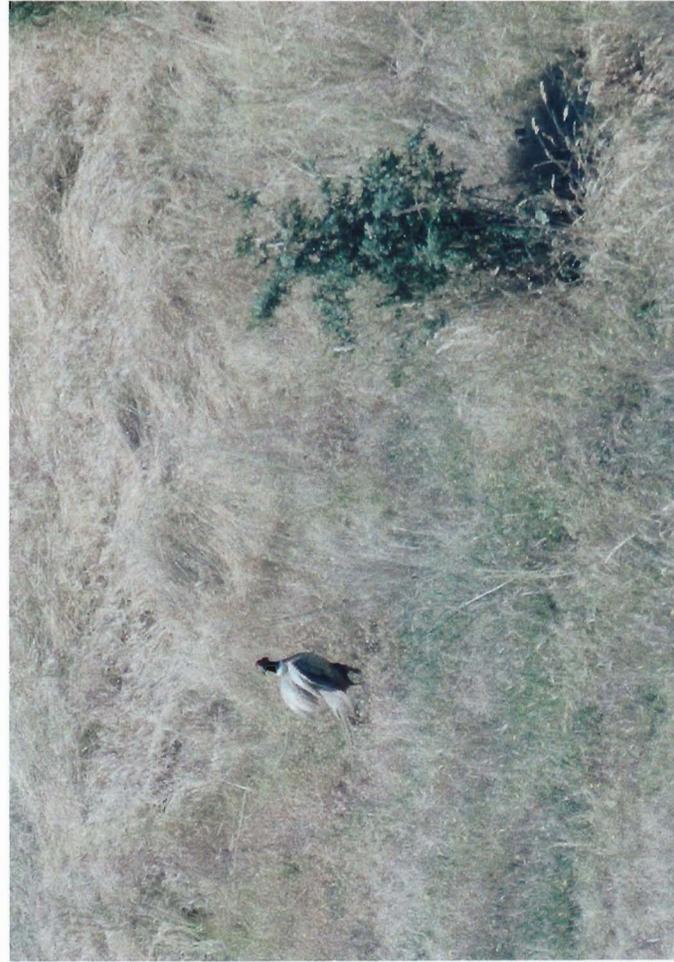
Geese foraging on the land proposed for development as Village 7. The Thunder Valley Casino is in the background.
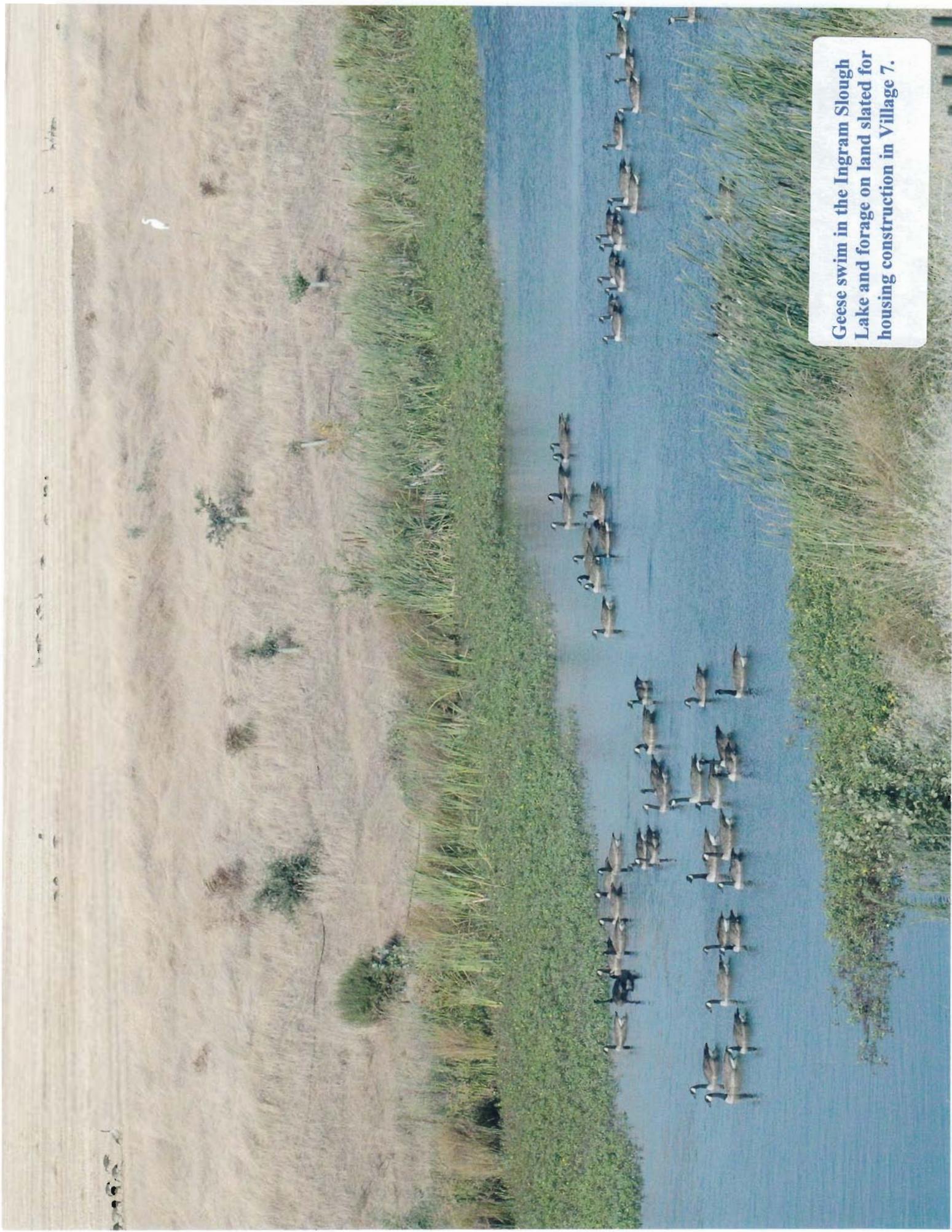
Geese swim in the Ingram Slough Lake and forage on land slated for housing construction in Village 7.
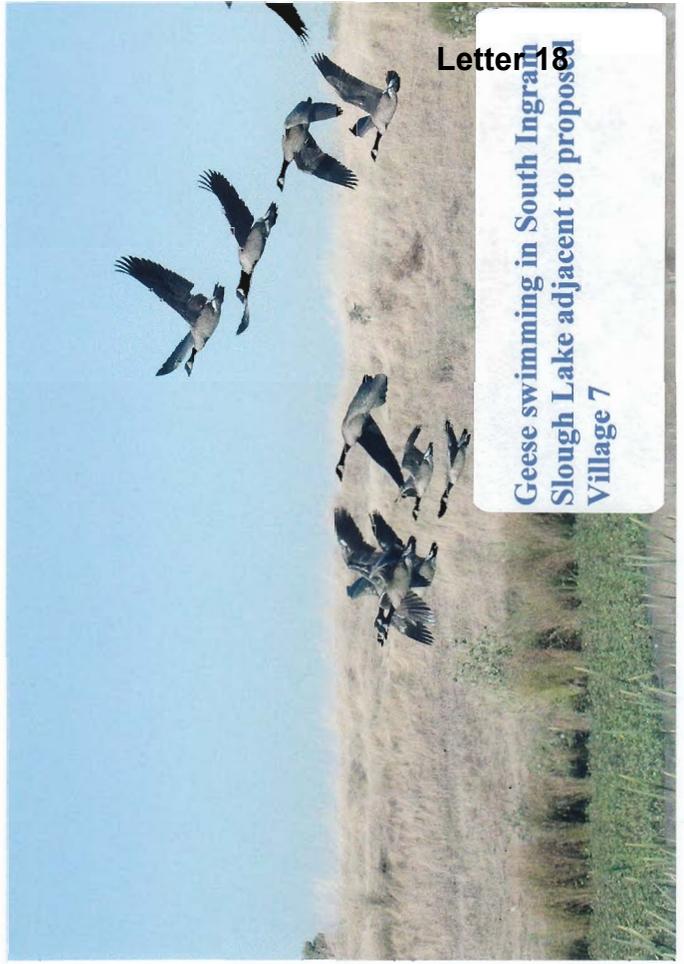
Geese swimming in South Ingram Slough Lake adjacent to proposed Village 7
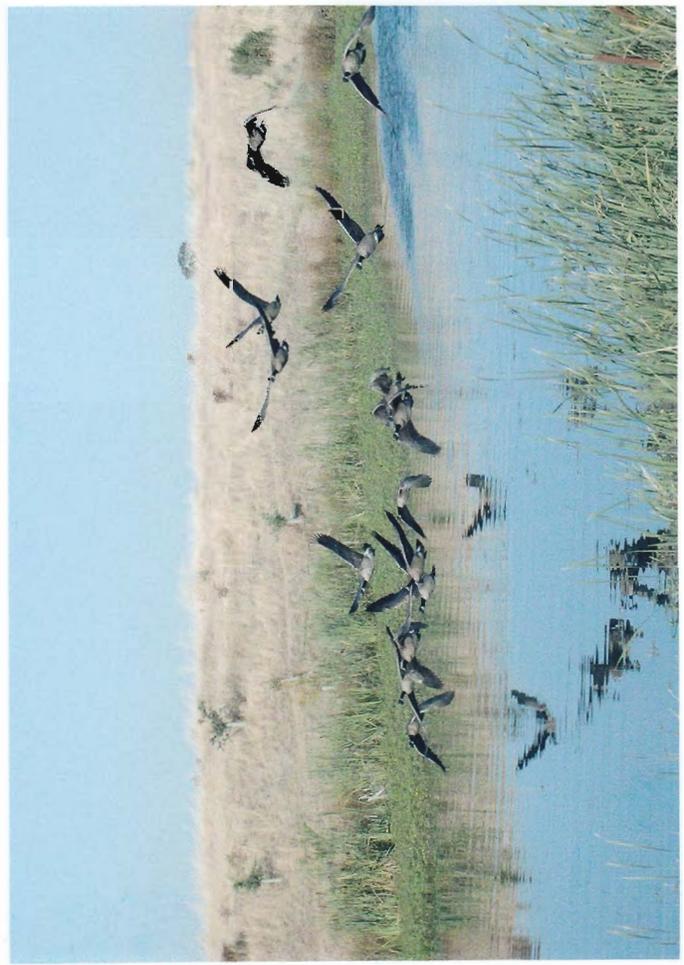
Geese swimming in South Ingram Slough Lake adjacent to proposed Village 7
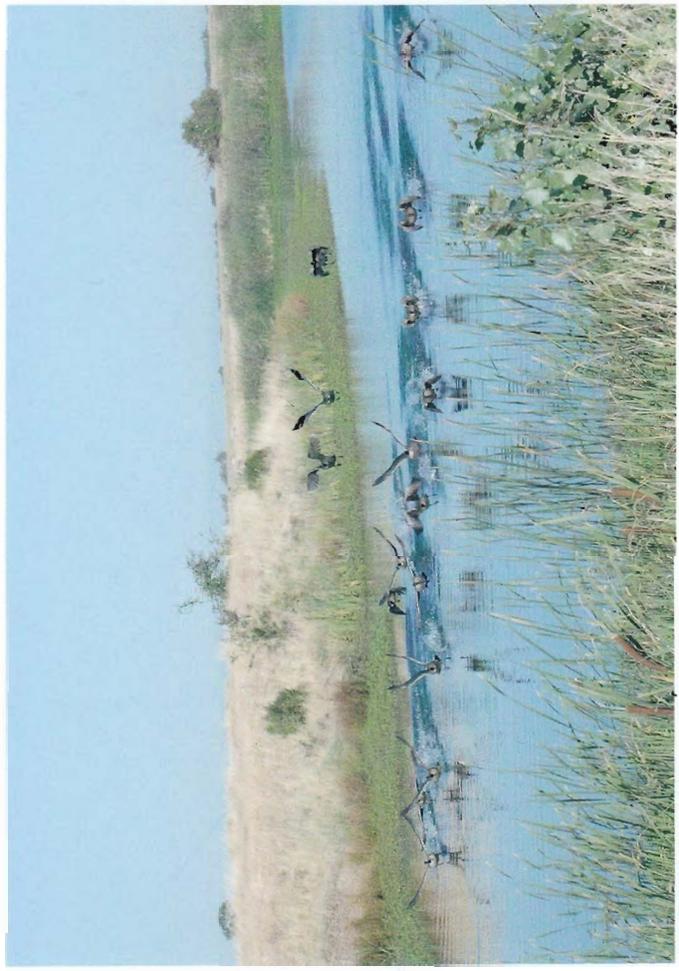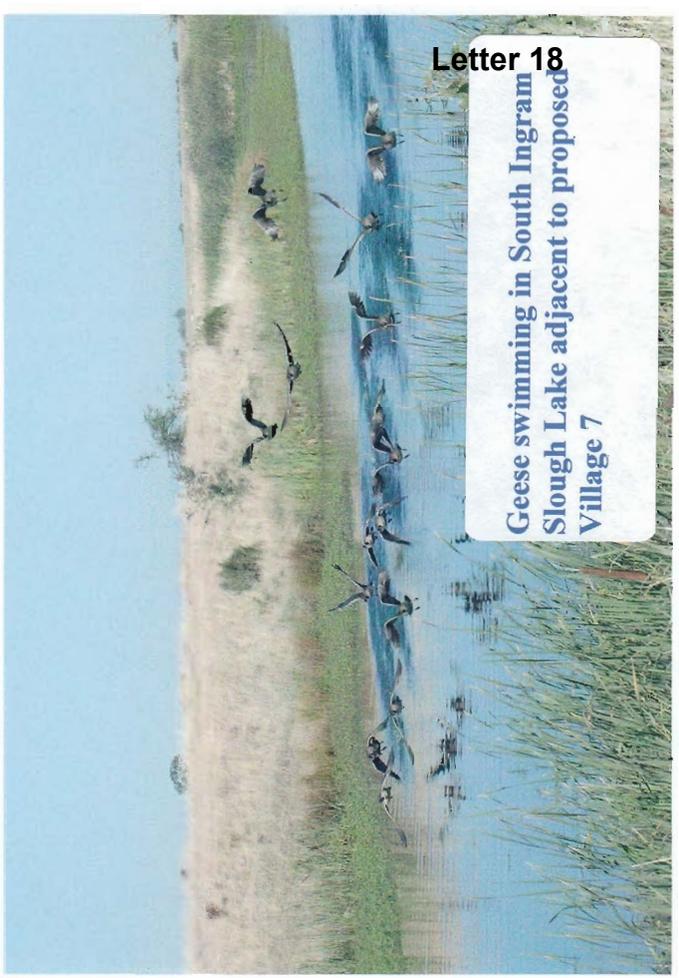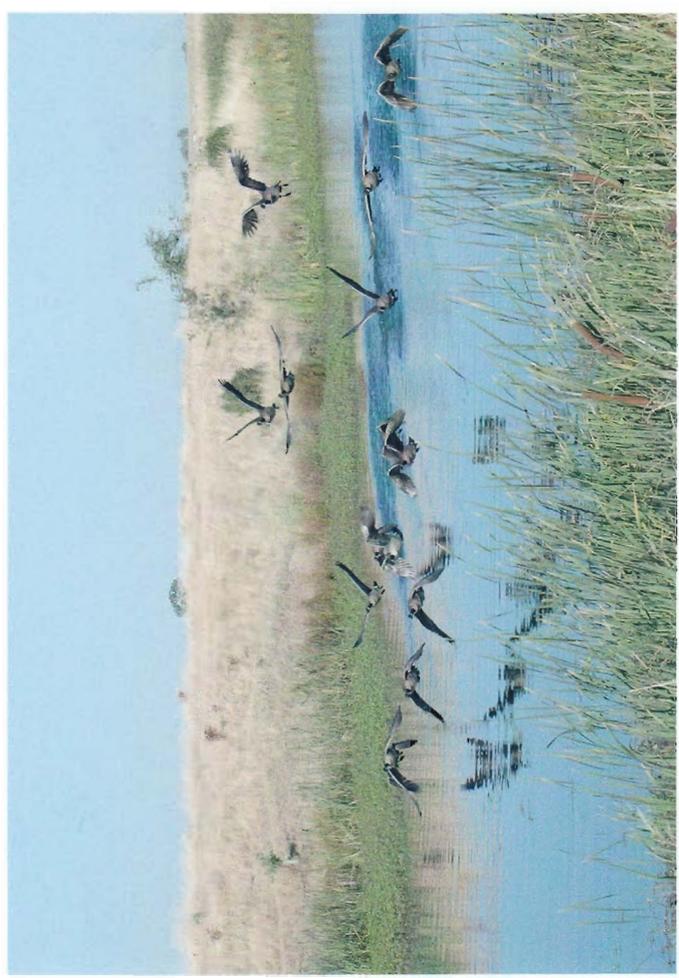
Geese over-fly the land proposed for housing in Village 7. The Thunder Valley Casino is in the background.

A river otter forages for food and harasses ducks in the South Ingram Slough Lake, adjacent to land proposed for Village 7.
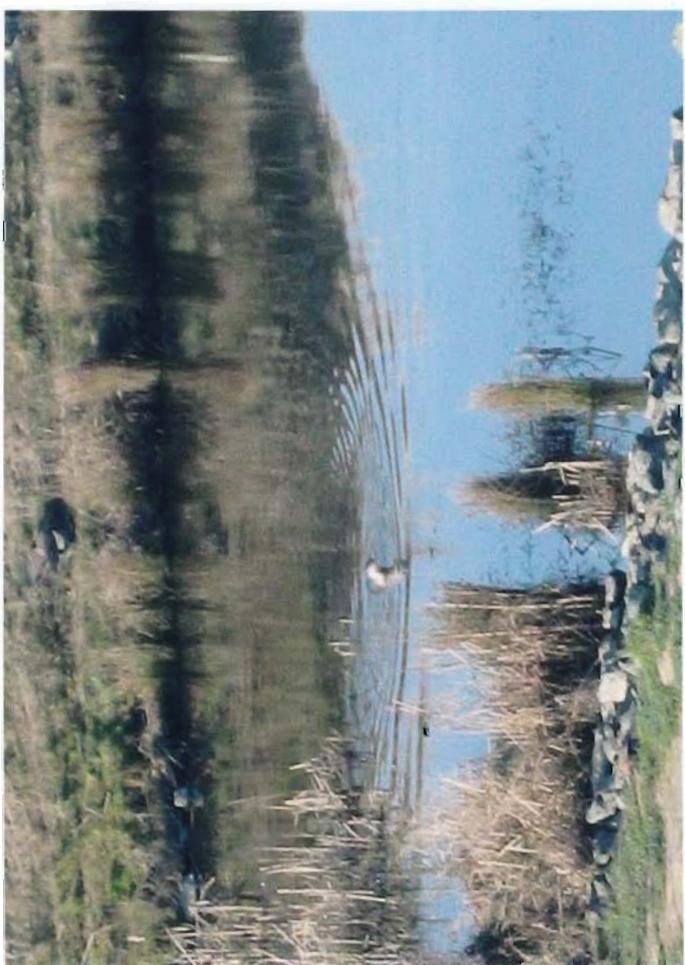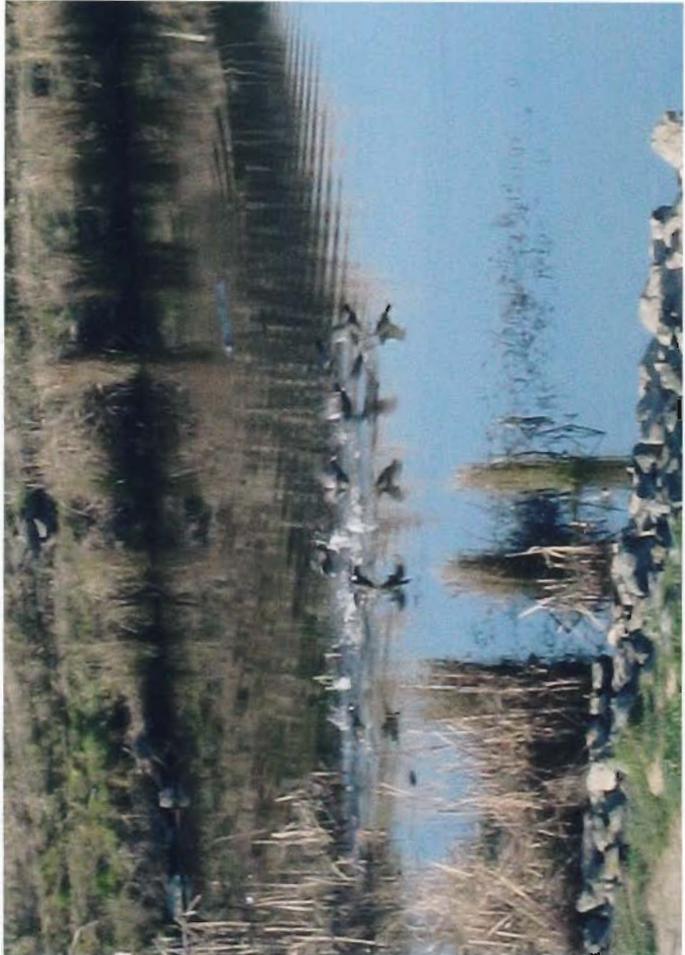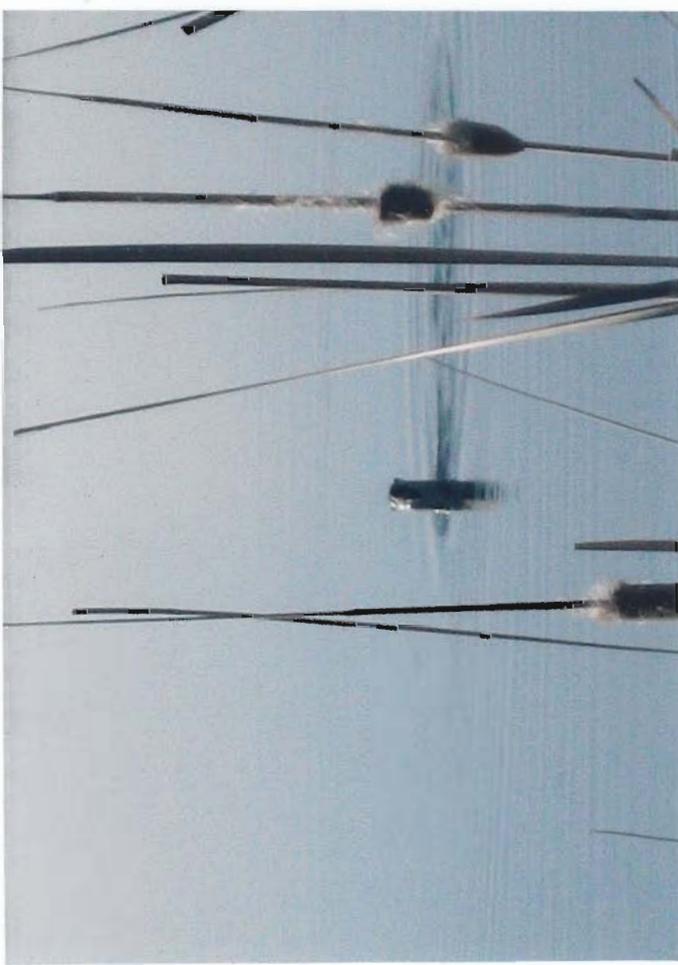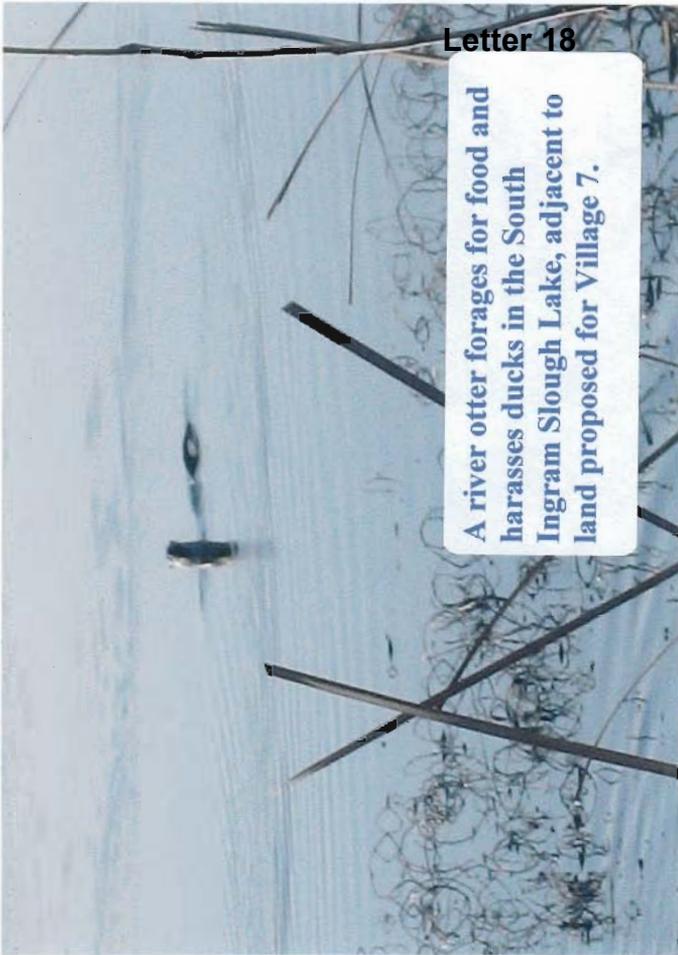
Table 4
Lincoln Crossing Project
Public Infrastructure Requirements and Projected Sources of Funding
LINCOLN CROSSING LIST OF POTENTIAL REIMBURSEMENT ITEMS REPAID BY SUBSEQUENT DEVELOPMENTS

Improvements	Budgeted Cost	Series 2003A Proceeds	Series 2004 Proceeds	Other Sources	Status or Description
City Development Fees/Cost Sharing Payments					
City engineering and construction fee	$ 134,000	$ 134,000			Pays for City engineering and supplies
City community capital facility contribution	300,000	300,000			Pays for fire protection facilities.
City community facility fee (net of fee credit)	17,042,086	4,272,344	$12,769,742		Pays for parks, public safety facilities, City Hall expansion, City maintenance yard, etc.
City PFE fees (net of fee credit)	4,958,909	1,388,556	$ 3,570,353		Pays for water, roadway and storm drain infrastructure.
City fees for park construction	971,777	416,108	555,669		Pays for parks located throughout the City.
Subtotal	*$23,406,772*	*$6,511,008*	*$16,895,764*		
City Direct Construction Improvements					
City water storage reservoir construction	$ 3,750,000	$ 1,875,000		$1,875,000 [1]	In design phase. Estimated project completion 1/06.
City water transmission pipeline construction	4,100,000	1,900,000		2,200,000 [1]	In design phase. Estimated project completion 1/06.
City water wells construction	2,200,000	1,600,000		600,000 [1]	In design phase. Estimated project completion 8/05.
New Wastewater Plant, Stage 2 contribution	8,829,027	8,829,027			Preliminary design phase. Estimated completion 8/06.
City Joiner Parkway bridge construction	3,040,000	1,940,000		1,100,000 [1]	Construction phase. Estimated completion 1/05.
City Open Space land acquisition[2]	2,943,075	867,300	$ 2,075,775		
Subtotal	*$24,862,102*	*$17,011,327*	*$2,075,775*	*$ 5,775,000*	
Other Development Fees and Improvements	*$ 867,686*	*$ 428,708*	*$ 438,978*		
Phase I Acquisition Improvements					
Developer direct payments					
New Wastewater Plant, Stage 1 contribution	$15,644,161		$15,644,161		Undergoing testing; start up scheduled for 8/04.
Existing Wastewater Plant Expansion	855,839		855,839		Projected completion 9/04.
Ferrari Ranch Rd./railroad intersection	118,000	$ 118,000			Completed.
Subtotal	*$16,618,000*	*$ 118,000*	*$16,500,000*		
Phase I Storm Drain Improvements					
Joiner Parkway	$ 2,014,759		$ 1,132,730	$ 882,029	Completed.
Ferrari Ranch Road	326,875		326,875		Completed.
Danbury Drive	190,851		190,851		Completed.
Village Infrastructure	406,065		406,065		Completed.
Phase I Ingraham Slough Improvements	1,256,640		1,256,640		Completed

DOCSSC1:337906.8

Improvements	Budgeted Cost	Series 2003A Proceeds	Series 2004 Proceeds	Other Sources	Status or Description
Builder in-tract storm drain (3)	1,766,615			$ 1,766,615	Under construction by merchant builders.
Subtotal	*$ 5,961,805*		*$ 3,313,161*	*$ 2,648,644*	
Phase I Sewer Improvements					
Joiner Parkway	$ 228,472		$ 228,472		Completed.
Ferrari Ranch Road	31,891		31,891		Completed.
Danbury Drive	85,203		85,203		Completed.
Village Infrastructure	370,235		370,235		Completed.
Builder in-tract sewer (3)	2,349,396			$ 2,349,396	Under construction by merchant builders.
Subtotal	*$ 3,065,197*		*$ 715,801*	*$ 2,349,396*	
Phase I Water Improvements					
West Lincoln Parkway	$ 679,293		$ 339,693	$ 339,600	Completed.
Ferrari Ranch Road	68,039		68,039		Completed.
Danbury Drive	192,979		192,979		Completed.
Village Infrastructure	474,359		474,359		Completed.
Builder in-tract water (3)	2,823,943		-	$ 2,823,943	Under construction by merchant builders.
Subtotal	*$ 4,238,613*		*$ 1,075,071*	*$ 3,163,543*	
Phase I Streets and Misc.					
Joiner Parkway	$ 4,392,800		$ 2,946,211	$ 1,446,589	Completed
Ferrari Ranch Road	1,210,418		783,350	427,068	Completed
Danbury Drive	527,134		527,134		Completed
Phase I Street Lights and Signals	1,000,000		866,665	133,335	Completed
Village Infrastructure	507,972		507,972		Completed
60kV relocation	1,482,780		1,482,780		Completed
City fees for in-tract street improvements (3)	3,569,657			3,569,657	To be paid by builders after closing of lot sales.
Builder public infrastructure fee payments	6,018,980		-	6,018,980	To be paid by builders after closing of lot sales.
Subtotal	*$18,709,741*		*$ 7,114,112*	*$11,595,629*	
Phase I Acquisition Totals:	**$48,593,357**	**$ 118,000**	**$ 28,718,145**	**$19,757,212**	
Phase II Acquisition Improvements					
Phase II Storm Drain Improvements					
Joiner Parkway	$ 28,155		$ 3,017	$ 25,138	Completed.
Ferrari Ranch Road	470,816		470,816		Completed.
Groveland West	30,181		30,181		Completed.
Phase II Channel Grading	347,670		347,670		Completed.
Groveland East, Stanmark Dr.	102,841		102,841		Completed.
Builder in-tract storm drain (3)	1,312,159		-	$ 1,312,159	To be constructed by merchant builders.

G-2

Improvements	Budgeted Cost	Series 2003A Proceeds	Series 2004 Proceeds	Other Sources	Status or Description
Subtotal	*$ 2,291,822*		*$ 954,525*	*$ 1,337,297*	
Phase II Sewer Improvements					
Ferrari Ranch Road	$ 5,454		$ 5,454		Completed.
Groveland West	84,841		84,841		Completed.
Groveland East, Stanmark Dr.	181,877		181,877		Completed.
Builder in-tract sewer [3]	1,745,022		-	$ 1,745,022	To be constructed by merchant builders.
Subtotal	*$ 2,017,194*		*$ 272,172*	*$ 1,745,022*	
Phase II Water Improvements					
Ferrari Ranch Road	$ 1,568		$ 1,568		Completed.
Groveland West	265,580		265,580		Completed.
Groveland East, Stanmark Dr.	99,786		99,786		Completed.
Hampstead Lane	163,156		163,156		Completed.
Builder in-tract water [3]	$ 2,097,494		-	$ 2,097,494	To be constructed by merchant builders.
Subtotal	*$ 2,627,584*		*$ 530,090*	*$ 2,097,494*	
Phase II Streets and Misc.					
Joiner Parkway	$ 447,103		$ 263,012	$ 184,091	Under construction; expected completion 9/04.
Ferrari Ranch Road	2,246,042		1,628,375	617,667	Under construction; expected completion 8/04.
Groveland West	269,147		269,147		Under construction; expected completion 8/04.
Groveland East, Stanmark Dr.	670,068		670,068		Under construction; expected completion 8/04.
South Ingraham Slough Improvements	163,514		163,514		Completed.
Builder public infrastructure fee payments	5,436,200			5,436,200	
Builder in-tract streets [3]	2,651,376		-	$ 2,651,376	To be constructed by merchant builders.
Subtotal	*$ 11,883,450*		*$ 2,994,116*	*$ 8,889,334*	
Phase II Acquisition Totals:	**$ 18,820,050**		**$ 4,750,903**	**$14,069,147**	
Phase III Acquisition Improvements					
Phase III Storm Drain Improvements					
Ferrari Ranch Road	$ 151,659		$ 151,659		Completed.
Brentford Circle	672,210		672,210		Construction start 8/04; projected completion 12/04.
Caledon Circle	1,344,812		1,344,812		90% complete.
Builder in-tract storm drain [3]	2,399,286		-	$ 2,399,286	To be constructed by merchant builders.
Subtotal	*$ 4,567,967*		*$ 2,168,681*	*$ 2,399,286*	
Phase III Sewer Improvements					
Ferrari Ranch Road	$ 16,819		$ 16,819		Completed.

Improvements	Budgeted Cost	Series 2003A Proceeds	Series 2004 Proceeds	Other Sources	Status or Description
Brentford Circle	761,065		761,065		Construction start 8/04; projected completion 12/04.
Caledon Circle	1,197,736		1,197,736		Completed.
Builder in-tract sewer (3)	3,190,777		-	$ 3,190,777	To be constructed by merchant builders.
Subtotal	*$ 5,166,397*		*$ 1,975,620*	*$ 3,190,777*	
Phase III Water Improvements					
Ferrari Ranch Road	$ 27,144		$ 27,144		Completed.
Brentford Circle	312,370		312,370		Construction start 8/04; projected completion 12/04.
Caledon Circle	674,545		674,545		90% complete.
Builder in-tract water (3)	3,835,273		-	$ 3,835,273	To be constructed by merchant builders.
Subtotal	*$ 4,849,332*		*$ 1,014,059*	*$ 3,835,273*	
Phase III Streets and Misc.					
Ferrari Ranch Road	$ 822,307		$ 630,347		70% complete.
Brentford Circle	1,097,751		1,097,751		Construction start 8/04; projected completion 12/04.
Caledon Circle	2,220,919		2,220,919		Projected completion 10/04.
South Ingram Slough Channel Improvements	1,329,850		1,329,850		Completed.
Two Bridges on Brentford Circle	1,333,800		1,333,800		50% complete; projected completion 8/04.
Builder public infrastructure fee payments (3)	13,382,776			13,382,776	To be paid by builders after closing of lot sales.
Builder in-tract streets (3)	4,848,046		-	4,848,046	To be constructed by merchant builders.
Subtotal	*$ 25,035,449*		*$ 6,612,667*	*$ 18,422,782*	
Phase III Acquisition Totals:	*$ 39,619,145*		*$ 11,771,027*	*$ 27,848,118*	
TOTALS	**$156,169,112**	**$ 24,069,043**	**$ 64,650,592**	**$ 67,449,477**	
TOTAL COSTS ELIGIBLE FOR REIMBURSEMENT FROM NEW DEVELOPMENT		**$ 16,320,043**	**$42,618536**		**TOTAL LOAD FACTOR ON LINCOLN CROSSING: $58,938,579**

(1) "Other Sources" consist of development fees from other developers.

(2) Upon payment of this amount to the Master Developer for the acquisition of open space, the Master Developer is required to use such amount for the payment of certain development fees, including fees for fire department staffing, a fire department supplemental fee and a City supplemental tax.

(3) Costs to be paid directly by merchant builders

LINCOLN CROSSING

FUTURE
COMMUNITY
PARK

Lincoln Parks: $17,000,000 for a
5-year old sign, weeds and
graffiti?

Photo of the typical condition of the parks in Lincoln Crossing. Note the wonderful quality of our bike trails.

HIGHWAY 65 BYPASS

3D SOUTH

VILLAGE 7 COMMERCIAL LAND

MOORE ROAD

SORRENTO

FERRARI RANCH ROAD

LINCOLN CROSSING

SOUTH INGRAM SLOUGH

SOUTH INGRAM SLOUGH

Park and Open Space Legend

1		Natural Open Space
2		**Community Parks** 2- 20.5 acres, Nader Property
3		**Neighborhood Parks** 3a- 7.3 acres, Nader Property 3b- 5.0 acres, Aitken Property
4		**Village Greens** 4a- 1.3 acres, Nader Property 4b- 1.1 acres, Nader Property 4c- 1.9 acres, Nader Property 4d- 1.8 acres, Nader Property 4e- 1.6 acres, Nader Property 4f- 1.0 acres, Nader Property 4g- 1.6 acres, Nader Property 4h- 1.2 acres, Nader Property 4i- 1.3 acres, Nader Property 4j- 1.1 acres, Nader Property 4k- 1.8 acres, Aitken Property 4l- 2.6 acres, Remainder Property 4m- 2.9 acres, Remainder Property
5		**Pocket Parks** 5a- 0.5 acres, Nader Property 5b- 0.5 acres, Nader Property 5c- 0.5 acres, Nader Property 5d- 0.8 acres, Nader Property 5e- 0.8 acres, Nader Property 5f- 0.5 acres, Nader Property
6		Linear Parkway

NORTH
NOT TO SCALE

Source: Village 7 Specific Plan, 2009.

FIGURE **2-8**
Park and Open Space Plan

PBS&J®

0D5093600

Map showing Village 7 commercial land, proposing land swap for Lincoln Crossing park land.
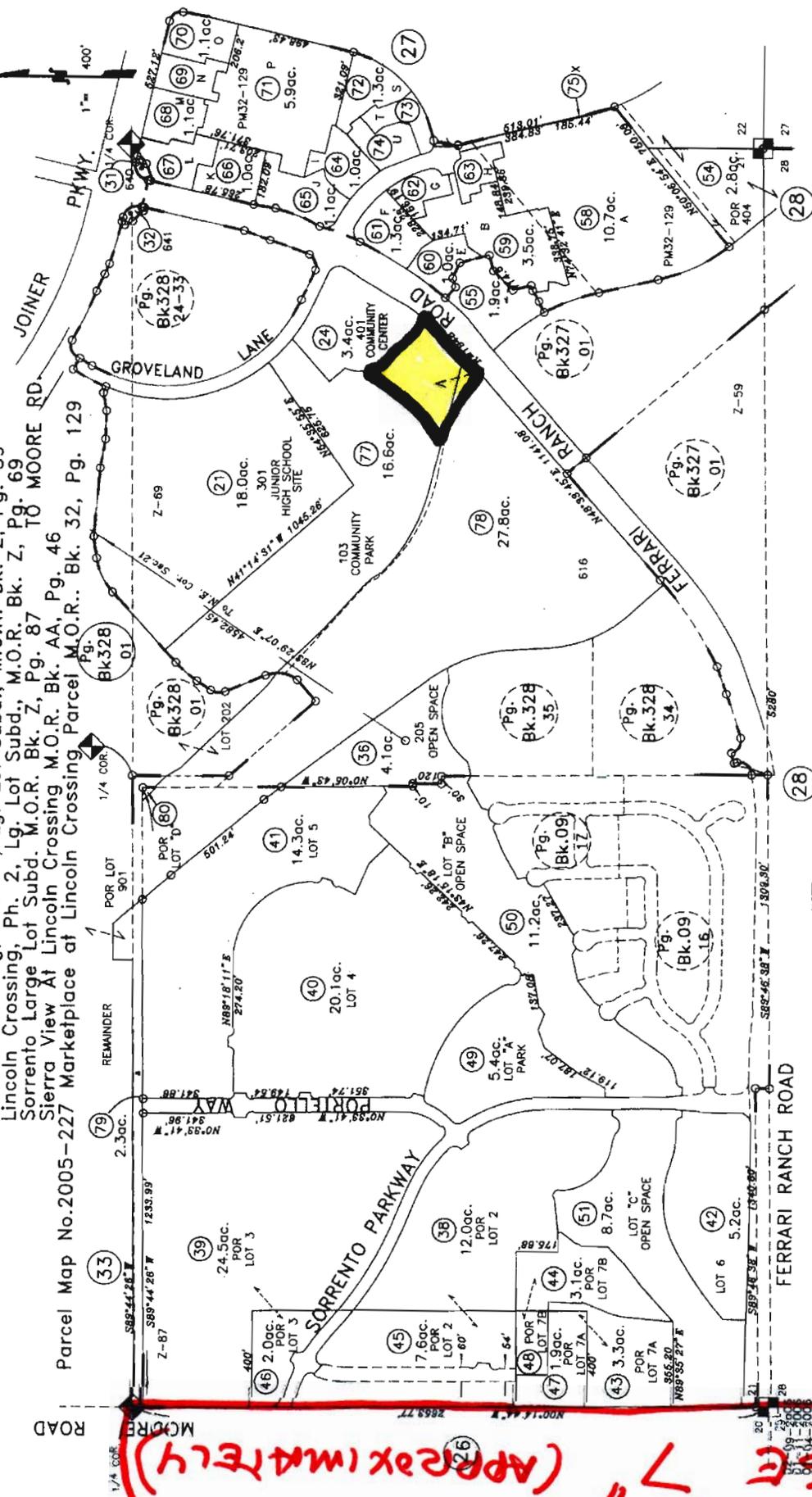
Map showing site of Community Park 103 and the proposed 3 acre service commercial center in Lincoln Crossing.

JUNIOR HIGH SCHOOL SITE

N54°35'55"E 625.75'

N 1045.26'

103
COMMUNITY
PARK

(78)
27.8ac.

(77)
16.6ac.

APPROX.
3
ARES

(24)
3.4ac.
401
COMMUNITY
CENTER

R=1948'

N3°45'E 1141.08'

RANCH

ROAD

(Pg.
BK327)

(55)
1.9ac.

(60)
0ac.
E

(59)
3.5ac.

1.3

6
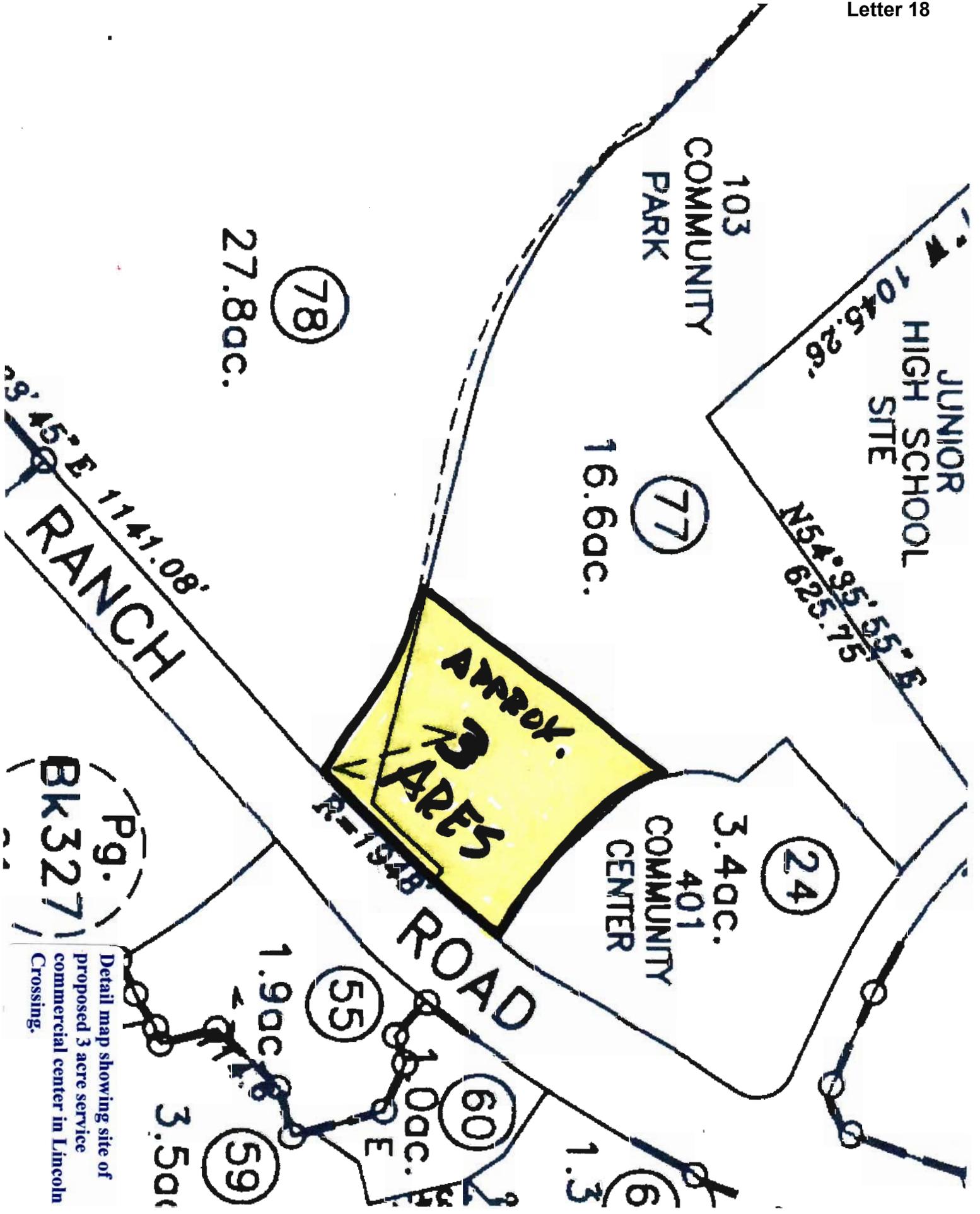
Detail map showing site of
proposed 3 acre service
commercial center in Lincoln
Crossing.

COMMENT LETTER 18:   JOHN FETT, LINCOLN, JULY 26, 2009

Response to Comment 18-1

The comment expresses appreciation for the City of Lincoln making the Draft EIR available online. The commenter also expresses a positive opinion of the applicant. The commenter identifies four areas of concern: nature habitat continuity, infrastructure cost sharing and reimbursement, housing density relative to open space/parks, and future commercial project viability and timing. Responses to the comments about these topics are provided in Responses to Comment 18-2 through 18-6.

Response to Comment 18-2

The majority of this comment is directed to specific design elements of the Proposed Project and does not address the Draft EIR analysis. As noted in Response to Comment 16-2, there are three street crossings of Ingram Slough and two bike/pedestrian-only crossings of Ingram Slough. Because Ingram Slough is a wetland habitat area that is being preserved, the City has determined that it needs to minimize the number of bridges at Ingram Slough, yet still provide for an effective trail system with a reasonable number of crossings. That determination is consistent with the City's General Plan Policy LU-12.4,, which provides that public access to creeks, wetlands, and other open space areas for pedestrians and bicycles should be allowed only where feasible and where it will not cause a significant impact to the natural resources. Adding more bike/pedestrian crossings to Ingram Slough as requested by the commenter would create new significant environmental impacts that the City has determined should be avoided.

The commenter is also concerned with the public's use and the perceived lack of maintenance by the City of the Lincoln Crossing open space/wetlands preserve. These comments are beyond the scope of the Draft EIR for the Village 7 Specific Plan and involve issues of compliance with the open space management plan applicable to the Lincoln Crossing preserve area.

Contrary to the commenter's assertion, the Draft EIR does, in fact, analyze impacts on wildlife species from the Village 7 Specific Plan Project. Impact 4.8-5 on page 4.8-30 in Section 4.8, Biological Resources, determined the Proposed Project could result in direct loss or disturbance of nesting migratory birds, including raptors, such as Swainson's hawk. Mitigation Measures 4.8-5(A) and (B) were identified to mitigate this potentially significant impact. Impact 4.8-6 on page 4.8-32 concluded foraging habitat for Swainson's hawk, burrowing owl, and other raptors that forage in project site grasslands could be affected. This was identified as a significant impact requiring mitigation (Mitigation Measures 4.8-6(A) and (B)) because development of the Proposed Project would result in the loss of foraging habitat. Impact 4.8-8 on page 4.8-35 in the Draft EIR states that Ingram Slough provides habitat for wildlife species such as ducks, egrets, and other waterfowl associated with the Pacific Flyway. Because development of the Village 7 Specific Plan could disrupt the shelter, nesting, and foraging habitat provided by this resource, the Draft EIR identified Mitigation Measure 4.8-8(A) and (B) to reduce this impact. All of the mitigation measures are consistent with federal and state regulations established for the purpose of protecting those species. Finally, Impact 4.8-9 on page 4.8-36 notes that a variety of invertebrate, amphibian, reptiles, birds, and mammals (e.g., coyotes) are present in the project site, and that these species are sufficiently mobile to move around the project site and to adjacent habitats. The impact analysis concludes that the Proposed Project would not fragment any habitat nor disrupt the introduction of genetic diversity.

Response to Comment 18-3

Comment noted.

Response to Comment 18-4

The commenter requests that the City require the Village 7 Specific Plan area to pay for a share of the infrastructure previously built in the Lincoln Crossing development. The infrastructure in the Lincoln Crossing area consists of the local subdivision improvements and those improvements serving a larger city-wide area. Local improvements are oftentimes financed by a community facilities district (CFD) which spreads their cost over a geographic area of benefit created and approved by the voters within that area of benefit when the CFD is approved for formation. Other improvements which serve a larger city-wide area are typically financed by way of the development impact fees the City charges on all new development pursuant to its PFE Program, and includes major infrastructure facilities serving the Lincoln Crossing development as well as the entire City. By requiring new development to pay the PFE Program's impact fees, the City requires new development to pay its fair share of the costs of infrastructure which serves a larger area. CEQA is an environmental information statute whose purpose is to describe and disclose to the public and to the decision-makers the significant effects on the environment of a project. For purposes of CEQA, the "environment" is defined as: "the physical conditions which exist within the area which will be affected by a proposed project including land air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance." (California Public Resources Code Section 21060.5) As a result of this statutory requirement, only changes to the physical environment will trigger the need for analysis in an environmental impact report; social or economic impacts alone will not do so because they are not changes in physical conditions. This principle is reflected in Public Resources Code section 21080(e) and 14 California Code of Regulations section 15054(f)(6) which provide that evidence of social or economic impacts that do not contribute to, or are not caused by, physical impacts on the environment are not substantial evidence of a significant effect on the environment. Consequently, in the absence of any substantial evidence that the project's economic effects would cause a physical change in the environment, CEQA only requires Draft EIR to examine the environmental impacts of the project. No further analysis or changes to the Draft EIR are necessary as a result of this comment.

The commenter also expresses dissatisfaction with the timing of construction of parks in the Lincoln Crossing development and states that no parks have been built within Lincoln Crossing by the City. City parks are built in phases over time as part of the City's capital improvement program for parks. Contrary to the commenter's assertion, the City has built the following parks that serve the Lincoln Crossing area: Pete Dimas Park (a 0.8-acre park on Stansbury Lane), Pete Singer Park (a 5.0-acre park at Danby Drive and Groveland Lane), Sheffield Park (a 1.5-acre park on Sheffield Lane), Machado Park (a 4.7-acre park on Downing Circle) and Auburn Ravine Park (a 10.0- acre park at Moore Road and Green Ravine Drive that also contains a dog park and multi-use trail system). In addition, the City currently has two more parks in the design development phase that will be constructed in the future.

With regard to the commenter's request that the City require the Lewis Property to pay seventeen million dollars ($17,000,000) in additional park fees to pay for the construction of new parks in the Lincoln Crossing development, and the commenter's concern over the manner in which the City has expended park fees collected from the Lincoln Crossing area to pay for parks in other areas of the City, such comment is noted. The City currently imposes a "Community Services" fee of $7,180 per residential unit to pay for parks, police, fire, city administration, libraries and solid waste services as a component part of its Public Facilities Fee Program ("PFFP") in order to provide six acres of parkland per 1,000 residents and three acres of open space per 1,000 residents. City parks are designed and constructed over time as funding is collected under the PFFP and in accordance with the City's capital improvement program schedule. The fees imposed on new development for parks and other community services under the PFFP were enacted in compliance with the California Mitigation Fee Act (California Government Code sections 66,000 et seq., and the Quimby Act (California Government Code sections 66,477 et seq.), as well as imposed in compliance with

constitutional requirements that there be a nexus between the amount of the fee imposed and the facilities being financed by the fee. In light of the foregoing requirements, there is no legal basis for the City to impose an additional seventeen million dollar ($17,000,000) fee on the Lewis Property requested by the commenter to pay for the construction of parks in the Lincoln Crossing development on top of the PFFP fees that will already be payable when the Lewis Property develops.

Response to Comment 18-5

The commenter raises a design issue with the location of the high density residential units and the parks. Insofar as this is a design matter, and not an environmental one, the comment is noted.

Response to Comment 18-6

The commenter raises a design issue with the location of the commercial uses in Village 7. Insofar as this is a design matter, and not an environmental one, the comment is noted.

Response to Comment 18-7

Comment noted.

Addendum to Public Comment on Development Plans for Village 7
Lincoln, CA
July 24, 2009

Rodney Campbell
City of Lincoln
Community Development Department
600 6th Street
Lincoln, CA 95648

Arnold Victor's name was left off the signature portion of the letter sent to the City, which was also signed by Paul Denzler, Cecilia Uselmann, Daniel Uselmann, Joan Brant-Love, and Lisa Williams. Please add his support to this document.

19-1

Arnold Victor
1615 Larkflower Way, Lincoln

COMMENT LETTER 19:   ARNOLD VICTOR, LINCOLN, JULY 24, 2009

Response to Comment 19-1

Comment noted.

VILLAGE 7 PUBLIC COMMENTS

July 22, 2009

To: Mr. Rod Campbell
       Community Development Director
       City of Lincoln

From: John Williams
      Lincoln Resident/ Environmental Restoration Specialist

I, John Williams of 345 M Street in Lincoln would like to submit comments in regard to
the proposed Village 7, by Lewis Group. As a citizen of Lincoln, I am concerned that
this project as proposed by Lewis Homes would negatively impact the natural beauty
and environmental integrity of the open space in the City of Lincoln.

20-1

One of the main concerns that I have is the adverse effect that this development, as
proposed, will have on the Ingram Slough that it proposes to develop next to and
encroach upon. The project proposes to channelize this slough making it more of an
open water environment instead of the slow-moving wetland habitat that it has had
historically. The idea behind this seems to be a way to be able to develop as close to
the slough as possible. At the most eastern boundary of the project, Ingram Slough is
proposed to be squeezed into a very narrow area with a bridge going over the top. This
would not provide any room for recreational trails or wildlife viewing. Furthermore, this
feature would eliminate any possibility of this open space being part of a viable wildlife
corridor. I strongly suggest that the City of Lincoln look at this aspect of the Village 7
plan and require that the developer come up with a more viable alternative that provides
for recreational opportunities for the public along Ingram and provide long-term
protection of wildlife habitat through the use of a wider set-back for wildlife migration.

20-2

Another concern that I have is the proposed wetland to the Northwest section of Village
7. This wetland is surrounded by proposed development, in particular commercial
business properties. This would create an isolated patch of land much like an island
that would be impossible for animals and plants to succeed in. Biological diversity will
decline without any new inputs from surrounding natural areas. Migration of animals in
and out of the area will be impossible. Furthermore, commercial businesses can often
be the worst types of neighbors to natural areas due to pollutants and other impacts. It
is clear that this area is not permissible for development without mitigation. The
developer intends to fence it off and call it open space in order to meet the City's 40%
goal. This type of "open space" is hardly what the City of Lincoln was looking for in its
General Plan. There are no recreational opportunities or environmental habitat values
being preserved in this area. What I predict for this area will be a place for wind-blown

20-3

trash to collect, weeds to grow unmanaged and a place for vandalism to flourish if it is built according to this plan. Ultimately, the City of Lincoln will be responsible for cleaning up, fighting fires, and removing the homeless if area is left as proposed. Open space should be meaningfully protected with an emphasis on natural beauty, recreational opportunities, habitat preservation...etc. I urge the City of Lincoln to look at this part of the proposed Village 7 plan and ask the developer to come up with a better alternative. This area can be linked to other open space areas, enlarged or even given up all together if that means more space could be given to the Ingram Slough for habitat enhancement.

20-3
(cont.)

I have one other aspect of the Village 7 proposed development plan that I would like to bring to your attention. In conversations with Mr. Bill Mellerup, of the Lewis Group, he shared that the landscaping proposed along many of the roadways in Village 7 would be considered "Linear Parkways." These areas would be mounded and planted with fruit trees and other water-loving plants to give it a more rural look. He also mentioned that this would be in lieu of any sound wall construction and would count towards their 40% Open Space requirement. I have many issues with this part of the plan. First, landscaped setbacks from a road way are in no way Open Space. As defined in Lincoln's General Plan, these type of right of ways would not qualify towards Open Space. In addition, I think that any new projects in Lincoln should be evaluated in terms of what the ultimate cost is going to be for our City. To plant fruit trees and other water-loving plants means that the City of Lincoln will be responsible for irrigating, maintenance, pruning, pest control...etc. Would it not be wise to require all developers make their proposed public areas and open spaces the most efficient possible so that the City is not left spending countless hours and money to care for it? For this aspect of the plan, I think that native and Mediterranean plants should be used for water conservation, low maintenance and habitat value. I strongly urge that the City of Lincoln not allow these "Linear Parkways" to be built as proposed or be counted as Open Space. An alternative is to enlarge the other Open Space areas next to Ingram Slough or along Auburn Ravine.

20-4

These are the main concerns that I have about this project. I am all for the City of Lincoln to grow intelligently. I believe that Lewis Group is a quality developer and that this proposed village would be a great addition to the City if a few changes are made as pointed out above. My main concern as a resident of Lincoln is that we preserve and restore what little natural beauty we have left. Any future projects should reflect a commitment by the City of Lincoln to the future well being of the environment and therefore the quality of life of its citizens. My hope is that the City of Lincoln could become a model for other cities in this regard in addition to water conservation, energy efficiency, wildlife and native plant habitat preservation...etc.

20-5

Thank you for the opportunity to voice my concerns,

John Williams

COMMENT LETTER 20:   JOHN WILLIAMS, LINCOLN, JULY 22, 2009

Response to Comment 20-1

The comment expresses an opinion the Proposed Project would negatively impact the natural beauty and environmental integrity of open space in the City of Lincoln. The comment does not specifically address the analysis in the Draft EIR. Responses to Comments 20-2 through 20-4 address the commenter's concerns.

Response to Comment 20-2

There are no plans to channelize Ingram Slough at the Village 7 Specific Plan site. Please see Responses to Comments 15-10, 17-4, and 17-5. With the exception of the crossings over Ingram Slough, the Slough will be avoided and placed in an open space preserve area.

The comment asserts the Proposed Project would eliminate viable wildlife corridors. This is a general comment that does not reference any specific analysis or conclusion presented in the Draft EIR. The City has considered potential effects on wildlife migration and corridors in the Draft EIR in Section 4.8, Biological Resources. The Draft EIR concludes the Proposed Project would not result in adverse environmental impacts on Ingram Slough or affect wildlife migration. Please see Response to Comment 17-2.

Response to Comment 20-3

The commenter expresses several concerns with creation of a wetland preserve in Village 7 at the Lewis Property. Please see Response to Comment 17-5.

The commenter is of the opinion that biological diversity would decline as a result of the Proposed Project because there would be no new inputs, and migration of animals in and out of the area would be "impossible."   This is a general comment that does not reference any specific analysis or conclusion presented in the Draft EIR. Impact 4.8-9 on page 4.8-36 in the Draft EIR notes that a variety of invertebrate, amphibian, reptiles, birds, and mammals (e.g., coyotes) are present in the project site, and that these species are sufficiently mobile to move around the project site and to adjacent habitats. The impact analysis concludes that the Proposed Project would not fragment any habitat nor disrupt the introduction of genetic diversity. The Draft EIR provides the following to support this conclusion. The project has been designed to retain wildlife movement corridors through the site along Ingram Slough and Auburn Ravine, and retain connectivity with adjacent and regional areas of wildlife habitat. Those less-mobile species, such as the vernal pool branchiopods and plants would be lost with project development. However, vernal pool branchiopods are adapted to a highly isolated life cycle, relying on individuals located within their individual vernal pools for reproduction. Introduction of new individuals of both plants and vernal pool branchiopods can come by way of wind, water, or other carriers such as birds and cattle, if present. Development of the Proposed Project would remove some habitat from the site, but would not disrupt the introduction of genetic diversity from adjacent sites. Birds and other carriers would continue to move through adjacent areas, and water would continue to flow through the site. Furthermore, wildlife would be able to use Ingram Slough and Auburn Ravine and other open space corridors for movement. Because the Proposed Project would not result in habitat fragmentation or population isolation, this impact is considered less than significant.

Please see also Response to Comment 17-2.

Response to Comment 20-4

The commenter is opposed to the linear parkways and paseos counting toward the 40% open space requirement and is opposed to planting fruit trees and other water-loving plants in the linear parkways. Landscaping in the linear parkways and paseos found in Village 7 will comply with the requirements of the City's General Plan and the Village 7 Specific Plan. The General Plan provides that each specific plan must provide a design framework that integrates the streetscape into the overall project design.

General Plan Policy OSC-5.4 specifies that the City shall encourage the planting of native trees, shrubs, and grasslands in order to preserve the visual integrity of the landscape, provide habitat conditions suitable for native vegetation, and ensure that a maximum number and variety of well-adapted plants are maintained. Policy OSC-5.10 requires the City to develop a list of native vegetation to be used as a landscape palette within open space/preserve areas. That policy also specifies that native plants should be incorporated into plant palettes used in developed areas. The City has no plans to landscape the linear parkways or any of the other open space areas within the Village 7 Specific Plan with fruit trees or to approve any fruit trees as part of the approved public landscaping planting list in Village 7.

Policies OSC-4.5 and OSC-4.7 specify that the City shall encourage the use of reclaimed water, in place of treated potable water for landscaping and other suitable applications, and state that the City will require the installation of reclaimed water irrigation systems in areas where reclaimed water could be supplied in the future.

With regard to the commenter's concern about the linear parkways counting toward the 40% open space requirement, please see Response to Comment 17-3. The linear parkways in Village 7 are not part of the roadway right-of-way dedication, but are in addition to it. In lieu of building masonry sound walls adjacent to the major roadways, the linear parkways will serve as both sound buffers and visual buffers for the residential development in the Village 7 area. Consequently, Policy LU-15.14 of the General Plan does not prohibit counting them toward fulfillment of the 40% open space requirement in the General Plan. Policy LU-15.14 (at Page 4-40 of the General Plan) specifically provides that land within buffer areas can be used to satisfy the 40% open space requirement. In addition, the General Plan also states that areas in excess of required rights-of-way may be counted toward meeting the 40% open space requirement. It must be recognized that the linear parkways are far in excess of the City's standard road right-of-way requirements.

The paseos are connections between the City's parks and trail system and provide an essential element of physical connectivity in off-street locations. As such, paseos are not to be considered "pocket parks" but are akin to extensions of the overall City park and trail system. General Plan Policy LU-15.17 contains a number of criteria for determining when land can be counted toward meeting the 40% open space requirement and specifically states that land utilized for trails can be used for satisfying the open space requirement. The Village 7 Specific Plan further specifies that only major paseos, those 35 feet or larger in width, can be counted toward the 40% open space requirement. Thus, paseos that are smaller than 35 feet in width will not count toward the 40% open space requirement.

Response to Comment 20-5

The commenter is not opposed to the Proposed Project and expresses a positive opinion of the applicant. Comment noted.

5. MITIGATION MONITORING PROGRAM

INTRODUCTION

This document provides the Mitigation Monitoring Program (MMP) for the Village 7 Specific Plan Project Draft EIR, pursuant to Section 21080.6 of the California Public Resources Code, which requires public agencies to "adopt a reporting and monitoring program for the changes to the project which it has adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment." A Mitigation Monitoring Program is required for the Proposed Project because the Draft EIR has identified significant adverse impacts, and mitigation measures have been identified to mitigate those impacts.

The purpose of a MMP is to:

- ensure that mitigation measures are implemented;

- provide feedback to agency staff and decision makers about the effectiveness of the mitigation measures;

- provide learning opportunities for improving mitigation measures on future projects; and

- identify the need for enforcement action before irreversible environmental damage occurs.

The Proposed Project would be subject to all applicable mitigation measures identified in the EIR, including mitigation measures identified in the Initial Study (Appendix A in the Draft EIR).

Table 5-1 presents the mitigation measures for the Lewis Property portion of the Proposed Project. Mitigation measures for the Village 7 Programmatic Portion are listed in Table 5-2.

The numbering of the individual mitigation measures follows the numbering sequence as found in the EIR. Adoption of the MMP shall occur prior to, or concurrently with, adoption of the Proposed Project for which the program has been developed.

CONTENTS OF THE MMP

The components of the MMP are addressed briefly below.

Impact and Mitigation Measures: The impacts are summarized from the Draft EIR and Initial Study (IS) checklist (Appendix A in the Draft EIR), and the mitigation measures are taken verbatim from the EIR and IS.

Monitoring and Enforcement Action: For every mitigation measure, one or more actions are described. These are the heart of the MMP, as they delineate the means for implementing EIR measures and, in many cases, the criteria for determining whether a measure has been implemented.

Implementation: This column identifies the entity that will undertake the required action. The contractor is named for actions occurring during grading or construction. On-site inspections will be done by City staff.

Timing of Action: Each action must take place during or prior to some part of the project development or approval.

Monitoring and Enforcement Responsibility: The City of Lincoln will have ultimate and legal responsibility for implementation of all mitigation measures. This column indicates which office within the City, usually the Development Services Department or the Public Services Department,, will conduct the actual monitoring and reporting, as well as take corrective actions when a measure has not been properly implemented.

TABLE 5-1

VILLAGE 7 SPECIFIC PLAN PROJECT – LEWIS PROPERTY
MITIGATION MONITORING PROGRAM

Impact	Mitigation Measures – Lewis Property		Responsible Entity	Timing/ Milestone	Monitoring and Enforcement Responsibility
4.1 Land Use and Agricultural Resources
4.1-1 The Proposed Project could result in internal land use incompatibilities.	4.1-1(A)	a) The applicant shall construct fencing and post signs that incorporate Section 12.20.80 of the Lincoln Municipal Code and Section 602.8 of the California Penal Code to inform the public of sensitive wetland/wildlife areas near the open space areas and in the Orchard Creek Wetlands Preserve that borders the Lewis Property on the south and at other wetland/wildlife areas within the open space areas at the Lewis Property.	Applicant	O	DSD
		b) The applicant shall design its specific project to comply with all setback and buffer requirements required by any Clean Water Act Section 404 permits, incidental take permits and Streambed Alteration Agreements.	Applicant	G	DSD Corps CDFG
		c) Notify homebuyers of the presence of sensitive wetland/wildlife areas within the open space areas.	Applicant	O	DSD
4.1-2 The Proposed Project could result in land use incompatibilities with adjacent land uses.	4.1-2(A)	b) The applicant shall provide to home buyers within the Proposed Project information about agricultural operations and potential nuisance activities occurring on lands adjacent to the project site, including a copy of Placer County's Right-to-Farm Ordinance. Residential development located next to active agricultural areas shall have a notice included in the deed notifying buyers of the agricultural use.	Applicant	O	DSD
		c) Record disclosures concerning all residential properties within the C1 Zone and D Zone regarding noise and safety issues as required by the Placer County Airport Land Use Compatibility Plan and California Business and Professions Code section 11010 and California Civil Code sections 1102.6, 1103.4, and 1353.	Applicant	I	DSD
4.3 Transportation and Circulation
4.3-5 The Proposed Project would worsen to an unacceptable level or further worsen already unacceptable operations at	4.3-5	Prior to the issuance of Building Permits for the Proposed Project, the project applicants or their successors shall pay the applicable South Placer Regional Transportation Authority Fee, which will help fund the widening of SR 65 to six lanes.	Applicant	B	DSD

Monitoring Responsibility
DSD = City of Lincoln Development Services Department
PSD = City of Lincoln Public Services Department
PCAPCD = Placer County Air Pollution Control District
CDFG = California Department of Fish and Game
PCEHS = Placer County Environmental Health Services
Corps = U.S. Army Corps of Engineers

Timing of Action
 I = Prior to Final Map Approval
G = Prior to Improvement Plan/Grading Permit
C = During Construction/Grading
O = Prior to Occupancy
B = Prior to Building Permit

	TABLE 5-1			
	VILLAGE 7 SPECIFIC PLAN PROJECT – LEWIS PROPERTY **MITIGATION MONITORING PROGRAM**			
Impact	**Mitigation Measures – Lewis Property**	**Responsible Entity**	**Timing/ Milestone**	**Monitoring and Enforcement Responsibility**
three locations on SR 65 south of Lincoln under existing plus project conditions.				
4.3-6 The Proposed Project would add significant levels of traffic to Moore Road between the project site and Fiddyment Road, and to Fiddyment Road from Moore Road to the south City limits, which are not constructed to current design standards.	4.3-6 The project applicants or their successors shall pay a fair share of the cost to upgrade Moore Road between Fiddyment Road and the western project boundary, and Fiddyment Road from Moore Road to the south City limits, to current City of Lincoln design standards for a two-lane arterial. The City may add this road improvement to the Public Facilities Element (PFE), with PFE credits being given to the constructing party. Alternatively, the City may require the project applicants or their successors to construct the improvements and provide them with a right of reimbursement from third parties who also benefit from the improvements. The timing of the fair share payment or construction shall be as specified in the development agreement(s) between City and project applicants, but the required timing will be concurrent with the development of the threshold triggering use.	Applicant	B	DSD
4.3-13 The Proposed Project would worsen to an unacceptable level or further worsen cumulatively unacceptable operations (to a significant degree) on roadway segments within Placer County.	4.3-13 Prior to the issuance of Building Permits at the Proposed Project, the project applicants or their successors shall pay a fair-share of the cost to improve the five Placer County roadway segments significantly impacted by the Proposed Project, provided that either the Placer County Traffic Mitigation fee program is modified and/or a regional funding mechanism is in place to include improvements to these roadways.	Applicant	B	DSD

Monitoring Responsibility
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TABLE 5-1

**VILLAGE 7 SPECIFIC PLAN PROJECT – LEWIS PROPERTY
MITIGATION MONITORING PROGRAM**

Impact	Mitigation Measures – Lewis Property	Responsible Entity	Timing/ Milestone	Monitoring and Enforcement Responsibility
4.3-14 The Proposed Project would worsen cumulatively unacceptable operations (to a significant degree) on State Route 193 and State Route 65 through Placer County, Rocklin, and Roseville.	4.3-14 The project applicants or their successors shall pay SPRTA Fees to help widen SR 65 to six lanes, and pay a fair-share of the cost to make improvements to segments of SR 193 significantly impacted by the Proposed Project if a regional funding mechanism and roadway improvement plan for SR 193 are adopted prior to issuance of Building Permits at the Proposed Project.	Applicant	B	DSD
4.4 Air Quality				
4.4-1 Grading and other earth-disturbing activities associated with the Proposed Project would generate emissions of PM$_{10}$ and PM$_{2.5}$.	4.4-1(A) The following mitigation measures shall be implemented by the applicant during all grading activities: • The applicant shall submit to the City of Lincoln, as the lead agency, and receive approval of a Construction Emission/Dust Control Plan prior to issuance of a grading permit. This plan must address the minimum Administrative Requirements found in section 300 and 400 of District Rule 228, Fugitive Dust. The applicant shall have a pre-construction meeting for grading activities for 20 or more acres to discuss the construction emission/dust control plan with employees and/or contractors and the District is to be invited. The applicant shall suspend all grading operations when fugitive dusts exceed District Rule 228 Fugitive Dust limitations. An applicant representative, certified by CARB to perform Visible Emissions Evaluations (VEE), shall routinely evaluate compliance to Rule 228, Fugitive Dust. This requirement for a VEE is for projects grading 20 or more acres regardless of how many acres are to be disturbed daily. It is to be noted that fugitive dust is not to exceed 40% opacity and not go beyond property boundary at any time. If lime or other drying agents are utilized to dry out wet grading areas they shall be controlled as to not exceed District Rule 228 Fugitive Dust limitations.	Applicant	G	PSD PCAPCD

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Impact	Mitigation Measures – Lewis Property	Responsible Entity	Timing/ Milestone	Monitoring and Enforcement Responsibility
	TABLE 5-1 VILLAGE 7 SPECIFIC PLAN PROJECT – LEWIS PROPERTY MITIGATION MONITORING PROGRAM			
	• Apply water to control dust as needed to prevent dust impacts offsite. Operational water truck(s) shall be onsite, as required, to control fugitive dust. Construction vehicles leaving the site shall be cleaned to prevent dust, silt, mud, and dirt from being released or tracked off-site.	Applicant	C	PSD PCAPCD
	• Apply approved chemical soil stabilizers, vegetative mats, or other appropriate best management practices to manufacturers specifications, to all-inactive construction areas (previously graded areas which remain inactive for 96 hours).	Applicant	C	PSD PCAPCD
	• Spread soil binders on unpaved roads and employee/equipment parking areas and wet broom or wash streets if silt is carried over to adjacent public thoroughfares.	Applicant	C	PSD PCPACD
	• Install wheel washers or wash all trucks and equipment leaving the site.	Applicant	C	PSD PCPACD
	• Vegetation materials removed from the site during construction shall not be burned in the open. Vegetative material should be delivered to a green waste recycling facility.	Applicant	C	PSD PCPACD
	• Active grading sites shall be watered at least twice daily.	Applicant	C	PSD PCPACD
	• A traffic speed limit of 15 miles per hours shall be posted and enforced on all unpaved construction roads.	Applicant	C	PSD PCPACD
	• All excavating and grading activities shall be suspended when wind speeds (as instantaneous gusts) exceed 25 miles per hour and dust is transported onto adjacent developed properties.	Applicant	C	PSD PCPACD

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TABLE 5-1

**VILLAGE 7 SPECIFIC PLAN PROJECT – LEWIS PROPERTY
MITIGATION MONITORING PROGRAM**

Impact	Mitigation Measures – Lewis Property	Responsible Entity	Timing/ Milestone	Monitoring and Enforcement Responsibility
4.4-2 Construction activities associated with the Proposed Project would generate emissions of criteria air pollutants ROG and NO$_x$ that would exceed PCAPCD thresholds.	4.4-2(A) During all phases of construction, the project applicant shall ensure that the following mitigation measures are implemented:			
	• During second stage smog alerts (0.350 ppm of ozone), the construction day shall be shortened and the number of vehicles and equipment operating at the same time shall be reduced.	Applicant	C	PSD PCAPCD
	• Construction equipment operators shall shut off equipment when not in use to avoid unnecessary idling. Vehicle idling shall be kept below five consecutive minutes in accordance with Lincoln Municipal Code Section 10.14 requirements.	Applicant	C	PSD PCAPCD
	• Construction equipment exhaust emissions shall not exceed District Rule 202 Visible Emission limitations. Operators of vehicles and equipment found to exceed opacity limits are to be immediately notified and the equipment must be repaired within 72 hours. An applicant representative, certified to perform Visible Emissions Evaluations (VEE), shall routinely evaluate project related off-road and heavy-duty on-road equipment emissions for compliance with this requirement for projects grading more than 20 acres in size regardless in how many acres are to be disturbed daily. Contractors can access the PCAPCD or Sacramento Metropolitan Air Quality Management District's web site to determine if their off-road fleet meets the requirements listed in this measure.	Applicant	C	PSD PCAPCD
	• The prime contractor shall submit to the District a comprehensive inventory (i.e. make, model, year, emission rating) of all the heavy-duty off-road equipment (50 horsepower of greater) that will be used an aggregate of 40 or more hours for the construction project. The project representative shall provide the District with the anticipated construction timeline including start date, and name and phone number of the project manager and on-site foreman. The project shall provide a plan for approval by the District demonstrating that the heavy-duty (> 50 horsepower) off-road vehicles to be used in the construction project, including owned, leased and subcontractor vehicles, will achieve a project wide fleet-average up to 20 percent NOx reduction and 45 percent particulate reduction compared to the most recent CARB fleet average. The District should be contacted for average fleet	Applicant	G	PSD PCAPCD

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| | | | | Monitoring and |
| | | Responsible | Timing/ | Enforcement |
Impact	Mitigation Measures – Lewis Property	Entity	Milestone	Responsibility
	emission data. Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available.	Applicant	G	DSD PCAPCD
	• The following measure shall be incorporated into construction bid documents: All applicable pieces (at a minimum three pieces) of diesel equipment used on the site during the demolition, earthmoving and clearing stages of construction shall be fitted with a level 3 California Air Resources Board verified diesel emission control system. All off-road and on-road construction equipment shall use a B20 biodiesel blend. Prior to the issuance of a demolition or grading permit, the construction contractor and/or applicant shall submit to the PCAPCD and the City a certified list of the non-road diesel powered construction equipment that will be retrofitted with emission control devices or that will use Clean Fuels. The Clean Fuels shall consist of low NO_x and PM_{10} emission diesel fuel that (1) can be used without engine modification, (2) is certified to provide a minimum emissions reduction of 30 percent PM_{10} and 10 percent NO_x when compared to No. 2 Diesel Fuel, and (3) is included on the CARB Verification List. The list shall include (1) the equipment number, type, make, and contractor/sub-contractor name; (2) the emission control device make, model and EPA or CARB verification number; and/or (3) the type and source of fuel to be used. If any diesel powered non-road construction equipment is found to be in non-compliance with this specification, the contractor will be issued a Notice of Non-Compliance and given a 24 hour period in which to bring the equipment into compliance or remove it from the project. For each piece of diesel powered non-road construction equipment that will not be retrofitted or use Clean Fuels, the project applicant shall provide an explanation detailing why such measures are not employed.			

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TABLE 5-1

**VILLAGE 7 SPECIFIC PLAN PROJECT – LEWIS PROPERTY
MITIGATION MONITORING PROGRAM**

Impact	Mitigation Measures – Lewis Property	Responsible Entity	Timing/ Milestone	Monitoring and Enforcement Responsibility
4.4-3 Operation of the Proposed Project would generate emissions of criteria pollutants.	4.4-3(A) The project applicant shall implement the following mitigation measures:			
	• The conditions of approval and the covenants, conditions, and restrictions (CC&Rs) for the project shall explicitly prohibit the installation of wood-burning stoves and wood-burning fireplaces within the Lewis Property portion of the Specific Plan area. Only natural gas or propane fireplace stoves and fireplaces are permitted in single-family residential units. No natural gas or propane fireplaces stoves or fireplaces shall be installed in multi-family residential units. Prior to the issuance of occupancy permits, the applicant must provide written proof of compliance with this measure to the City and PCAPCD.	Applicant	I	DSD
	• Only Energy Star-labeled (or equivalent) refrigerators, clothes washers, and dishwashers shall be installed in multi-family dwelling units, and Energy Star labeled (or equivalent) dishwashers shall be installed in single-family dwelling units.	Applicant	B	DSD
	• The project applicant shall participate in the PCAPCD off-site mitigation program for post-mitigated emissions that exceed PCAPCD thresholds. Off-site mitigation strategies include retrofitting existing on-road heavy-duty vehicles/equipment with cleaner burning engines, retrofitting or purchasing new low emission agriculture pumps, transit vehicles, and CNG fueling infrastructure. To participate in the off-site mitigation program, the applicant shall pay into the PCAPCD off-site mitigation program, included in Appendix D in this Draft EIR, in consultation with PCAPCD.	Applicant	B	PCAPCD
4.4-5 Project occupants could be exposed to intermittent odors from the City of Lincoln Wastewater Treatment and Reclamation Facility (WWTRF), Western	4.4-5(A) Record perpetual notices for all lots within the Village 7 Specific Plan indicating that odors from the Lincoln WWTRF, WRSL, and agricultural operations could occur, and provide copies of this notice to all buyers of these properties.	Applicant	I	DSD

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Impact	Mitigation Measures – Lewis Property	Responsible Entity	Timing/ Milestone	Monitoring and Enforcement Responsibility
Regional Sanitary Landfill (WRSL) Material Recovery Facility (MRF), or nearby agricultural operations.				
4.5 Noise				
4.5-1 Construction of the Proposed Project would temporarily increase ambient noise levels.	4.5-1(A) The City shall ensure construction contractors comply with the following: • Construction hours shall be limited to 7am to 5pm Monday through Friday and on Saturdays from 8am to 4pm, with no construction on Sundays and holidays (unless extended by a special permit). • All heavy construction equipment and all stationary noise sources (such as diesel generators) shall have manufacturer-installed mufflers. • Equipment warm up areas, water tanks, and equipment storage areas shall be located in an area as far away from existing residences as is feasible. • Construction equipment operators shall shut off equipment when not in use to avoid unnecessary idling. Vehicle idling shall be kept below five consecutive minutes in accordance with Lincoln Municipal Code Section 10.14 requirements.	Applicant	C	PSD
4.6 Hazardous Materials and Public Safety				
4.6-1 Construction of the Proposed Project could result in the generation or exposure of hazardous materials that could create a health or safety hazard to workers, the public, or the environment.	4.6-1(A) a) Prior to demolition of existing on-site structures and/or development of the Lewis Property, the project applicant shall implement all recommendations from the Phase I EA completed by GeoTrans, Inc. Specifically, the project applicant shall: • Contact and coordinate with the PCEHS and/or the local air management district to determine if asbestos sampling and abatement is required prior to demolition of the on-site structures. If such a survey is required, all soils surrounding the existing and former structures shall be sampled for residual fragments of lead-based paint, as well. • Prior to the development of the property, the project applicant shall abandon all domestic and irrigation wells in accordance with state and local requirements.	Applicant	G	DSD PSD PCEHS

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Impact	Mitigation Measures – Lewis Property	Responsible Entity	Timing/ Milestone	Monitoring and Enforcement Responsibility
	• The project applicant shall remove and properly dispose of, or recycle, all petroleum chemicals and hazardous materials from the property. • The project applicant shall remove the concrete, tires, and wood debris from the on-site dumping areas. The soils beneath the debris shall be observed for stains or discoloration. b) If evidence of contamination is found, construction activities shall cease and an environmental professional shall assess the situation. If necessary, the environmental professional shall prepare a sampling plan to collect soil and/or groundwater samples to determine whether or not the site has been adversely affected by past activities. The samples shall be analyzed for the contaminants determined to be a potential health concern by the environmental professional. Depending on the nature of the contamination (if any), the PCEHS shall be contacted for further direction, which could include further investigation or remediation.	Applicant	C	PSD PCEHS
4.6-2 Construction of the Proposed Project could create a health hazard to workers, the public, and the environment due to previously unidentified contaminated soil and groundwater.	4.6-2(A) If, during construction activities, evidence of hazardous materials contamination is observed or suspected (i.e., stained or odorous soil, or oily or discolored water), construction activities shall cease and an environmental professional shall assess the situation. If necessary, the environmental professional shall prepare a sampling plan to collect soil and/or groundwater samples to determine whether or not the site has been adversely affected by past activities. The samples shall be analyzed for the contaminants determined to be a potential health concern by the environmental professional. Depending on the nature of the contamination (if any), the PCEHS shall be contacted for further direction, which could include further investigation or remediation.	Applicant	C	PSD PCEHS

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MITIGATION MONITORING PROGRAM**

Impact	Mitigation Measures – Lewis Property	Responsible Entity	Timing/ Milestone	Monitoring and Enforcement Responsibility
	4.7 Hydrology and Water Quality			
4.7-2 Development of the Proposed Project would increase the amount (volume) of stormwater runoff discharged to Ingram Slough and Orchard Creek.	4.7-2(A) Prior to final map approval, the Applicant shall identify 78.0 acre-feet of storage capacity in the watershed to accommodate increased stormwater runoff volumes associated with the Lewis Property. Storage capacity shall be obtained at the existing Stormwater Retention Facility (SWRF) and/or the approved Lakeview Farms Volumetric Mitigation Facility. AND The Applicant shall be required to cover its fair share of costs associated with construction, operation, and maintenance, and management of the regional retention facilities to offset increased stormwater volume generated by the Lewis Property. Assuming the regional facility has been constructed, Applicant shall pay the appropriate fees prior to final map approval. If at the time the final map is approved, the regional facilities are not available or operational, or if additional capacity is required, the Applicant shall create on-site storage capacity, or through a combination of on-site and off-site capacity to fully mitigate the 78.0 acre-feet. If off-site facilities are used, The Applicant shall be required to cover its fair share of costs associated with construction, operation, and maintenance, and management of the regional retention facilities to offset increased stormwater volume generated by the Lewis Property. Assuming the regional facility has been constructed, Applicant shall pay the appropriate fees prior to final map approval.	Applicant	I	DSD
4.7-4 Implementation of the Proposed Project would increase the types and amounts of pollutants in stormwater runoff that could be discharged to Ingram Slough, which could affect water quality.	4.7-4(A) a) Project Conditions of Approval shall specify that appropriate Best Management Practices (BMPs) be incorporated into project design to reduce urban pollutants in runoff, consistent with goals and standards established under federal and State non-point source discharge NPDES regulations and Basin Plan water quality objectives, the City's Post-Construction Stormwater Runoff Control Ordinance No. 826B, and Low-Impact Development (LID) alternatives for stormwater quality control per Public Facilities and Services Implementation Measure 3.0 of the adopted 2050 General Plan.	City	I	PSD DSD

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Impact	**Mitigation Measures – Lewis Property**	**Responsible Entity**	**Timing/ Milestone**	**Responsibility**

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**VILLAGE 7 SPECIFIC PLAN PROJECT – LEWIS PROPERTY
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Impact	Mitigation Measures – Lewis Property	Responsible Entity	Timing/ Milestone	Monitoring and Enforcement Responsibility
	b) The proposed water quality facilities shall be identified and designed in a Stormwater Management Plan prepared in accordance with Section 8.60.40 of the City's Municipal Code for City review and approval. All water quality facilities identified in the Stormwater Management Plan shall be constructed with the installation of the infrastructure.	Applicant	G	PSD DSD
	c) The Stormwater Management Plan shall also include the method or methods for funding the long-term maintenance of the proposed water quality facilities. The City shall formally adopt and implement a funding mechanism specifically to fund the long-term maintenance of the proposed water quality facilities as proposed by the Stormwater Management Plan.	Applicant/City	G	PSD DSD
	d) The project applicant shall submit a site-specific BMP plan showing the on-site locations and effectiveness of the BMP facilities proposed for long-term water quality impact reduction prior to project approval. The plan shall include a method or methods for financing the long-term maintenance of the proposed site-specific facilities.	Applicant	G,C	PSD DSD
	e) All BMPs for water quality protection, source control, and treatment control shall be developed in accordance with the California Stormwater Quality Association Stormwater Best Management Practice Handbook for Construction and New Development/Redevelopment (or other similar source approved by the CVRWQCB, County, and City) for the project. The BMPs shall be designed to mitigate (minimize, infiltrate, filter, or treat) stormwater runoff. Flow or volume based post-construction BMPs shall be designed at a minimum in accordance with the PCFCWCD and City standards and shall be included for long-term maintenance of BMPs. All BMPs shall reflect the Best Available Technologies (BAT) available at the time of implementation and shall reflect site-specific limitations. The City shall make the final determinations as to the appropriateness of the BMPs proposed for the Proposed Project and the City shall ensure future implementation, operation, and maintenance of the BMPs.	Applicant	G	PSD DSD

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Impact	Mitigation Measures – Lewis Property	Responsible Entity	Timing/ Milestone	Monitoring and Enforcement Responsibility
	f) Stormwater runoff from the Proposed Project's impervious surfaces (including roads) shall be collected and routed through specially designed water quality treatment facilities (BMPs) for removal of pollutants of concern (i.e. sediment, oil/grease, etc.), as approved by the City. The applicant shall verify that proposed BMPs are appropriate to treat the pollutants of concern from the Proposed Project and shall provide for the establishment of vegetation, where specified, by means of proper irrigation, for effective performance of BMPs.	Applicant	G	PSD DSD
	Prior to Final Map approval, easements shall be created and offered for dedication to the City for maintenance and access to these facilities in anticipation of possible City maintenance. No water quality facility construction shall be permitted within any identified wetlands area, floodplain, or right-of-way, except as authorized by project approvals.	Applicant	I	PSD DSD
4.8 Biological Resources				
4.8-3 The Proposed Project could result in the loss and/or degradation of rare plant populations.	4.8-3(A) a) The project applicant shall retain a qualified biologist to conduct focused surveys within the project site for special-status plant species including but not limited to big-scale balsamroot, Boggs Lake hedge-hyssop, dwarf downingia, legenere, Sacramento orcutt grass, and Sanford's arrowhead during the appropriate time of year (March through June). If no special-status plants are located during the surveys, no further mitigation would be required.	Applicant	G	DSD CDFG
	b) If Boggs Lake hedge-hyssop or Sacramento orcutt grass is located during the surveys in areas that cannot be avoided, the project applicant shall consult with CDFG to obtain a management permit, under Section 2081 of the California Fish and Game Code. Mitigation can be accomplished either in the onsite mitigation preserve area, or at an approved offsite mitigation bank. The ratio of mitigation credits will be determined during this consultation, and can be conducted concurrently with Mitigation Measure 4.8-2(B) subsections (c), (d), and (e).			
	c) If any other special-status vernal pool plant species, including, but not limited to dwarf downingia and legenere are located during the surveys in areas that cannot be avoided, the project applicant shall implement Mitigation Measure 4.8-2(B) subsections (c), (d), and (e), with the addition of soil/seed bank salvage, for use in created wetlands in mitigation areas.			

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		Responsible Entity	Timing/ Milestone	Monitoring and Enforcement Responsibility
Impact	**Mitigation Measures – Lewis Property**			
	d) If any special-status upland plant species including, but not limited to big-scale balsamroot, or wetland species such as Sanford's arrowhead are located during the surveys, the project applicant shall comply with adopted CDFG Guidelines.			
4.8-4 The Proposed Project could result in the loss and/or degradation of western pond turtles and its habitat.	4.8-4(A) a) Prior to project construction, the project applicant and/or developer shall retain a qualified biologist to conduct preconstruction surveys of suitable habitat within the project site within 30 days prior to project construction to ensure no western pond turtles have established territories. If ground-disturbing activities are delayed or suspended for more than 30 days after the preconstruction survey, the site shall be re-surveyed. b) If individual western pond turtles are discovered during the survey on the project site, or immediately adjacent area, the project applicant or their agent shall initiate consultation with the CDFG to formulate and implement minimization measures, which could include capture and relocation of individuals found on-site. c) If surveys identify the presence of western pond turtles on site, the project applicant shall implement mitigation measures required by the California Department of Fish and Game at the time of the consultation.	Applicant	G C	DSD CDFG PSD
4.8-5 The Proposed Project could result in the direct loss or disturbance of nesting migratory birds, including raptors (birds-of-prey).	4.8-5(A) a) If construction is to occur between March 15 through August 30, the project applicant, in consultation with the City of Lincoln and CDFG, shall conduct a preconstruction breeding-season survey of the project site within 30 days of when construction is planned to begin. The survey shall be conducted by a qualified biologist (who is also knowledgeable about the California black rail) to determine if any protected raptors or migratory birds (including, but not limited to the California black rail) are nesting on or directly adjacent to the project site. b) A description of methodology including dates of field visits, the names of survey personnel with resumes, and a list of references cited and persons contacted shall be provided to the City. c) A map showing the location(s) of any protected raptor or migratory bird nests observed on the project site shall be provided to the City.	Applicant	G C	DSD CDFG PSD

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MITIGATION MONITORING PROGRAM

Impact	Mitigation Measures – Lewis Property	Responsible Entity	Timing/ Milestone	Monitoring and Enforcement Responsibility
	d) The project applicant, in consultation with the City of Lincoln and CDFG, shall avoid all protected raptor and migratory bird nest sites located in the project site during the breeding season (approximately March 15 through August 30) while the nest is occupied with adults and/or young. This avoidance could consist of delaying construction in close proximity to the nest during the nesting season. Any occupied nest shall be monitored by a qualified biologist to determine when the nest is no longer used. If the construction cannot be delayed, avoidance shall include the establishment of a non-disturbance buffer zone around the nest site. The size of the buffer zone will be determined in consultation with the City and CDFG. The buffer zone shall be delineated by highly visible temporary construction fencing.			
4.8-6 The Proposed Project could result in the loss of foraging habitat for Swainson's hawk, white tailed kite, burrowing owl and other raptors.	4.8-6(A) The project applicant shall ensure that at least an appropriate number of acres (as approved by the City and CDFG) of annual grasslands or other suitable raptor foraging habitat are preserved based upon project impacts of 363 acres (0.75:1 ratio). Preservation may occur through either: a) Payment of a mitigation fee to the City of Lincoln through a negotiated agreement between the City, the project applicant, and CDFG. The monies will be held in a trust fund, and used to preserve mitigation land through the purchase, monitoring, maintenance, and remediation of lands that support suitable raptor foraging habitat (consistent with CDFG guidelines); or b) Purchase of conservation easements or fee title to suitable raptor foraging habitat to protect the habitat from urban development; or c) Participate in Placer County Natural Community Conservation Plan/Habitat Conservation Plan, once adopted.	Applicant	G	DSD CDFG
4.8-7 The Proposed Project could result in loss of nesting habitat for tri-colored blackbird.	4.8-7(A) a) The project applicant shall retain a qualified biologist to conduct pre-construction nesting surveys for tri-colored blackbird colonies within the project site and off-site areas proposed for infrastructure development. The survey should be conducted no more than 30 days from the onset of construction. If ground-disturbing activities are delayed or suspended for more than 30 days after the preconstruction survey, the site shall be re-surveyed.	Applicant	G C	DSD CDFG PSD

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Impact	Mitigation Measures – Lewis Property	Responsible Entity	Timing/ Milestone	Monitoring and Enforcement Responsibility
	b) The project applicant, in consultation with the City of Lincoln and CDFG, shall avoid all active nest sites located in the project site during the breeding season while the nest site is occupied with adults and/or young. This avoidance could consist of delaying construction to avoid the nesting season or establishing a buffer around the nest site. Any occupied nest shall be monitored by a qualified biologist to determine when the nest is no longer used. If the construction cannot be delayed, avoidance shall include the establishment of a non-disturbance buffer zone around the nest site. The size of the buffer zone will be determined in consultation with the City and CDFG, and will be, at a minimum, 250 feet. The buffer zone shall be delineated by highly visible temporary construction fencing.			
4.8-8 The Proposed Project would result in the modification to stream corridors, disrupting the associated habitat.	4.8-8(A) In addition to pre-construction surveys for special status species, as described in Mitigation Measures 4.8-3, 4.8-4, and 4.8-7, the project applicant shall obtain all necessary permits to alter Ingram Slough, including a CDFG Streambed Alteration Agreement, a Corps Section 404 permit, a Regional Water Quality Control Board Section 401 Permit and a SWPPP and any FESA/CESA take permits, should special-status species be identified.	Applicant	G	DSD CDFG Corps RWQCB
4.9 Public Utilities				
4.9-17 The Proposed Project would increase the demand on water supplies. Existing and planned water supplies would be sufficient to meet the demands of the Proposed Project in addition to the City of Lincoln's existing and planned future uses, but the existing entitle-ments are not sufficient.	4.9-17(A) Prior to recordation of a Final Map, the City of Lincoln shall obtain necessary entitlements demonstrating there will be adequate water supply to serve the portion of the Proposed Project defined on the Final Map, in accordance with Government Code Section 66473.7(a)(1) – SB 221 Written Verification of Water Supply.	City	I	DSD

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Impact	**Mitigation Measures – Lewis Property**	**Responsible Entity**	**Timing/ Milestone**	**Responsibility**
	TABLE 5-1 **VILLAGE 7 SPECIFIC PLAN PROJECT – LEWIS PROPERTY** **MITIGATION MONITORING PROGRAM**			
	4.10 Visual Resources			
4.10-2 Development of the Proposed Project would increase glare and lighting in the project vicinity.	4.10-2(A) All light standards shall be shielded and directed such that adjacent properties are not illuminated.	Applicant	G,C	DSD
	4.11 Climate Change			
4.11-1 Development of the proposed project could potentially result in a cumulatively considerable incremental contribution to the significant cumulative impact of global climate change.	4.11-1(A) a) An Energy Conservation Plan for all commercial and residential development shall be required prior to recordation of the first small lot Final Map. The plan shall describe the techniques and programs to be employed in the development of the project to achieve (1) a minimum 15 percent energy efficiency above that required by the 2008 Title 24 energy efficiency regulations, or compliance with the then-current Title 24 energy efficiency regulations. These programs shall include either: (i) Participation in the PG&E Energy Star Performance Method. This method is available to builders of single-family and multi-family homes that are at least 15 percent more energy efficient than required by the 2008 Title 24 energy efficiency regulations and meet all US EPA specifications. Participating builders become part of the California Energy Star New Homes Program, and their homes earn the Energy Star label. Incremental incentives can also be earned by adding energy efficient appliances and/or lighting to homes. OR (ii) Participation in the New Solar Homes Partnership (NSHP) Performance Method. This method is available to builders of single-family homes that are at least 15 percent more efficient than required by the 2008 Title 24 energy efficiency regulations and meet all US EPA specifications. OR	Applicant	I	DSD

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	(iii) Participation in the Build It Green Program, which was created by Build It Green, a non-profit organization whose mission is to promote health, durable, energy and resource efficient buildings throughout California. Using the Green Point Checklist, a home can be considered green if it fulfills the prerequisites and earns at least 50 points and meets the minimum points per category: Energy (30 points); Indoor Air Quality (5 points); Resources (6 points); and Water (9 points). Build It Green uses certified Green Point Raters to measure success with the program and verification of the measures employed to meet the requirements of the checklist.			
	b) The project applicant shall be responsible for having prepared, by an experienced and qualified firm, an Energy Resource Conservation Guide that will provide educational information on how homeowners can increase energy efficiency and conservation in their new homes. The information will be delivered to each original homeowner as part of the move-in package. The information packet shall be reviewed by, and be subject to approval of, City of Lincoln staff.	Applicant	O	DSD
	c) Installation of Light Emitting Diode (LED) traffic signals and LED street lights shall be required at the Lewis Property and be constructed in accordance with City improvement standards or as otherwise approved by the Development Services Director.	Applicant	C	DSD
	d) The project applicant shall ensure that a tree planting program at the Lewis Property, approved by the City of Lincoln staff, provides the following: Streets: Residential collector streets:　　　1 tree per 35 linear ft Primary residential street:　　　1 tree per 35 linear ft Major and minor paseos:　　　1 tree per 25 ft. Ferrari Ranch Road:　　　551 trees within the Lewis Property boundaries Moore Road:　　　928 trees within the Lewis Property boundaries	Applicant	C	DSD

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| | | | | Monitoring and |
| | | Responsible | Timing/ | Enforcement |
Impact	Mitigation Measures – Lewis Property	Entity	Milestone	Responsibility
	Central Blvd: 1,471 trees within the Lewis Property boundaries			
	Residential Units:			
	LDR units: 1 front yard tree			
	Village Country			
	Estate(VCE) units: 2 front yard trees			
	MDR units: 1 front yard tree. Some MDR units may not have front yards; however, where the front of an MDR lot is on a paseo, trees will be spaced 25 ft on center along the paseo. The exact number of trees to be planted in MDR developments will be determined during the City's design review process by the City and project applicant with the goal of having one front yard or back yard tree for each residential unit.			
	HDR units: Average of 40 trees per acre			
	Open Space Areas:			
	Mini parks 27 trees per acre			
	Community parks 27 trees per acre			
	Neighborhood parks 27 trees per acre			
	School & VMU:			
	VMU: 10 trees per acre			
	School: 15 trees per acre			
	Commercial: Sufficient trees to provide 50% tree shading within 15 years in commercial and retail parking lots, consistent with General Plan policy OSC-3.10.			
	NOTE: The number of trees specified above is an approximate number and will be subject to adjustment for physical constraints resulting from the actual location of physical improvements (both above ground and underground) and public safety considerations, such as the need to preserve vehicle operator sight distances at all roadway intersections.			

TABLE 5-1

VILLAGE 7 SPECIFIC PLAN PROJECT – LEWIS PROPERTY
MITIGATION MONITORING PROGRAM

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VILLAGE 7 SPECIFIC PLAN PROJECT – LEWIS PROPERTY
MITIGATION MONITORING PROGRAM

Impact	Mitigation Measures – Lewis Property	Responsible Entity	Timing/ Milestone	Monitoring and Enforcement Responsibility
	e) Pursuant to the City's new 2050 General Plan, and specifically under the Energy Resources section, Goal OSC-3, "Encourage energy conservation in new and existing developments throughout the City," to address Policy OSC 3.9, "Shade Tree Planting," the project applicant shall be responsible for having prepared, by an experienced and qualified firm, or by an organization such as the Sacramento Tree Foundation, a tree information planting and care guide. The planting and care guide will be delivered to each original homeowner as a part of the move in package. The planting and care guide shall be reviewed by, and be subject to the approval of, City of Lincoln staff.	Applicant	O	DSD
	f) The City shall require that energy efficient lighting fixtures, including fluorescent lights, be installed as part of the original construction of residential and commercial structures within the plan area.	Applicant	B	DSD
	g) The City shall require light-colored roofing materials with a solar reflective value and thermal emittance value of 0.25 or better on all residential and commercial buildings.	Applicant	B	DSD
	h) Pursuant to the City's new 2050 General Plan, and specifically under the Energy Resources section, Goal OSC-3, "Encourage energy conservation in new and existing developments throughout the City," the City shall be responsible pursuant to Policy OSC 3.14, "Early Planning for Energy Efficiency," for developing a program whereby energy planners and energy efficiency specialists will be included in pre-application discussions with a developer or builder to help identify the potential for inclusion of solar orientation and other energy efficient systems into the land plan and building practices.	Applicant	Pre-application	DSD
	i) Implement all mitigation measures identified in Section 4.4, Air Quality.	See Section 4.4		
	j) Implement Mitigation Measure 4.7-4 (Urban Stormwater Pollutants) in Section 4.7, Hydrology and Water Quality.	See Section 4.7		
	k) New commercial buildings (except schools) shall be 15 percent more energy efficient than the 2008 Title 24 building standards based on annual energy usage.	Applicant	B	DSD

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				Monitoring and
Impact	Mitigation Measures – Lewis Property	Responsible Entity	Timing/ Milestone	Enforcement Responsibility
	l) The roadway system shall be designed to accommodate the usage of neighborhood electric vehicles (NEVs).	Applicant	G	DSD
	m) Provide bus turnouts and transit shelters on roadways that are to be served by bus transit in the future in accordance with City improvement standards and as otherwise directed by City's Development Services Director.	Applicant	G	DSD
	n) Water used during construction shall be reclaimed water.	Applicant	C	PSD
Initial Study Mitigation Measures				
Building height in air safety zone	Hazards and Hazardous Materials Mitigation Measure 1	Applicant	B	DSD
	The project developer shall request an airspace review for any building over 150 feet tall.			
Historical/archaeological resources	Cultural Resources Mitigation Measure 2	Applicant	G	DSD
	The project proponent shall provide proof to the City that no structures on-site are over 50 years old. If structures on-site are discovered to be 50 years old or older, or the age cannot be determined, a qualified professional shall be hired by the project proponent to evaluate the structures for historical significance and provide mitigation measures, if needed. Compliance with mitigation measures shall be demonstrated to the City prior to construction activities. All reports shall be filed with the appropriate CHRIS Information Center.			
	Cultural Resources Mitigation Measure 3	Applicant	C	PSD
	a) In the event any historic surface or subsurface archaeological features or deposits, including locally darkened soil ("midden"), that could conceal cultural deposits, animal bone, shell, obsidian, mortars, or human remains, are uncovered during construction, work within 100 feet of the find shall cease and a qualified archaeologist shall be contacted to determine if the resource is significant. If the find is determined to be of significance, resources (such as grinding stones and mano fragments) shall be donated to an appropriate cultural center.			

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MITIGATION MONITORING PROGRAM

Impact	Mitigation Measures – Lewis Property	Responsible Entity	Timing/ Milestone	Monitoring and Enforcement Responsibility
	b) When Native American archaeological, ethnographic, or spiritual resources are involved, all identification and treatment shall be conducted by qualified archaeologists who are either certified by the Society of Professional Archaeologists (SOPA) or meet the federal standards as stated in the Code of Federal Regulations (36 C.F.R. 61), and Native American representatives who are approved by the local Native American community as scholars of their cultural traditions.			
	c) In the event that no such Native American is available, persons who represent tribal governments and/or organizations in the locale in which resources could be affected shall be consulted. When historic archaeological sites or historic architectural features are involved, all identification and treatment is to be carried out by historical archaeologists or architectural historians. These individuals shall meet either SOPA or 36 C.F.R. 61 requirements.			
	d) If human bone or bone of unknown origin is found during construction, all work shall stop in the vicinity of the find and the County Coroner shall be contacted immediately. If the remains are determined to be Native American, the Coroner shall notify the Native American Heritage Commission who shall notify the person it believes to be the most likely descendent. The most likely descendent shall work with the contractor to develop a program for reinterment of the human remains and any associated artifacts. No additional work is to take place within the immediate vicinity of the find until the identified appropriate actions have been carried out.			
	Cultural Resources Mitigation Measure 4 Should any evidence of paleontological resources (e.g., fossils) be encountered during grading or excavation either onsite or offsite as a result of a project improvement, work shall be suspended within 100 feet of the find, and the City of Lincoln shall be immediately notified. At that time, the City shall coordinate any necessary investigation of the site with a qualified paleontologist as needed to assess the resource and provide proper management recommendations. Possible management recommendations for important resources could include resource avoidance or data recovery excavations. The contractor shall implement any measures deemed necessary by the City for the protection of the paleontological resources.	Applicant	C	PSD

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VILLAGE 7 SPECIFIC PLAN PROJECT – VILLAGE 7 PROGRAMMATIC PORTION
MITIGATION MONITORING PROGRAM

Impact	Mitigation Measures – Village 7 Programmatic Portion	Responsible Entity	Timing/ Milestone	Monitoring and Enforcement Responsibility
	4.1 Land Use and Agricultural Resources			
4.1-1 The Proposed Project could result in internal land use incompatibilities.	4.1-1(B) a) The applicant shall construct fencing and post signs that incorporate Section 12.20.80 of the Lincoln Municipal Code and Section 602.8 of the California Penal Code to inform the public of sensitive wetland/wildlife areas within the open space areas.	Applicant	O	DSD
	b) The applicant shall design its specific project to comply with all setback and buffer requirements required by any Clean Water Act Section 404 permits, incidental take permits and Streambed Alteration Agreements.	Applicant	G	DSD Corps CDFG
	c) The applicant shall provide to home buyers within the Proposed Project information about agricultural operations and potential nuisance activities occurring on lands adjacent to the project site, including a copy of Placer County's Right-to-Farm Ordinance. Residential development located next to active agricultural areas shall have a notice included in the deed notifying buyers of the agricultural use.	Applicant	O	DSD
4.1-2 The Proposed Project could result in land use incompatibilities with adjacent land uses.	4.1-2(B) b) The applicant shall provide to home buyers within the Proposed Project information about agricultural operations and potential nuisance activities occurring on lands adjacent to the project site, including a copy of Placer County's Right-to-Farm Ordinance. Residential development located next to active agricultural areas shall have a notice included in the deed notifying buyers of the agricultural use.	Applicant	O	DSD
	c) Record disclosures concerning all residential properties within the C1 Zone and D Zone regarding noise and safety issues as required by the Placer County Airport Land Use Compatibility Plan and California Business and Professions Code section 11010 and California Civil Code sections 1102.6, 1103.4, and 1353.	Applicant	I	DSD
4.1-6 The Proposed Project could conflict with an existing Williamson Act contract.	4.1-6(B) No land under Williamson Act contract will be rezoned until the contract has expired or been cancelled	City	Prior to land use application	DSD

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MITIGATION MONITORING PROGRAM**

Impact		Mitigation Measures – Village 7 Programmatic Portion	Responsible Entity	Timing/ Milestone	Monitoring and Enforcement Responsibility
		4.3 Transportation and Circulation			
4.3-5 The Proposed Project would worsen to an unacceptable level or further worsen already unacceptable operations at three locations on SR 65 south of Lincoln under existing plus project conditions.	4.3-5	Prior to the issuance of Building Permits for the Proposed Project, the project applicants or their successors shall pay the applicable South Placer Regional Transportation Authority Fee, which will help fund the widening of SR 65 to six lanes.	Applicant	B	DSD
4.3-6 The Proposed Project would add significant levels of traffic to Moore Road between the project site and Fiddyment Road, and to Fiddyment Road from Moore Road to the south City limits, which are not constructed to current design standards.	4.3-6	The project applicants or their successors shall pay a fair share of the cost to upgrade Moore Road between Fiddyment Road and the western project boundary, and Fiddyment Road from Moore Road to the south City limits, to current City of Lincoln design standards for a two-lane arterial. The City may add this road improvement to the Public Facilities Element (PFE), with PFE credits being given to the constructing party. Alternatively, the City may require the project applicants or their successors to construct the improvements and provide them with a right of reimbursement from third parties who also benefit from the improvements. The timing of the fair share payment or construction shall be as specified in the development agreement(s) between City and project applicants, but the required timing will be concurrent with the development of the threshold triggering use.	Applicant	B	DSD

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MITIGATION MONITORING PROGRAM**

Impact	Mitigation Measures – Village 7 Programmatic Portion	Responsible Entity	Timing/ Milestone	Monitoring and Enforcement Responsibility
4.3-13 The Proposed Project would worsen to an unacceptable level or further worsen cumulatively unacceptable operations (to a significant degree) on roadway segments within Placer County.	4.3-13 Prior to the issuance of Building Permits at the Proposed Project, the project applicants or their successors shall pay a fair-share of the cost to improve the five Placer County roadway segments significantly impacted by the Proposed Project, provided that either the Placer County Traffic Mitigation fee program is modified and/or a regional funding mechanism is in place to include improvements to these roadways.	Applicant	B	DSD
4.3-14 The Proposed Project would worsen cumulatively unacceptable operations (to a significant degree) on State Route 193 and State Route 65 through Placer County, Rocklin, and Roseville.	4.3-14 The project applicants or their successors shall pay SPRTA Fees to help widen SR 65 to six lanes, and pay a fair-share of the cost to make improvements to segments of SR 193 significantly impacted by the Proposed Project if a regional funding mechanism and roadway improvement plan for SR 193 are adopted prior to issuance of Building Permits at the Proposed Project.	Applicant	B	DSD
4.4 Air Quality				
4.4-1 Grading and other earth-disturbing activities associated with the Proposed Project would generate emissions of PM$_{10}$ and PM$_{2.5}$.	4.4-1(B) The following mitigation measures shall be implemented by the applicant during all grading activities: • The applicant shall submit to the City of Lincoln, as the lead agency, and receive approval of a Construction Emission/Dust Control Plan prior to issuance of a grading permit. This plan must address the minimum Administrative Requirements found in section 300 and 400 of District Rule 228, Fugitive Dust. The applicant shall have a pre-construction meeting for grading activities for 20 or more acres to discuss the construction emission/dust control plan with employees and/or contractors and the District is to be invited. The applicant shall suspend all grading operations when fugitive dusts exceed District Rule 228 Fugitive Dust limitations. An applicant representative, certified by CARB to perform Visible Emissions	Applicant	C,G	PSD PCAPCD

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		Responsible Entity	Timing/ Milestone	Monitoring and Enforcement Responsibility
Impact	**Mitigation Measures – Village 7 Programmatic Portion**			
	requirement for a VEE is for projects grading 20 or more acres regardless of how many acres are to be disturbed daily. It is to be noted that fugitive dust is not to exceed 40% opacity and not go beyond property boundary at any time. If lime or other drying agents are utilized to dry out wet grading areas they shall be controlled as to not exceed District Rule 228 Fugitive Dust limitations.			
	• Apply water to control dust as needed to prevent dust impacts offsite. Operational water truck(s) shall be onsite, as required, to control fugitive dust. Construction vehicles leaving the site shall be cleaned to prevent dust, silt, mud, and dirt from being released or tracked off-site.			
	• Apply approved chemical soil stabilizers, vegetative mats, or other appropriate best management practices to manufacturers specifications, to all-inactive construction areas (previously graded areas which remain inactive for 96 hours).			
	• Spread soil binders on unpaved roads and employee/equipment parking areas and wet broom or wash streets if silt is carried over to adjacent public thoroughfares.			
	• Install wheel washers or wash all trucks and equipment leaving the site.			
	• Vegetation materials removed from the site during construction shall not be burned in the open. Vegetative material should be delivered to a green waste recycling facility.			
	• Active grading sites shall be watered at least twice daily.			
	• A traffic speed limit of 15 miles per hours shall be posted and enforced on all unpaved construction roads.			
	• All excavating and grading activities shall be suspended when wind speeds (as instantaneous gusts) exceed 25 miles per hour and dust is transported onto adjacent developed properties.			

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MITIGATION MONITORING PROGRAM

Impact	Mitigation Measures – Village 7 Programmatic Portion	Responsible Entity	Timing/ Milestone	Monitoring and Enforcement Responsibility
4.4-2 Construction activities associated with the Proposed Project would generate emissions of criteria air pollutants ROG and NO_x that would exceed PCAPCD thresholds.	4.4-2(B) During all phases of construction, the project applicant shall ensure that the following mitigation measures are implemented:			
	• During second stage smog alerts (0.350 ppm of ozone), the construction day shall be shortened and the number of vehicles and equipment operating at the same time shall be reduced.	Applicant	C	DSD PCAPCD
	• Construction equipment operators shall shut off equipment when not in use to avoid unnecessary idling. Vehicle idling shall be kept below five consecutive minutes in accordance with Lincoln Municipal Code Section 10.14 requirements.	Applicant	C	DSD PCAPCD
	• Construction equipment exhaust emissions shall not exceed District Rule 202 Visible Emission limitations. Operators of vehicles and equipment found to exceed opacity limits are to be immediately notified and the equipment must be repaired within 72 hours. An applicant representative, certified to perform Visible Emissions Evaluations (VEE), shall routinely evaluate project related off-road and heavy-duty on-road equipment emissions for compliance with this requirement for projects grading more than 20 acres in size regardless in how many acres are to be disturbed daily. Contractors can access the PCAPCD or Sacramento Metropolitan Air Quality Management District's web site to determine if their off-road fleet meets the requirements listed in this measure.	Applicant	C	DSD PCAPCD
	• The prime contractor shall submit to the District a comprehensive inventory (i.e. make, model, year, emission rating) of all the heavy-duty off-road equipment (50 horsepower of greater) that will be used an aggregate of 40 or more hours for the construction project. The project representative shall provide the District with the anticipated construction timeline including start date, and name and phone number of the project manager and on-site foreman. The project shall provide a plan for approval by the District demonstrating that the heavy-duty (> 50 horsepower) off-road vehicles to be used in the construction project, including owned, leased and subcontractor vehicles, will achieve a project wide fleet-average up to 20 percent NOx reduction and 45 percent particulate reduction compared to	Applicant	G	DSD PCAPCD

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Impact	Mitigation Measures – Village 7 Programmatic Portion	Responsible Entity	Timing/ Milestone	Monitoring and Enforcement Responsibility
	the most recent CARB fleet average. The District should be contacted for average fleet emission data. Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available.			
	• The following measure shall be incorporated into construction bid documents: All applicable pieces (at a minimum three pieces) of diesel equipment used on the site during the demolition, earthmoving and clearing stages of construction shall be fitted with a level 3 California Air Resources Board verified diesel emission control system. All off-road and on-road construction equipment shall use a B20 biodiesel blend. Prior to the issuance of a demolition or grading permit, the construction contractor and/or applicant shall submit to the PCAPCD and the City a certified list of the non-road diesel powered construction equipment that will be retrofitted with emission control devices or that will use Clean Fuels. The Clean Fuels shall consist of low NO_x and PM_{10} emission diesel fuel that (1) can be used without engine modification, (2) is certified to provide a minimum emissions reduction of 30 percent PM_{10} and 10 percent NO_x when compared to No. 2 Diesel Fuel, and (3) is included on the CARB Verification List. The list shall include (1) the equipment number, type, make, and contractor/sub-contractor name; (2) the emission control device make, model and EPA or CARB verification number; and/or (3) the type and source of fuel to be used. If any diesel powered non-road construction equipment is found to be in non-compliance with this specification, the contractor will be issued a Notice of Non-Compliance and given a 24 hour period in which to bring the equipment into compliance or remove it from the project. For each piece of diesel powered non-road construction equipment that will not be retrofitted or use Clean Fuels, the project applicant shall provide an explanation detailing why such measures are not employed.	Applicant	G	DSD PCAPCD

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Impact	Mitigation Measures – Village 7 Programmatic Portion	Responsible Entity	Timing/ Milestone	Monitoring and Enforcement Responsibility
4.4-3 Operation of the Proposed Project would generate emissions of criteria pollutants.	4.4-3(B) The project applicant shall implement the following mitigation measures: • The conditions of approval and the covenants, conditions, and restrictions (CC&Rs) for the project shall explicitly prohibit the installation of wood-burning stoves and wood-burning fireplaces within the Programmatic Portion of the Specific Plan area. Only natural gas- or propane-fireplace stoves are permitted. Prior to the issuance of occupancy permits, the applicant must provide written proof of compliance with this measure to the City and PCAPCD.	Applicant	I	DSD
	• Only Energy Star-labeled (or equivalent) dishwashers shall be installed in single-family dwelling units.	Applicant	B	DSD
	• The project applicant shall participate in the PCAPCD off-site mitigation program for post-mitigated emissions that exceed PCAPCD thresholds. Off-site mitigation strategies include retrofitting existing on-road heavy-duty vehicles/equipment with cleaner burning engines, retrofitting or purchasing new low emission agriculture pumps, transit vehicles, and CNG fueling infrastructure. To participate in the off-site mitigation program, the applicant shall pay into the PCAPCD off-site mitigation program, included in Appendix D in this Draft EIR, in consultation with PCAPCD.	Applicant	B	PCAPCD
4.4-5 Project occupants could be exposed to intermittent odors from the City of Lincoln Wastewater Treatment and Reclamation Facility (WWTRF), Western Regional Sanitary Landfill (WRSL) Material Recovery Facility (MRF), or nearby agricultural operations.	4.4-5(B) Record perpetual notices for all lots within the Village 7 Specific Plan indicating that odors from the Lincoln WWTRF, WRSL, and agricultural operations could occur, and provide copies of this notice to all buyers of these properties.	Applicant	I	DSD

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Impact	Mitigation Measures – Village 7 Programmatic Portion	Responsible Entity	Timing/ Milestone	Monitoring and Enforcement Responsibility
	4.5 Noise			
4.5-1 Construction of the Proposed Project would temporarily increase ambient noise levels.	4.5-1(B) The City shall ensure construction contractors comply with the following: • Construction hours shall be limited to 7am to 5pm, Monday through Friday and on Saturdays from 8am to 4pm, with no construction on Sundays and holidays (unless extended by a special permit). • All heavy construction equipment and all stationary noise sources (such as diesel generators) shall have manufacturer-installed mufflers. • Equipment warm up areas, water tanks, and equipment storage areas shall be located in an area as far away from existing residences as is feasible. • Construction equipment operators shall shut off equipment when not in use to avoid unnecessary idling. Vehicle idling shall be kept below five consecutive minutes in accordance with Lincoln Municipal Code Section 10.14 requirements.	Applicant	C	PSD
	4.6 Hazardous Materials and Public Safety			
4.6-1 Construction of the Proposed Project could result in the generation or exposure of hazardous materials that could create a health or safety hazard to workers, the public, or the environment.	4.6-1(B) a) Prior to demolition of existing on-site structures and/or development of the Village 7 Programmatic Portion, the project applicants shall contact and coordinate with the PCDEHS and/or the local air management district to determine if asbestos sampling and abatement is required prior to demolition of the on-site structures. If such a survey is required, all soils surrounding the existing and former structures shall be sampled for residual fragments of lead-based paint, as well.	Applicant	G,C	DSD PSD PCEHS

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Impact	Mitigation Measures – Village 7 Programmatic Portion	Responsible Entity	Timing/ Milestone	Monitoring and Enforcement Responsibility
	b) For the Aitken Ranch II area, the applicant shall have a qualified professional review the results of the Phase 1 ESA and develop specific recommendations for removal of potentially contaminated items, soil and/or groundwater testing, as needed, and any subsequent remedial actions associated with the former turkey farming operations to ensure that development of the project site will not result in adverse human health or environmental risks during construction or occupancy. Soil and groundwater testing shall be performed prior to any site development activities that would disturb surface soils at the location of the former turkey farming operations. If chemicals are present in soils that would present a human health or environmental risk, a soil management plan shall be prepared by the qualified professional prior to approval of Final Grading or Improvement Plans. The soil management plan shall specify how affected soils will be tested, removed, stockpiled, or otherwise handled prior to and during soil-disturbing activities.

c) The project applicant shall hire a certified hazardous material specialist to prepare a formal Phase I EA to analyze the potential for hazardous materials within the Remainder Area. The project applicant shall incorporate all applicable and feasible recommendations in order to reduce the risk of hazardous material release during construction to a less-than-significant level. | | | |
| 4.6-2   Construction of the Proposed Project could create a health hazard to workers, the public, and the environment due to previously unidentified contaminated soil and groundwater. | 4.6-2(B) If, during construction activities, evidence of hazardous materials contamination is observed or suspected (i.e., stained or odorous soil, or oily or discolored water), construction activities shall cease and an environmental professional shall assess the situation. If necessary, the environmental professional shall prepare a sampling plan to collect soil and/or groundwater samples to determine whether or not the site has been adversely affected by past activities. The samples shall be analyzed for the contaminants determined to be a potential health concern by the environmental professional. Depending on the nature of the contamination (if any), the PCEHS shall be contacted for further direction, which could include further investigation or remediation. | Applicant | C | PSD PCEHS |

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	4.7 Hydrology and Water Quality			
4.7-2 Development of the Proposed Project would increase the amount (volume) of stormwater runoff discharged to Ingram Slough and Orchard Creek.	4.7-2(B) a) The Applicant(s) shall develop an additional 23 acre-feet of storage capacity in the watershed to accommodate increased stormwater runoff volumes associated with the Village 7 programmatic portion of the Proposed Project (Aitken Ranch II, Scheiber, Remainder Area). The applicant(s) shall use one of the following options, or a combination thereof, presented in the *Lincoln Nader/Aitken Ranch II/Sundance and the Remainder Properties Tentative Map, Master Drainage Study* for volumetric mitigation: • Participate in the City's Proposed Phase 2 Regional Retention Basin: Phase 1 of the City's Regional Retention Basin project was constructed to accommodate up to 315 acre-feet from the Del Webb development. Additional phased expansions (Phases 2 and 3) are planned to accommodate up to approximately 800 acre-feet of additional retention volume. The Village 7 Programmatic Portion could participate in the construction of Phase 2 of the existing City of Lincoln retention basin to mitigate the Proposed Project's runoff volumes. • Utilize excess capacity in the City's Proposed Phase 1 Regional Retention Basin: Phase 1 of the City's Regional Retention Basin project has a 315 acre-foot retention storage capacity and was constructed by Del Webb to mitigate their project impacts. Based on the SLMDP, the retention volume required to mitigate impacts for the Del Webb project totaled 286 acre-feet. The Phase 1 basin therefore has approximately 29 acre-feet of available storage that could be used by the Village 7 Programmatic Portion. This mitigation option would not entirely reduce the retention volume required for the Village 7 Programmatic Portion, but could be combined with one or more of the other options presented herein. • Create a New Retention Basin: The project applicant could participate in the City's future retention basin within the Cross Canal watershed.	Applicant	I	DSD

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	OR • Create a new on-site retention basin within the Village 7 Programmatic Portion.			
	b) If one or more of the off-site mitigation options listed in (a) are used, prior to final map approval, the project applicant(s) shall pay PFE fees to cover its fair share of costs associated with construction, operation, and maintenance, and management of off-site regional retention facilities to offset increased stormwater volume generated by the Village 7 Programmatic Portion.	Applicant	I	DSD
4.7-4 Implementation of the Proposed Project would increase the types and amounts of pollutants in stormwater runoff that could be discharged to Ingram Slough, which could affect water quality.	4.7-4(B) a) Project Conditions of Approval shall specify that appropriate Best Management Practices (BMPs) be incorporated into project design to reduce urban pollutants in runoff, consistent with goals and standards established under federal and State non-point source discharge NPDES regulations and Basin Plan water quality objectives, the City's Post-Construction Stormwater Runoff Control Ordinance No. 826B, and Low-Impact Development (LID) alternatives for stormwater quality control per Public Facilities and Services Implementation Measure 3.0 of the adopted 2050 General Plan.	City	I	PSD DSD
	b) The proposed water quality facilities shall be identified and designed in a Stormwater Management Plan prepared in accordance with Section 8.60.40 of the City's Municipal Code for City review and approval. All water quality facilities identified in the Stormwater Management Plan shall be constructed with the installation of the infrastructure.	Applicant	G	PSD DSD
	c) The Stormwater Management Plan shall also include the method or methods for funding the long-term maintenance of the proposed water quality facilities. The City shall formally adopt and implement a funding mechanism specifically to fund the long-term maintenance of the proposed water quality facilities as proposed by the Stormwater Management Plan.	Applicant/City	G	PSD DSD

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	d) The project applicant shall submit a site-specific BMP plan showing the on-site locations and effectiveness of the BMP facilities proposed for long-term water quality impact reduction prior to project approval. The plan shall include a method or methods for financing the long-term maintenance of the proposed site-specific facilities.	Applicant	G,C	PSD DSD
	e) All BMPs for water quality protection, source control, and treatment control shall be developed in accordance with the California Stormwater Quality Association Stormwater Best Management Practice Handbook for Construction and New Development/Redevelopment (or other similar source approved by the CVRWQCB, County, and City) for the project. The BMPs shall be designed to mitigate (minimize, infiltrate, filter, or treat) stormwater runoff. Flow or volume based post-construction BMPs shall be designed at a minimum in accordance with the PCFCWCD and City standards and shall be included for long-term maintenance of BMPs. All BMPs shall reflect the Best Available Technologies (BAT) available at the time of implementation and shall reflect site-specific limitations. The City shall make the final determinations as to the appropriateness of the BMPs proposed for the Proposed Project and the City shall ensure future implementation, operation, and maintenance of the BMPs.	City	G	PSD DSD
	f) Stormwater runoff from the Proposed Project's impervious surfaces (including roads) shall be collected and routed through specially designed water quality treatment facilities (BMPs) for removal of pollutants of concern (i.e. sediment, oil/grease, etc.), as approved by the City. The applicant shall verify that proposed BMPs are appropriate to treat the pollutants of concern from the Proposed Project and shall provide for the establishment of vegetation, where specified, by means of proper irrigation, for effective performance of BMPs.	Applicant	G	PSD DSD
	Prior Final Map approval, easements shall be created and offered for dedication to the City for maintenance and access to these facilities in anticipation of possible City maintenance. No water quality facility construction shall be permitted within any identified wetlands area, floodplain, or right-of-way, except as authorized by project approvals.	Applicant	I	PSD DSD

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	4.8 Biological Resources			
4.8-1 The Proposed Project would result in the filling or adverse modification of jurisdictional wetland/ other "waters of the U.S."	4.8-1(B) a) The project applicant shall retain a qualified biologist to conduct a wetland delineation of the remaining properties in the Village 7 Programmatic portion of the project site. This delineation shall be submitted to the Corps for verification prior to the issuance of any grading permits for the Village 7 Programmatic portion of the project site.	Applicant	G	DSD Corps USFWS
	b) The project applicant shall prepare a wetland mitigation plan that ensures no net loss of wetlands, consistent with Lincoln Public Facilities Element (PFE) Policy 9-13. The wetland mitigation plan shall be based on the wetland delineation verified by the Corps. This measure may be implemented through the 404 permit and/or Streambed Alteration Agreement processes. The plan shall include the following or equally effective components.	Applicant	G	DSD
	Compensation c) The project proponent shall compensate for the loss of wetland habitat through a combination of preservation of vernal pools and seasonal wetlands in open space preserves, on-site restoration/enhancement along Ingram Slough, and the purchase of mitigation credits at an approved mitigation bank. The ratio of compensation will be determined in consultation with the Corps and U.S. Fish and Wildlife Service, as part of the 404-permit process.	Applicant	G	DSD
	Reduction/Avoidance d) Prior to any construction activities on the site, a protective fence shall be erected at the boundaries of the wetland preserves in the areas of construction. This fence shall remain in place until all construction activity in the immediate area is completed. No activity shall be permitted within the wetlands preserve except for those expressly permitted by the US Fish and Wildlife Service.	Applicant	C	PSD

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	e) A buffer shall be provided along all preserved wetlands. Only those uses allowed in the 404 Permit and/or the Streambed Alteration Agreements shall be permitted in the wetlands preserve and its buffer.	Applicant	G,C	PSD
	f) Water quality in the wetlands preserve shall be protected using erosion control techniques including (as appropriate), but not necessarily limited to, preservation of existing vegetation, mulches (e.g., hydraulic, straw, wood, etc.), geotextiles and mats, during construction in the watershed. Additionally, urban runoff shall be managed to protect water quality in the wetlands preserve using techniques such as velocity dissipation devices, sediment basins and pollution collection devices.	Applicant	G,C	PSD
	g) Landscape irrigation runoff shall only be permitted to directly enter the wetlands preserve according to the provisions of the 404 Permit and/or the Streambed Alteration Agreement.	Applicant	O	PSD
	h) Mowing and other maintenance activities shall be limited to those detailed in the 404 Permit and/or the Streambed Alteration Agreement.	Applicant	O	PSD
4.8-2 Development of the Proposed Project could result in the loss of special-status vernal pool crustacean and amphibian species and degradation and/or loss of their habitat.	4.8-2(B) a) The project applicant shall retain a qualified biologist to conduct a vernal pool crustacean survey following current USFWS protocol within the Village 7 Programmatic portion of the project site. Alternatively, the project applicant could forgo the surveys and assume presence of vernal pool crustaceans in all appropriate habitat within the Village 7 Programmatic portion of the project site. The survey, or assumption of presence shall occur prior to the issuance of any grading permits for the Village 7 Programmatic portion of the project site.	Applicant	G C	DSD USFWS PSD

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Impact	Mitigation Measures – Village 7 Programmatic Portion	Responsible Entity	Timing/ Milestone	Enforcement Responsibility
	b) Surveys have determined that at least one of the federally-listed vernal pool crustacean species occurs on some properties at the project site. Other federally-listed vernal pool crustaceans and/or western spadefoot may also occur in affected pools within the project site. As development of the project site could result in the loss of these species, the following or equally effective measures (as approved by the City and USFWS) shall be required. The selected measures may be part of the permitting process.			
	Compensation			
	c) The project proponents shall obtain biological opinions from the U.S. Fish and Wildlife Service (and if necessary, the National Marine Fisheries Service) and are further required to comply with the conditions and mitigation requirements of those agencies. Mitigation may include, but is not limited to, both onsite and offsite preservation and creation of wetlands, purchase of credits at mitigation banks, payment of in lieu fees approved by the agencies, or other agency approved and required mitigation measures.			
	d) Orange exclusionary fencing shall be placed and maintained around any avoided (preserved) vernal pool crustacean habitat during construction to prevent impacts from construction vehicles and equipment. This fencing shall be inspected by a qualified biologist throughout the construction period to ensure that it is in good functional condition. After construction, fencing around open space areas containing wetlands or other sensitive habitats shall be replaced by permanent fencing that will be maintained by the City, and/or the local home owners association.			
	e) Prior to beginning work in the project site, all on-site construction personnel shall receive instruction regarding the presence of listed species and the importance of avoiding impacts on these species and their habitat.			

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Impact	Mitigation Measures – Village 7 Programmatic Portion	Responsible Entity	Timing/ Milestone	Monitoring and Enforcement Responsibility
	f) The project proponent shall ensure that activities that are inconsistent with the maintenance of the suitability of remaining vernal pool habitat and associated watershed on-site is prohibited as required by the USFWS and Corps.			
4.8-3 The Proposed Project could result in the loss and/or degradation of rare plant populations.	4.8-3(B) a) The project applicant shall retain a qualified biologist to conduct focused surveys within the project site for special-status plant species including but not limited to big-scale balsamroot, Boggs Lake hedge-hyssop, dwarf downingia, legenere, Sacramento orcutt grass, and Sanford's arrowhead during the appropriate time of year (March through June). If no special-status plants are located during the surveys, no further mitigation would be required.	Applicant	G	DSD Corps
	b) If Boggs Lake hedge-hyssop or Sacramento orcutt grass is located during the surveys in areas that cannot be avoided, the project applicant shall consult with CDFG to obtain management permit, under Section 2081 of the California Fish and Game Code. Mitigation can be accomplished either in the onsite mitigation preserve area, or at an approved offsite mitigation bank. The ratio of mitigation credits will be determined during this consultation, and can be conducted concurrently with Mitigation Measure 4.8-2(B) subsections (c), (d), and (e).			
	c) If any other special-status vernal pool plant species, including, but not limited to dwarf downingia and legenere are located during the surveys in areas that cannot be avoided, the project applicant shall implement Mitigation Measure 4.8-2(B) subsections (c), (d), and (e), with the addition of soil/seed bank salvage, for use in created wetlands in mitigation areas.			
	d) If any special-status upland plant species including, but not limited to big-scale balsamroot, or wetland species such as Sanford's arrowhead are located during the surveys, the project applicant shall comply with adopted CDFG Guidelines.			

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	Impact	Mitigation Measures – Village 7 Programmatic Portion	Responsible Entity	Timing/ Milestone	Monitoring and Enforcement Responsibility
4.8-4 The Proposed Project could result in the loss and/or degradation of western pond turtles and its habitat.	4.8-4(B)	a) Prior to project construction, the project applicant and/or developer shall retain a qualified biologist to conduct preconstruction surveys of suitable habitat within the project site within 30 days prior to project construction to ensure no western pond turtles have established territories. If ground-disturbing activities are delayed or suspended for more than 30 days after the preconstruction survey, the site shall be re-surveyed. b) If individual western pond turtles are discovered during the survey on the project site, or immediately adjacent area, the project applicant or their agent shall initiate consultation with the CDFG to formulate and implement minimization measures, which could include capture and relocation of individuals found on-site. c) If surveys identify the presence of western pond turtles on site, the project applicant shall implement mitigation measures required by the California Department of Fish and Game at the time of the consultation.	Applicant	G C	DSD CDFG PSD
4.8-5 The Proposed Project could result in the direct loss or disturbance of nesting migratory birds, including raptors (birds-of-prey).	4.8-5(B)	a) If construction is to occur between March 15 through August 30, the project applicant, in consultation with the City of Lincoln and CDFG, shall conduct a preconstruction breeding-season survey of the project site within 30 days of when construction is planned to begin. The survey shall be conducted by a qualified biologist (who is also knowledgeable about the California black rail) to determine if any protected raptors or migratory birds (including, but not limited to the California black rail) are nesting on or directly adjacent to the project site. b) A description of methodology including dates of field visits, the names of survey personnel with resumes, and a list of references cited and persons contacted shall be provided to the City. c) A map showing the location(s) of any protected raptor or migratory bird nests observed on the project site shall be provided to the City.	Applicant	G C	DSD CDFG PSD

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	d) The project applicant, in consultation with the City of Lincoln and CDFG, shall avoid all protected raptor and migratory bird nest sites located in the project site during the breeding season (approximately March 15 through August 30) while the nest is occupied with adults and/or young. This avoidance could consist of delaying construction in close proximity to the nest during the nesting season. Any occupied nest shall be monitored by a qualified biologist to determine when the nest is no longer used. If the construction cannot be delayed, avoidance shall include the establishment of a non-disturbance buffer zone around the nest site. The size of the buffer zone will be determined in consultation with the City and CDFG. The buffer zone shall be delineated by highly visible temporary construction fencing.			
4.8-6 The Proposed Project could result in the loss of foraging habitat for Swainson's hawk, white tailed kite, burrowing owl and other raptors.	4.8-6(B) The project applicant shall ensure that at least an appropriate number of acres (as approved by the City and CDFG) of annual grasslands or other suitable raptor foraging habitat are preserved based upon project impacts of 180 acres (0.75:1 ratio). Preservation may occur through either: a) Payment of a mitigation fee to the City of Lincoln through a negotiated agreement between the City, the project applicant, and CDFG. The monies will be held in a trust fund, and used to preserve mitigation land through the purchase, monitoring, maintenance, and remediation of lands that support suitable raptor foraging habitat (consistent with CDFG guidelines); or b) Purchase of conservation easements or fee title to suitable raptor foraging habitat to protect the habitat from urban development; or c) Participate in Placer County Natural Community Conservation Plan/Habitat Conservation Plan, once adopted.	Applicant	G	DSD CDFG

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Impact	Mitigation Measures – Village 7 Programmatic Portion	Responsible Entity	Timing/ Milestone	Monitoring and Enforcement Responsibility
4.8-7 The Proposed Project could result in loss of nesting habitat for tri-colored blackbird.	4.8-7(B) a) The project applicant shall retain a qualified biologist to conduct pre-construction nesting surveys for tri-colored blackbird colonies within the project site and off-site areas proposed for infrastructure development. The survey should be conducted no more than 30 days from the onset of construction. If ground-disturbing activities are delayed or suspended for more than 30 days after the preconstruction survey, the site shall be re-surveyed. b) The project applicant, in consultation with the City of Lincoln and CDFG, shall avoid all active nest sites located in the project site during the breeding season while the nest site is occupied with adults and/or young. This avoidance could consist of delaying construction to avoid the nesting season or establishing a buffer around the nest site. Any occupied nest shall be monitored by a qualified biologist to determine when the nest is no longer used. If the construction cannot be delayed, avoidance shall include the establishment of a non-disturbance buffer zone around the nest site. The size of the buffer zone will be determined in consultation with the City and CDFG, and will be, at a minimum, 250 feet. The buffer zone shall be delineated by highly visible temporary construction fencing.	Applicant	G C	DSD CDFG PSD
4.9 Public Utilities				
4.9-1 The Proposed Project would generate additional wastewater flows to be treated by the WWTRF.	4.9-1(B) Prior to approval of the first Final Small Lot Map for the first planning area developed in the Village 7 Programmatic Portion of the Village 7 Specific Plan, the City shall ensure the planned expansion of the WWTRF provides adequate capacity to accommodate flows from the Village 7 Programmatic Portion. The project applicants shall pay fair-share cost of required fees to fund the expansion of the WWTRF.	Applicant	I	DSD

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4.9-2 The Proposed Project would generate additional wastewater flows, but not at levels that that would exceed the capacity of the existing wastewater collection infrastructure.	4.9-2(B) The project applicants for the Village 7 Programmatic Portion shall submit a wastewater infrastructure plan to the City of Lincoln prior to approval of the first Final Small Lot Map for the first planning area developed in the Village 7 Programmatic Portion of the Village 7 Specific Plan. The applicants shall follow mitigation measures or recommendations identified within the plan to ensure wastewater flows would be adequately conveyed to the WWTRF.	Applicant	I	DSD
4.9-15 The Proposed Project would generate a demand for park and recreation facilities, which could require the construction of new or expansion of existing recreational facilities.	4.9-15(B) The project applicant shall pay all applicable fair-share fees to the City pursuant to the established Public Facilities Element requiring 6 acres of parkland per 1,000 residents for the provision of recreational facilities to meet demands created by the Village 7 Programmatic Portion.	Applicant	B	DSD
4.9-17 The Proposed Project would increase the demand on water supplies. Existing and planned water supplies would be sufficient to meet the demands of the Proposed Project in addition to the City of Lincoln's existing and planned future uses, but the existing entitlements are not sufficient.	4.9-17(B) Prior to recordation of a Final Map, the City of Lincoln shall obtain necessary entitlements demonstrating there will be adequate water supply to serve the portion of the Proposed Project defined on the Final Map, in accordance with Government Code Section 66473.7(a)(1) – SB 221 Written Verification of Water Supply.	City	I	DSD

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	4.10 Visual Resources			
4.10-2 Development of the Proposed Project would increase glare and lighting in the project vicinity.	4.10-2(B) All light standards shall be shielded and directed such that adjacent properties are not illuminated.	City	G,C	DSD
	4.11 Climate Change			
4.11-1 Development of the proposed project could potentially result in a cumulatively considerable incremental contribution to the significant cumulative impact of global climate change.	4.11-1(B) a) An Energy Conservation Plan for all commercial and residential development shall be required prior to recordation of the first small lot Final Map. The plan shall describe the techniques and programs to be employed in the development of the project to achieve (1) a minimum 15 percent energy efficiency above that required by the 2008 Title 24 energy efficiency regulations, or (2) compliance with the then-current Title 24 energy efficiency regulations. These programs shall include either: (i) Participation in the PG&E Energy Star Performance Method. This method is available to builders of single-family homes that are at least 15 percent more energy efficient than required by the 2008 Title 24 energy efficiency regulations and meet all US EPA specifications. Participating builders become part of the California Energy Star New Homes Program, and their homes earn the Energy Star label. Incremental incentives can also be earned by adding energy efficient appliances and/or lighting to homes. OR (ii) Participation in the New Solar Homes Partnership (NSHP) Performance Method. This method is available to builders of single-family homes that are at least 15 percent more efficient than required by the 2008 Title 24 energy efficiency regulations and meet all US EPA specifications. OR	Applicant	I	DSD

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Impact	Mitigation Measures – Village 7 Programmatic Portion	Responsible Entity	Timing/ Milestone	Monitoring and Enforcement Responsibility
	(iii) Participation in the Build It Green Program, which was created by Build It Green, a non-profit organization whose mission is to promote health, durable, energy and resource efficient buildings throughout California. Using the Green Point Checklist, a home can be considered green if it fulfills the prerequisites and earns at least 50 points and meets the minimum points per category: Energy (30 points); Indoor Air Quality (5 points); Resources (6 points); and Water (9 points). Build It Green uses certified Green Point Raters to measure success with the program and verification of the measures employed to meet the requirements of the checklist.			
	b) The project applicant shall be responsible for having prepared, by an experienced and qualified firm, an Energy Resource Conservation Guide that will provide educational information on how homeowners can increase energy efficiency and conservation in their new homes. The information will be delivered to each original homeowner as part of the move-in package. The information packet shall be reviewed by, and be subject to approval of, City of Lincoln staff.	Applicant	O	DSD
	c) Installation of Light Emitting Diode (LED) traffic signals and LED street lights shall be required at the Village 7 Programmatic Portion and be constructed in accordance with City improvement standards or as otherwise approved by the Development Services Director.	Applicant	C	DSD
	d) The project applicants for projects within the Village 7 Programmatic Portion of the Specific Plan shall ensure that a tree planting program, approved by the City of Lincoln staff, provides the following: **Streets:** Residential collector streets:　1 tree per 35 linear ft Primary residential street:　1 tree per 35 linear ft Major and minor paseos:　1 tree per 25 ft	Applicant	C	DSD

Monitoring Responsibility
DSD= City of Lincoln Development Services Department
PSD = City of Lincoln Public Services Department
PCAPCD = Placer County Air Pollution Control District
CDFG = California Department of Fish and Game
PCEHS = Placer County Environmental Health Services
Corps = U.S. Army Corps of Engineers

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TABLE 5-2

**VILLAGE 7 SPECIFIC PLAN PROJECT – VILLAGE 7 PROGRAMMATIC PORTION
MITIGATION MONITORING PROGRAM**

Impact	Mitigation Measures – Village 7 Programmatic Portion	Responsible Entity	Timing/ Milestone	Monitoring and Enforcement Responsibility
	Residential Units:			
	LDR units: 1 front yard tree			
	MDR units: 1 front yard tree. Some MDR units may not have front yards; however, where the front of an MDR lot is on a paseo, trees will be spaced 25 ft on center along the paseo. The exact number of trees to be planted in MDR developments will be determined during the City's design review process by the City and project applicant(s) with the goal of having one front yard or back yard tree for each residential unit.			
	Open Space Areas:			
	Mini parks 27 trees per acre			
	Community parks 27 trees per acre			
	Neighborhood parks 27 trees per acre			
	NOTE: The number of trees specified above is an approximate number and will be subject to adjustment for physical constraints resulting from the actual location of physical improvements (both above ground and underground) and public safety considerations, such as the need to preserve vehicle operator sight distances at all roadway intersections.			
	e) Pursuant to the City's new 2050 General Plan, and specifically under the Energy Resources section, Goal OSC-3, "Encourage energy conservation in new and existing developments throughout the City," to address Policy OSC 3.9, "Shade Tree Planting," the project applicant shall be responsible for having prepared, by an experienced and qualified firm, or by an organization such as the Sacramento Tree Foundation, a tree information planting and care guide. The planting and care guide will be delivered to each original homeowner as a part of the move in package. The planting and care guide shall be reviewed by, and be subject to the approval of, City of Lincoln staff.	Applicant	O	DSD

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MITIGATION MONITORING PROGRAM

Impact	Mitigation Measures – Village 7 Programmatic Portion	Responsible Entity	Timing/ Milestone	Monitoring and Enforcement Responsibility
	f) The City shall require that energy efficient lighting fixtures, including fluorescent lights, be installed as part of the original construction of residential structures within the plan area.	Applicant	B	DSD
	g) The City shall require light-colored roofing materials with a solar reflective value and thermal emittance value of 0.25 or better on all residential buildings.	Applicant	B	DSD
	h) Pursuant to the City's new 2050 General Plan, and specifically under the Energy Resources section, Goal OSC-3, "Encourage energy conservation in new and existing developments throughout the City," the City shall be responsible pursuant to Policy OSC 3.14, "Early Planning for Energy Efficiency," for developing a program whereby energy planners and energy efficiency specialists will be included in pre-application discussions with a developer or builder to help identify the potential for inclusion of solar orientation and other energy efficient systems into the land plan and building practices.	Applicant	Pre-application	DSD
	i) Implement all mitigation measures identified in Section 4.4, Air Quality.	See Section 4.4		
	j) Implement Mitigation Measure 4.7-4 (Urban Stormwater Pollutants) in Section 4.7, Hydrology and Water Quality.	See Section 4.7		
	k) The roadway system shall be designed to accommodate the usage of neighborhood electric vehicles (NEVs).	Applicant	G	DSD
	l) Provide bus turnouts and transit shelters on roadways that are to be served by bus transit in the future in accordance with City improvement standards and as otherwise directed by City's Development Services Director.	Applicant	G	DSD
	m) Water used during construction shall be reclaimed water.	Applicant	C	PSD

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MITIGATION MONITORING PROGRAM

Impact	Mitigation Measures – Village 7 Programmatic Portion	Responsible Entity	Timing/ Milestone	Monitoring and Enforcement Responsibility
	INITIAL STUDY MITIGATION MEASURES			
Building height in air safety zone	Hazards and Hazardous Materials Mitigation Measure 1 The project developer shall request an airspace review for any building over 150 feet tall.	Applicant	B	DSD
Historical/archaeological resources	Cultural Resources Mitigation Measure 2 The project proponent shall provide proof to the City that no structures on-site are over 50 years old. If structures on-site are discovered to be 50 years old or older, or the age cannot be determined, a qualified professional shall be hired by the project proponent to evaluate the structures for historical significance and provide mitigation measures, if needed. Compliance with mitigation measures shall be demonstrated to the City prior to construction activities. All reports shall be filed with the appropriate CHRIS Information Center.	Applicant	G	DSD
	Cultural Resources Mitigation Measure 3 a) In the event any historic surface or subsurface archaeological features or deposits, including locally darkened soil ("midden"), that could conceal cultural deposits, animal bone, shell, obsidian, mortars, or human remains, are uncovered during construction, work within 100 feet of the find shall2 cease and a qualified archaeologist shall be contacted to determine if the resource is significant. If the find is determined to be of significance, resources (such as grinding stones and mano fragments) shall be donated to an appropriate cultural center. b) When Native American archaeological, ethnographic, or spiritual resources are involved, all identification and treatment shall be conducted by qualified archaeologists who are either certified by the Society of Professional Archaeologists (SOPA) or meet the federal standards as stated in the Code of Federal Regulations (36 C.F.R. 61), and Native American representatives who are approved by the local Native American community as scholars of their cultural traditions.	Applicant	G	PSD

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MITIGATION MONITORING PROGRAM

Impact	Mitigation Measures – Village 7 Programmatic Portion	Responsible Entity	Timing/ Milestone	Monitoring and Enforcement Responsibility
	c) In the event that no such Native American is available, persons who represent tribal governments and/or organizations in the locale in which resources could be affected shall be consulted. When historic archaeological sites or historic architectural features are involved, all identification and treatment is to be carried out by historical archaeologists or architectural historians. These individuals shall meet either SOPA or 36 C.F.R. 61 requirements. d) If human bone or bone of unknown origin is found during construction, all work shall stop in the vicinity of the find and the County Coroner shall be contacted immediately. If the remains are determined to be Native American, the Coroner shall notify the Native American Heritage Commission who shall notify the person it believes to be the most likely descendent. The most likely descendent shall work with the contractor to develop a program for reinterment of the human remains and any associated artifacts. No additional work is to take place within the immediate vicinity of the find until the identified appropriate actions have been carried out.			
	Cultural Resources Mitigation Measure 4 Should any evidence of paleontological resources (e.g., fossils) be encountered during grading or excavation either onsite or offsite as a result of a project improvement, work shall be suspended within 100 feet of the find, and the City of Lincoln shall be immediately notified. At that time, the City shall coordinate any necessary investigation of the site with a qualified paleontologist as needed to assess the resource and provide proper management recommendations. Possible management recommendations for important resources could include resource avoidance or data recovery excavations. The contractor shall implement any measures deemed necessary by the City for the protection of the paleontological resources.	Applicant	C	PSD

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Phase I Environmental Assessment
512-Acre Nader Property
2675 Moore Road
Lincoln, California

June 2001

Submitted to:

Lewis Operating Corp.
9216 Keifer Boulevard
Sacramento, California

Prepared by:

GeoTrans, Inc.
A TETRA TECH COMPANY
3035 Prospect Park Drive, Suite 40
Rancho Cordova, California 95670

PHASE I ENVIRONMENTAL ASSESSMENT REPORT
512-ACRE NADER PROPERTY
2675 MOORE ROAD
LINCOLN, CALIFORNIA

June 5, 2001

Prepared for:

Lewis Operating Corp.
9216 Keifer Boulevard
Sacramento, California 95286

Prepared by:

Geotrans, Inc.
3035 Prospect Park Drive, Suite 40
Ranch Cordova, California 95670

Project No. L318-101
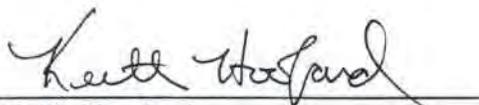
Keith Hoofard
Project Geologist

Tim Costello
Senior Scientist

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1.0 INTRODUCTION AND SCOPE OF WORK

This report presents the results of a Phase I environmental assessment (Phase I EA) conducted on the 512-acre Nader property located at 2675 Moore Road in Lincoln, California (the Property). The Property consists primarily of undeveloped agricultural land supporting two residences and associated outbuildings, and multiple irrigation ponds. The Property is located in portions of Section 20, 28 and 29 of Township 12 North, Range 6 East. A Pacific Gas and Electric underground pipeline easement is located in Section 28. The assessor parcel numbers for the Property are 021-263-012-510, 021-263-014-510, 021-280-005-510, and 021-263-015-510.

The Phase I EA was requested by Mr. Doug Mull of Lewis Operating Corp. (the Client) and was conducted by GeoTrans in accordance with the scope of work presented in our *Proposal for a Phase I Environmental Assessment, 512-Acre Property, Portions of Section 20, 28 and 29 of Township 12N, Range 6E, Lincoln, California*, dated December 14, 2000.

The scope of work was also consistent with ASTM Standard E1527-00 and general industry standards. GeoTrans understands Mr. Wayne Nader currently owns the Property and that Lewis Investment Company, LLC is interested in purchasing and developing the Property for residential use.

The objective of the Phase I EA activities was to provide an evaluation of current and historical use of the Property to assess whether such use has, or is expected to, result in environmental degradation of the Property. The scope of work conducted during the Phase I EA consisted of the following:

- Acquisition and review of a federal, state and local regulatory agency database search encompassing a one mile radius from the Property;

- A review of historical aerial photographs of the Property and vicinity taken over the last 48 years;

- Review of historical topographic maps dating back to 1910;

- Review of a March 1998 HLA underground storage tank investigation report for the Property;
- Obtaining and reviewing an archeological database summary report for the Property and surrounding areas;

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- A site reconnaissance of the Property;

- Observations of adjacent properties;

- Interviews with individuals knowledgeable of current and historic site use and ownership;

- Preparation of this report.

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2.0 PROPERTY DESCRIPTION, SITE RECONNAISSANCE, AND SURROUNDING LAND USE

The Property consists of four adjacent parcels covering approximately 512 acres located at 2675 Moore Road in Lincoln, California (Figures 1 and 2). The Property consists primarily of undeveloped agricultural land and supports a residence site and a farm site consisting of several outbuildings. Two domestic water wells supply potable water to the residence site and farm site. Multiple irrigation ponds, three non-operational irrigation wells, a Pacific Gas and Electric (PG&E) natural gas pipeline and power line easement, and a City of Lincoln effluent pipeline easement are also located on the Property.

2.1 Site Reconnaissance

Mr. Keith Hoofard of GeoTrans visually assessed the Property on December 21, 2000. Mr. Wayne Nader, the Property owner, was also on-site to answer questions about site features and historical site use. Features observed during the site reconnaissance are depicted on Figure 2 and Figure 3. Photographs taken of the Property and surrounding areas are presented in Appendix A.

At the time of the site reconnaissance, the Property consisted predominantly of vacant pastureland supporting a small farm site with a domestic well, one residential site with a domestic well, a drainage slough, nine irrigation ponds, and three inactive irrigation wells. The northern portion of the Property had been recently tilled. Cattle were observed grazing in the central portion of the Property, and several farm hands were observed cleaning cattle corrals near a barn at the farm site. According to Mr. Nader, James Riolo has leased the Property for a number of years for running cattle as hobby.

2.1.1 Farm Site

Features located at the farm site included a house, garage, equipment shed, tack, shed, barn, corrals, several camping trailers, a 500-gallon propane above ground storage tank (AST), an 8-inch diameter domestic well, approximately six farm tractors, one pole-mounted electrical transformer, and a former 500-gallon underground storage tank (UST) (Figures 2 and 3). The farm site and associated buildings and features were constructed in the 1950s, according to Mr. Nader. Mr. Nader is not aware of the completion characteristics of the domestic well.

The house and garage were of wood-frame construction atop a concrete slab floor with stucco exteriors and composite shingle roofs. Potable water is supplied to the house, and other farm site structures, by the 8-inch domestic well located southwest of the house in the yard. Sanitary waste is discharged to an underground septic tank and leach field,

according to Mr. Nader. The interior of the house and garage were not observed as they were occupied at the time of the site reconnaissance.

The equipment shed was of wood-framed construction with the exterior walls and roof finished with corrugated sheet metal. The floor of the equipment shed was bare ground, except for a small interior storage room equipped with a concrete floor. Items stored on the ground in the equipment shed included three 5-gallon gasoline cans (one ½ full; two empty); an approximate 150-gallon steel gasoline AST (empty); eight 5-gallon buckets of hydraulic oil, grease and turbine oil; approximately 10 one-gallon empty containers of DELO 400 oil; six car batteries; a gasoline generator; a compressor; welding gas cylinders (oxygen and acetylene); a portable welding cart; and a 250-gallon trailer-mounted diesel AST used to fuel the farm tractors. Miscellaneous containers (one-gallon or less) of lubricants, grease, carburetor cleaner, and roof cement were observed stored on a work bench located along the west wall of the equipment shed. A small metal cabinet located in the interior storage room contained grease gun tubes and one-gallon cans of oil. Minor "spot" oil staining was observed on the floor inside the equipment shed within tractor parking areas.

The tack shed was of wood-framed construction atop a concrete slab floor with the exterior walls and roof finished with corrugated sheet metal. The tack shed contained veterinary medical supplies, horseshoes, saddles and fly spray.

The barn was of wood-framed construction atop a dirt floor with a corrugated sheet metal roof and a wood exterior. The barn contained stacked hay bales, salt licks, and 20-gallon tubs of livestock supplement.

According to Mr. Nader, a former UST was located along the west side of the tack shed. The tank was removed a number of years ago by Teichert Construction when they owned the Property. Mr. Nader indicated the tank was quite small and appeared to have been an old propane tank that was converted for use as a UST. Mr. Nader was not aware of the purpose or contents of the UST. Mr. Nader indicated Harding Lawson Associates (HLA) conducted exploratory excavation and sampling in the location of the former UST in 1998 and submitted a report to Teichert Construction. This report is discussed in Section 3.4.

With the exception of minor "spot" oil staining observed inside the equipment shed, no signs or evidence of significant ground staining, releases of hazardous materials, or dump sites were observed in the farm site area.

2.1.2 Residence Site

Features located at the residence site included a house, an in-ground swimming pool, an 8-inch domestic well, and a pole-mounted electrical transformer (Figure 2). The house is of wood-frame construction atop a concrete slab floor with a stucco exterior and a shingle roof. Potable water is supplied to the house by the 8-inch domestic well located north of the house in the yard. Mr. Nader is not aware of the completion characteristics of the domestic well. Sanitary waste is discharged to an underground septic tank and leach field, according to Mr. Nader. The house was constructed in between 1975 and 1977, according to historical topographic maps and aerial photographs. The swimming pool was constructed in 1978, according to building department records. The interior of the house was not observed as it was occupied at the time of the site reconnaissance.

No signs or evidence of significant ground staining, releases of hazardous materials, or dumpsites were observed at the residence site.

2.1.3 Balance of Property

The balance of the Property consists of cattle pastureland occupied by nine irrigation ponds, three inactive irrigation wells, six pole-mounted electrical transformers, Ingram Slough, and three utility easements (Figure 2). Several head of cattle were observed grazing in the central portion of the Property at the time of the site reconnaissance. The inactive irrigation wells are constructed of approximately 12-inch diameter steel casing at the surface, with a steel plate welded across the top of each casing. According to Mr. Nader, he removed the well pumps and capped the three wells shortly after purchasing the Property in May 1999. Mr. Nader is not aware of the completion characteristics of the irrigation wells. Underground irrigation pipe, apparently used to convey water from the irrigation wells and ponds, transects much of the Property. Where exposed, some of the pipe is up to 12 inches in diameter and is of both steel and concrete construction.

A four-inch diameter PVC monitoring well was observed in the northeast portion of the Property near the eastern Property boundary. The well sticks up above grade approximately three feet and is protected by a steel "stovepipe" and lid. The PVC well casing was capped with a coffee can. According to Mr. Nader, the City of Lincoln installed the well approximately three years ago. The well is associated with the new City of Lincoln water supply well and utility building recently installed to the east of the Property, according to Mr. Nader. The well possibly served as a test well or observation well for aquifer pump testing in conjunction with the installation of the new City well.

Approximately 80-acres of pastureland along the northern Property boundary had been recently disced at the time of the site reconnaissance. According to Mr. Nader, he

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intended to plant an oat hay crop in this area; however, planting was cancelled as the expected return would not yield a profit due to poor market prices for oat hay.

PG&E maintains two utility easements along the eastern Property boundary on the southern half of the Property – one for overhead low voltage power lines and the second for an underground natural gas pipeline (Figure 2). The City of Lincoln also maintains a 3-acre utility easement along the western Property boundary for a newly installed underground effluent pipeline. The effluent pipeline will convey sanitary waste from the City of Lincoln to a future treatment plant to be located west of the Property.

The nine irrigation ponds appear to all be manmade. The small pond located south of the farm site and the two ponds located along the eastern Property boundary were constructed between 1952 and 1962, according to historical topographic maps and aerial photographs. The three ponds located east of the farm site were constructed between 1962 and 1967. The large pond located south of the farm site was constructed between 1967 and 1975. The small pond located near the western Property boundary was constructed between 1975 and 1981, and the small pond located north of the farm site was constructed between 1981 and 1992. The ponds appear to be shallow, with maximum depths of approximately 4 to 6 feet.

Three debris areas were observed on the Property – one consisting of concrete rubble located on the south side of the small pond located south of the farm site; the second consisting of old tires located at the drainage outlet of the small pond near the concrete rubble; and a third debris area consisting mainly of wood located east of the farm site near the pond. No evidence of hazardous materials was observed in the debris.

With the exception of the three debris areas, no signs of dumpsites were observed on the balance of the Property, and no evidence of significant ground staining or releases of hazardous materials were observed.

2.2 Adjacent Site and Vicinity Observations

The area in the vicinity of the Property consists primarily of vacant pastureland with scattered farm sites, large abandoned barns, and irrigation ponds:

North   Moore Road, beyond which is vacant pastureland, a mobile home and three large abandoned barns.

West   Moore Road, beyond which is vacant pastureland and a farm site, scattered residences, a large pond, a newly constructed City of Lincoln effluent impoundment (empty), and Ingram Slough.

South   Vacant pastureland.

East   Vacant pastureland, ponds, a newly constructed City of Lincoln
               utility building and water supply well, Ingram Slough, a farm site,
               and multiple abandoned large barns.

GeoTrans did not observe the storage or use of hazardous materials on the adjacent sites
listed above.

3.0 HISTORICAL REVIEW

GeoTrans reviewed historical aerial photographs, historical topographic maps, conducted an interview with the Property owner, reviewed a prior report, and obtained an archeological database report for the Property to evaluate historical land use of the Property. Sanborn Fire Insurance maps were not readily available for the area where the Property is located. Historical site use information is presented below.

3.1 Aerial Photograph Review

Aerial photographs for the years 1952, 1962 and 1993 were obtained from Environmental Data Resources (EDR) for review. A 1977 aerial photograph from the Placer County Soil Survey, and a 1997 aerial photograph obtained from the Microsoft Terraserver website were also reviewed. Aerial photographs generally provide information on land use over time, and the position of notable features located on site such as buildings, landfill areas, above ground tanks, and areas of distressed vegetation or discoloration. A brief summary of each photograph is presented below.

1952 The existing house at the farm site is visible on the photograph; however, the equipment shed, tack shed, barn, residence site and ponds have not been constructed. Ingram Slough is visible on the Property. A hay or grain crop appears to have been harvested on the portion of the Property located north of the farm site, based on the "corduroy" track pattern on the ground surface. The portion of the Property located south of the farm site and north of Ingram Slough appears to be supporting a grain crop. The balance of the Property appears to be pastureland. Moore Road is visible to the west and north of the Property. No structures are visible on the adjacent land to the north of the Property; however, a hay or grain crop appears to have been harvested from this site, based on the track pattern on the ground surface. The adjacent land to the west and south appears to be pastureland. The adjacent land to the east appears to be supporting pastureland and grain crops; however, only partial coverage to the east is provided on the photograph.

1962 The barn, equipment shed, and tack shed have been constructed at the farm site since 1952. The two ponds located along the eastern Property boundary and the small pond located south of the farm site have also been constructed since 1952. Much of the central one-half of the Property appears to be supporting a grain crop and the balance of the Property appears to be pastureland. Ingram Slough has been channeled along the eastern Property boundary just east of the farm site. The adjacent properties to the north, west and south appear relatively unchanged, except the large pond to the west of the Property has been constructed, and a grain

crop also appears to the west. The existing adjacent farm site and large barns are visible to the east of the Property.

1977 The Property and surrounding areas appear relatively unchanged since 1962; however, the residence site has been constructed to the north of the farm site and the three ponds located east of the farm site have been constructed. The adjacent large barns and mobile home have been constructed to the north of the Property across Moore Road. Additional large barns appear to have been constructed to the east of the Property.

1993 The Property and surrounding areas appear similar to conditions observed during the site reconnaissance; however, much of the Property located south of the residence site appears to be supporting a grain crop. The existing residences located west of the Property have been constructed since 1977.

1997 The Property and surrounding areas appear relatively unchanged since 1993.

3.2 Historical Topographic Maps

GeoTrans reviewed copies of historic 1910, 1953, 1967, 1975 and 1981 U.S. Geological Survey 7.5-minute topographic maps of the Roseville, California Quadrangle. The topographic maps were reviewed to identify historical geomorphic features and the presence or absence of structures located on and near the Property.

1910 The Property appears to be undeveloped except for a small structure located approximately 75 feet due west of the existing residence at the present day farm site. Ingram Slough is depicted on the Property; however, no ponds have been constructed. Moore Road is shown as it currently exists to the north and west of the Property. The adjacent properties appear to be undeveloped, except for one structure located east of the northern portion of the Property and a second structure located west of the Property across Moore Road. These structures appear to represent the adjacent present day farm sites to the east and west of the Property.

1953 The Property and surrounding areas appear unchanged since 1910, except a dirt road is now depicted leading to the on-site structure from Moore Road. What appear to be three east-west trending irrigation ditches have been constructed on the Property. The ditches enter the central portion of the Property from the east. No ponds are depicted on the Property; however, two drainage patterns are shown as originating on the Property – one in the northern portion of the Property and the second just south of Ingram Slough. Both drainage patterns flow to the west and

exit the Property. The existing capped irrigation well located along the eastern Property boundary is shown on the map.

1967 The farm site buildings on the Property have been constructed since 1953; however, the original single structure is no longer present. The dirt access road on the Property has been realigned to its present day location. The residence site to the north of the farm site has not been constructed. The three ponds located east of the farm site, the two ponds located along the eastern Property boundary, and the small pond located south of the farm site have been constructed since 1953. Two additional ponds (no longer on the Property) are also depicted immediately north of the farm site and immediately north of the dirt access road, adjacent to the bend in Moore Road. Ingram Slough has been channeled along the eastern Property boundary. The existing east-west oriented drainage ditch located south of the farm site has been constructed, and three north-south oriented irrigation ditches are depicted leading south from this drainage ditch. The existing capped irrigation well located southeast of the farm site has been constructed since 1953. The adjacent large pond to the west of the Property has been constructed, and several of the existing large barns to the east of the Property have been constructed.

1975 The Property appears relatively unchanged since 1967; however, the large irrigation pond to the south of the farm site has been constructed. The residence site to the north of the farm site is not depicted on the Property. The adjacent sites appear relatively unchanged, except the existing large barns to the north of the Property across Moore Road have been constructed, in addition to several more large barns to the east of the Property.

1981 The Property and surrounding areas appear similar to conditions observed during the site reconnaissance, however, the pond located north of the farm site has not been constructed. The two ponds no longer located on the Property, first identified on the 1967 topographic map, remain on the Property. The residence site to the north of the farm site and the small pond located along the western Property boundary have been constructed on the Property since 1975. Additional large barns have been constructed to the east of the Property.

3.3 Interviews

GeoTrans interviewed Mr. Wayne Nader, the Property owner, on December 21, 2000. According to Mr. Nader, his family purchased the Property from Teichert Construction in May 1999. Teichert Construction owned the Property for approximately 10 years prior; however, Teichert did not develop the Property or conduct operations on the Property, according to Mr. Nader. Mr. Nader indicated the Property has been used mainly for cattle

grazing, but may have supported feed crops (hay or oats) in the past. To Mr. Nader's knowledge, chemical applications to the Property, if any, may have included broadcast applications of nitrogen-based fertilizers.

According to Mr. Nader, he did not conduct a Phase I environmental site assessment prior to purchasing the Property from Teichert. According to Mr. Nader, Teichert had indicated they were not aware of any potential environmental liabilities associated with the Property, other than a former 500-gallon underground storage tank (UST) located near the tack shed. Mr. Nader indicated that Teichert retained Harding Lawson Associates (HLA) to conduct a subsurface soil investigation at the location of the former UST in 1998, the results of which were presented in HLA's March 1998 report (discussed in Section 3.4). The investigation did not indicate a fuel release had occurred from the former UST, according to Mr. Nader.

The two on-site residences and associated outbuildings, two domestic wells, three irrigation wells and irrigation ponds were located on-site in May 1999 when the Nader's purchased the Property, according to Mr. Nader. The house located nearest to Moore Road was constructed in 1970 and the second house, barn, tack shed and equipment shed were constructed in the 1950s (Note: the historical topographic maps and aerial photographs indicate the house located nearest to Moore Road was constructed sometime between 1975 and 1977). After purchasing Property, Mr. Nader removed the well pumps from the irrigation wells and welded steel plates over the well casings. Mr. Nader is not familiar with the completion characteristics or the three irrigation wells, or the two domestic wells located on the Property. Mr. Nader is not aware of historical chemical or hazardous materials use or storage, dumpsites, or chemical releases on the Property with the exception of minor oil drippings from equipment stored in the equipment shed.

3.4 1998 HLA Field Investigation Report

Mr. Doug Mull of Lewis Operating Corp. provided GeoTrans with a copy of a 1998 HLA field investigation report prepared for the Property. The report summarizes field activities and soil sampling conducted to assess soil conditions at the location of a 500-gallon UST formerly located adjacent to the tack shed at the farm site. The UST was reportedly removed from the Property by Teichert Construction several years prior to 1998; however, no records exist for the UST removal. The HLA report is summarized below. A copy of the report is provided in Appendix C.

On January 26, 1998, HLA excavated a pit to 8-feet in depth in the location of the former UST adjacent to the west wall of the tack shed. Soil samples were collected at depths of 3-, 5- and 7-feet below grade. The soil samples were screened for volatile organic compounds (VOCs) in the field using a photoionization detector (PID). No positive PID

readings were detected, and no soil staining or odors were noted in the excavation. The three soil samples were subsequently submitted for laboratory analysis of total petroleum hydrocarbons in the gasoline (TPH-g) and diesel (TPH-d) ranges and benzene, toluene, ethyl benzene and xylenes (BTEX). No TPH or BTEX compounds were detected in the three soil samples. HLA concluded that the soil in the vicinity of the former UST did not appear to have been impacted by a release of petroleum hydrocarbons.

3.5 Historic and Archeological Significance

Ms. Marianne Russo, with the North Central Information Center (NCIC) at Sacramento State University, was contacted for information to assess whether the Property and surrounding areas are considered of historic or archeological significance. The NCIC prepared a summary report to assess potential prehistoric and historic resources on and near the Property, based on available published archeological surveys. The NCIC's report is included in Appendix D.

According to NCIC information, a small portion of the Property (northern ¼) was previously surveyed by Lindstrom with Wells (1989) and by Jones & Stokes (1999). Surveys of other adjacent parcels have also been conducted as documented in Report No. 452 by Derr (1997), Jones and Stokes (1998 and 1999), Derr (1996), and Lindstrom with Wells (1989). Based on the NCIC's review of these documents, no previously recorded sites of *prehistoric* significance are known to be located on or adjacent to the Property. There is one site (P-31-21), composed of scattered stone tools, located within 1,000 feet of the Property. The nearest site of *historic* significance is located over ½-mile away and consists mostly of early ranching remains. The NCIC's review an 1855 GLO Plat for the vicinity of the Property shows that two branches of the Sacramento & Virginia Road were located to the north and southeast of the Property. These roads suggest that the area was beginning to develop soon after the beginning of the Gold Rush. The NCIC's review of listed historical references did not reveal any landmarks, National Register sites, historic districts or other mentioned sites on or in the vicinity of the Property.

The NCIC concluded that the sensitivity of the Property is estimated to be in the moderate to high range for *historic* resources, and in the moderate to low range for resources of *prehistoric* origins. The NCIC recommended that an archeological survey of the overall Property be conducted to adequately assess potential archeological resources on the Property.

4.0 SITE PHYSICAL CONDITIONS

4.1 Site Topography

The U.S. Geological Survey 7.5-minute Roseville, California quadrangle was used to reference geographic features in the vicinity of the Property. The Roseville Quadrangle reviewed for this assessment was originally published in 1967 and was photorevised in 1981.

According to the topographic map, the Property is located at an approximate elevation ranging from 135 feet above mean sea level (MSL) in the northeast corner of the Property to 105 feet above MSL in the southwest corner of the Property. The ground surface on the Property slopes gently to the southwest. Ingram Slough drains through the Property from the southeast corner of Section 20 to the southwest corner of Section 29, where it empties into Orchard Creek. Orchard Creek drains to the west, where it empties into the Auburn Ravine located approximately two miles west of the Property.

The two residences, barn, equipment shed, irrigation ponds, one of the irrigation wells, and the dirt access road from Moore Road are depicted on the Property on the map. Small structures that appear to represent scattered residences or farm sites are depicted on the map in the surrounding areas to the west, south and east of the Property. Larger structures that appear to represent the large barns located north and east of the Property are also depicted on the map.

4.2 Local Geology

The 1987 *Geologic Map of the Sacramento Quadrangle*, prepared by the State of California Department of Conservation, Division of Mines and Geology, was used to assess the local geology of the Property. According to the Map, the Property is located on Quaternary age alluvium of the Riverbank Formation.

According to the 1994 *Fault Activity Map of California*, prepared by the State of California Department of Conservation, Division of Mines and Geology, the inferred trace of the north-south trending Willows Fault Zone is located approximately 14 miles west Property. The north-south trending Deadman Fault is also located approximately 14 miles east of the Property in the Foothills Fault System. According to the map, these faults have not experienced displacement within the last 1.6 million years. No fault traces are depicted on the Property.

GeoTrans, Inc.

4.3 Soil Conditions

According to the USDA Soil Conservation Service (SCS) Soil Survey of Placer County, California, soil on the Property is comprised primarily of the Comeda-Fiddyment complex to the north of the farm site and the Kilaga loam to the south of the farm site. The Comeda is a deep, well-drained claypan soil that formed in alluvium, mainly from granitic sources. The Fiddyment is a well-drained soil that is moderately deep over a hardpan, which formed in old valley fill siltstone. Most areas of this complex have been used to support winter grain crops or used as pastureland. The Kilaga is a very deep, nearly level, well-drained soil on alluvial bottoms and low terraces, which formed in alluvium from mixed sources. This soil unit is suited for rice, irrigated pasture and cornfields. The Kilaga soil exhibits slow permeability in the subsoil and has a high shrink-swell capacity.

4.4 Groundwater Conditions

Depth to groundwater was measured at 36 feet below grade in the domestic well located at the farm site. Based on October 1990 groundwater surface elevation data for three nearby State wells, obtained from the Department of Water Resources Internet accessible database, the groundwater flow direction beneath the Property was calculated to be to the northwest.

GeoTrans, Inc.

5.0 REGULATORY AGENCY DATABASE SEARCH

To help assess potential on- or off-site environmental concerns relevant to the Property, GeoTrans retained Environmental Data Resources (EDR) to perform a search of federal, state, and local regulatory agency databases that contain listings of facilities which use or store hazardous substances, as well as listings of sites that are known or suspected to have contaminated soil or groundwater due to a release of a hazardous substance or leaking underground storage tank.

The database search also lists landfills, other disposal sites, and properties with registered underground storage tanks. Regulatory agency databases, which report hazardous substance use or storage, were searched for sites within a 1/2-mile radius of the Property. Databases that report hazardous substance release sites and landfill sites were searched out to a 1-mile radius. The database search radii were extended by 1/2-mile due to the large size and irregular shape of the Property. The database search report is included in Appendix B.

The Property was not listed on the regulatory agency databases. Only one nearby site was found within the database search radius. This site is the Antonio Mountain Ranch site located at 1735 Fiddyment Road, one-half mile due west of the Property. According to information presented in the EDR report, a gasoline release occurred at this site from a UST. The release reportedly impacted soil only. The impacted soil was excavated and treated on-site (spreading and aeration), according to the EDR report. The Placer County Environmental Health Department closed the site in September 1992. This site is not expected to represent a concern for the Property, as it is located hydraulically downgradient with respect to the local groundwater flow direction and groundwater impact was not documented.

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6.0 LOCAL AGENCY RESEARCH

The purpose of this task was to obtain information from regulatory or local government agencies most likely to have information regarding hazardous materials use, hazardous materials storage or hazardous materials releases, and abandoned oil and gas wells at the Property. The agencies from which GeoTrans requested information regarding the Property were the Placer County Agricultural Commissioner's office, the California Department of Conservation Division of Oil, Gas and Geothermal Resources (DOGGR), Placer County Building and Planning Department, and the Placer County Environmental Health Department.

6.1 Placer County Agricultural Commissioner

GeoTrans requested pesticide Prior Use Reports for the Property from the Placer County Agricultural Commissioner's office. The Commissioner generally retains pesticide records for the prior five to seven years, generally according to the farm name or name of the individual using the land. According to Mr. Ken Stark, Placer County Deputy Agricultural Commissioner, he is unaware of prior pesticide use on the Property and believes the land has been used primarily for pasture. Mr. Stark indicated possible historical herbicide use on the Property could have include phenoxy herbicides or RoundUp, which would have been sprayed along fencelines and ditches for weed control.

6.2 Division of Oil, Gas and Geothermal Resources

GeoTrans obtained and reviewed the DOGGR District 6 oil and gas well map for the Roseville area. According to the map, there are no active or abandoned oil/gas wells located on the Property.

6.3 Placer County Building and Planning Department

Available building records pertaining to the Property were requested at the Placer County Building and Planning Department in Auburn, California. The only records on file pertained to the construction of the swimming pool at the residence site. Records indicate Roy Story, the Property owner, installed the pool in 1978. Peri Bilt Pools of Carmichael, California performed the installation.

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6.4 Placer County Environmental Health Department

Placer County Environmental Health Department personnel performed a search of their computer database for available information pertaining to the Property. No records were found for the Property searching by address or Property owner name (Wayne Nader).

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7.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS

A summary of the Phase I EA findings are presented below.

- Based on the findings of this Phase I EA, the majority of the Property has been used as rangeland, and has possibly supported periodic grain crops, since at least 1910. One small structure was located on-site at the current farm site area from at least 1910 to sometime between 1952 and 1963. The existing farm site was constructed in the 1950s, and the existing residence site was constructed between 1975 and 1977. Mr. Wayne Nader is the current Property owner.

- Mr. Nader purchased the Property from Teichert Construction in May 1999. Teichert owned the Property for approximately 10 years, according to Mr. Nader. According to Mr. Nader, Mr. James Riolo has leased the Property for a number of years for running cattle as a hobby.

- At the time of the site reconnaissance, structures located on the Property included two residences, a garage, equipment shed, tack shed, barn and cattle corrals. Miscellaneous chemicals observed stored in the equipment shed included diesel, gasoline, and petroleum-based lubricants. No evidence of chemical releases were observed on the Property, with the exception of minor "spot" oil staining on the ground in the equipment shed. The staining appears to be typical of minor oil drippings from vehicle and equipment parking. The balance of the Property consisted of vacant rangeland, and several head of cattle observed in the central portion of the Property.

- Based on the age of the on-site structures (greater than 23 years old), the potential exists for asbestos-containing building materials (ACBMs) to have been used during their construction.

- A 500-gallon UST was formerly located adjacent to the west wall of the tack shed at the farm site. According to Mr. Nader, the UST was an above ground propane tank that had been converted into a UST. The UST was reportedly removed by Teichert Construction; however, no records exist for the UST removal. Soil samples were collected and analyzed from the former UST location in 1998 by Harding Lawson Associates. The soil samples did not contain detectable concentrations of TPH-gasoline, TPH-diesel or benzene, toluene, ethyl benzene and xylenes (BTEX) compounds.

GeoTrans, Inc.

- No evidence of past or present pesticide use or storage was observed on the Property. According to the Property owner, Mr. Wayne Nader, he is unaware of pesticide use on the Property. Mr. Nader believes chemical use on the Property, if any, may have involved broadcast applications of nitrogen based fertilizers. The Placer County Agricultural Commissioner believes the Property has been used primarily for pasture and is unaware of past pesticide used on the Property. The Commissioner indicated phenoxy herbicides or RoundUp might have been used along fencelines and ditches for weed control.

- Two active domestic water supply wells and three inactive (capped) irrigation wells are located on the Property. One 4-inch diameter PVC monitoring well is also located on the Property. The City of Lincoln installed the well approximately three years ago in conjunction with their recently installed water supply well located east of the Property. The completion characteristics of the on-site wells are unknown.

- Two underground septic tanks and leach field systems are located on the Property – one at each residence.

- Nine relatively shallow manmade irrigation ponds are located across the Property.

- Eight pole-mounted electrical transformers are located across the Property. It is unknown if the transformers are oil-cooled and, if so, if the cooling oil contains polychorinated biphenyls (PCBs). No staining was noted beneath the transformers.

- PG&E maintains two utility easements along the eastern Property boundary on the southern half of the Property – one for low voltage overhead electric transmission lines, and the second for an underground natural gas pipeline. The City of Lincoln also maintains a utility easement along the western Property boundary for a newly installed underground effluent pipeline. The effluent pipeline will convey sanitary waste from the City of Lincoln to a future treatment plant to be located west of the Property.

- Three debris areas were observed on the Property – one consisting of concrete; the second consisting of old tires; and the third consisting mainly of wood. No evidence of hazardous materials was observed in the debris.

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- GeoTrans's review of federal and state regulatory agency databases revealed only one nearby site (a gasoline release site) located within the database search radii. This site has been closed by the lead regulatory agency and is not expected to represent a concern for the Property.

- The NCIC's review of available published reports did not reveal areas of historic or prehistoric significance on the Property. The NCIC's review of listed historical references did not reveal any landmarks, National Register sites, historic districts or other mentioned sites on or in the vicinity of the Property.

Based on the information summarized above, the following conclusion is made.

- GeoTrans found no evidence or indication of the presence of *Recognized Environmental Conditions* on the Property. However, based on the age of the on-site structures, ACBMs may be present in the structures.

- The NCIC concluded that sensitivity of the Property is estimated to be in the moderate to high range for *historic* resources and in the moderate to low range for resources of *prehistoric* origins.

The above conclusion supports the following recommendation:

- No further site assessment of the Property is recommended at this time.

- Placer County Environmental Health and/or the local air management district should be contacted to determine if asbestos sampling and abatement is required prior to demolition of the on-site structures.

- The two domestic wells and three irrigation wells should be properly abandoned according to State and local requirements prior to developing the Property.

- Site development in the area of the 4-inch PVC monitoring well should be coordinated with the City of Lincoln to determine if this well is permanent or can be abandoned.

- The NCIC recommends that an archeological survey be completed for the overall Property to assess and adequately catalogue potential archeological resources that may be located on the Property.

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8.0 LIMITATIONS

The property investigation performed as part of this assessment should not be construed to be complete characterizations of overall environmental regulatory compliance, or of conditions above or below grade. GeoTrans has assumed that the information sources utilized for this investigation provided complete and accurate information; however, regulatory files are often difficult to access and incomplete, particularly in regard to historical data. Any reliance by Lewis Operating Corp. shall be consistent and in keeping with the limitations expressed in GeoTrans' December 14, 2000 proposal, and subject to project work scope limitations.

The work performed is consistent with the standards of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions. No other representation, expressed or implied, and no warranty or guarantee is included or intended in this report.

GeoTrans, Inc.

FIGURES

← SITE

Lewis Operating Corp. Lincoln, California	DATE: 12/28/00
	DESIGNED: RDH
Site Location Map	CHECKED: KDH
512 Acre Nader Property	APPROVED: KDH
	DRAWN: RDH
2675 Moore Road	PROJ.: L318-101
GeoTrans, Inc. A TETRA TECH COMPANY	Figure 1

Scale: 1"=2000'

0   1000'   2000'

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Site Vicinity Map — 512 Acre Nader Property, 2675 Moore Road

PASTURE

RECENTLY DISCED

Mobile Home

City of Lincoln Effluent Pipeline

Farm Site

MOORE ROAD

Swimming Pool

House

City of Lincoln Monitoring Well

Farm Site

House

House

House

Farm Site

New Utility Building and City Well

PASTURE

Debris Pile

Irrigation Water Lift Pump

Farm Site (See Figure 3)

Drainage

Irrigation Water Transfer Pump

PASTURE

PG&E Overhead Power Lines

PG&E Natural Gas Pipeline

PASTURE

Abandoned Irrigation Well

Old Tires

Concrete Debris

City of Lincoln Effluent Impoundment For Future POTW

PASTURE

Ingram Slough

PASTURE

PASTURE

Creek

PASTURE

N

Scale: 1"=600'
0   300   600'

Explanation

⊕ Active 8" Domestic Well

⊕ Inactive 12" Irrigation Well (Capped)

● Monitoring Well

Ⓣ Pole Mounted Transformer

▨ Large Barns

▨ Irrigation Pond

— · — Property Boundary

Lewis Operating Corp.
Lincoln, California

Site Vicinity Map
512 Acre Nader Property
2675 Moore Road

GeoTrans, Inc.

DATE: 12/28/00
DESIGNED: RDH
CHECKED: KDH
APPROVED: KDH
DRAWN: RDH
PROJ.: L31B-101

Figure 2
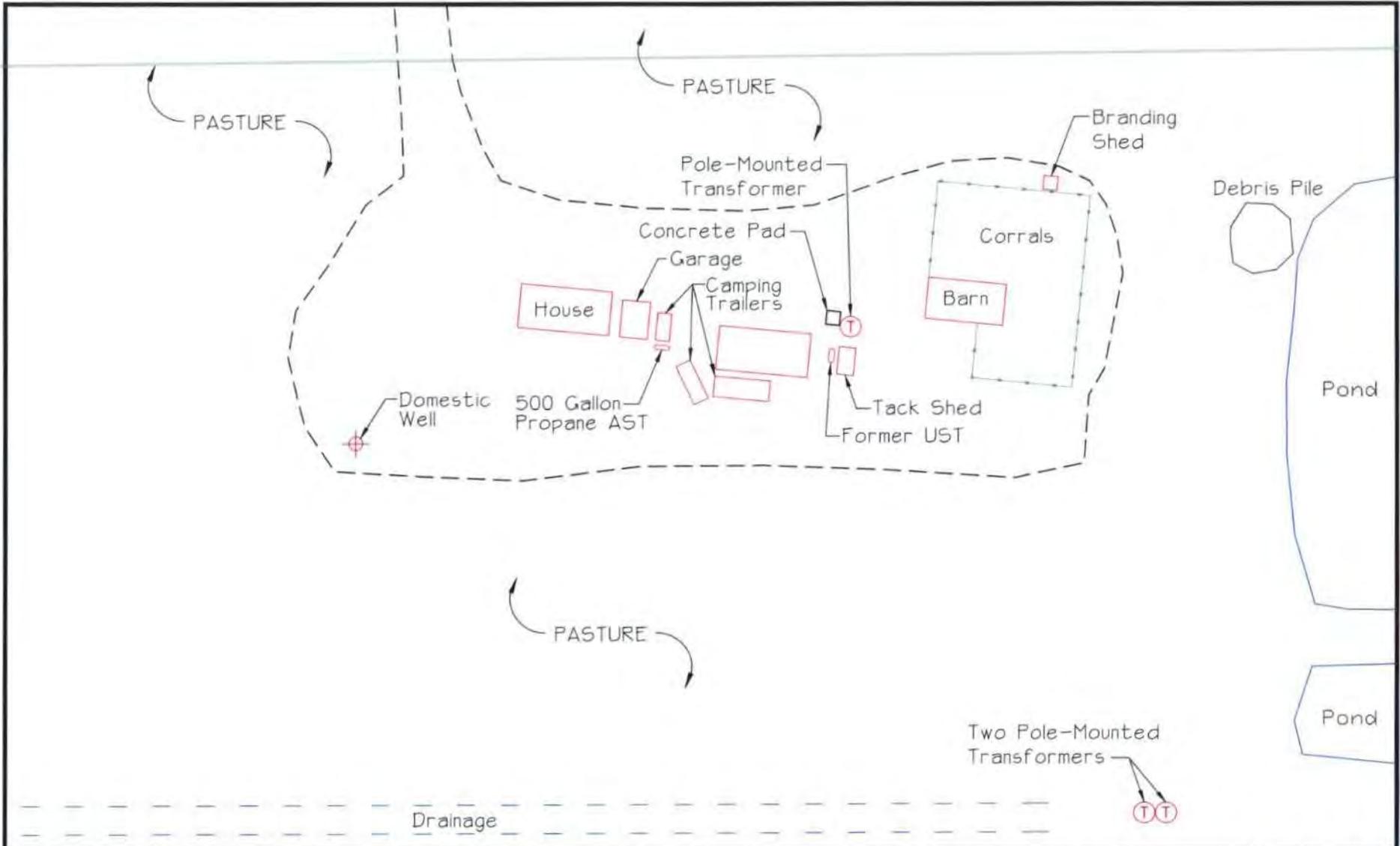
PASTURE

PASTURE

Branding Shed

Debris Pile

Pole-Mounted Transformer

Concrete Pad

Corrals

Garage

Camping Trailers

House

Barn

Pond

Domestic Well

500 Gallon Propane AST

Tack Shed

Former UST

PASTURE

Pond

Two Pole-Mounted Transformers

Drainage

Lewis Operating Corp. Lincoln, California	DATE: 12/28/00
	DESIGNED: RDH
Farm Site Area **512 Acre Nader Property** **2675 Moore Road**	CHECKED: KDH
	APPROVED: KDH
	DRAWN: RDH
	PROJ.: L318-101

N

Scale: 1"=100'
0   50'   100'

GeoTrans, Inc.
A TETRA TECH COMPANY

Figure 3

D:\Projects\GeoTrans\Sacto\LewisCorp\L318\drawings\18sn03-a.dwg   12/29/2000   10:33:49

APPENDIX A

Site Photographs

Photo 1: Overview of the farm site looking north-northwest.

Photo 2: Looking south at the farm site residence and garage.

GeoTrans, Inc.

512-Acre Nader Property

2675 Moore Road

Lincoln, California

Photographic Record
December 21, 2000

Photo 3: Domestic well located in the southwest corner of the yard at the farm site residence.
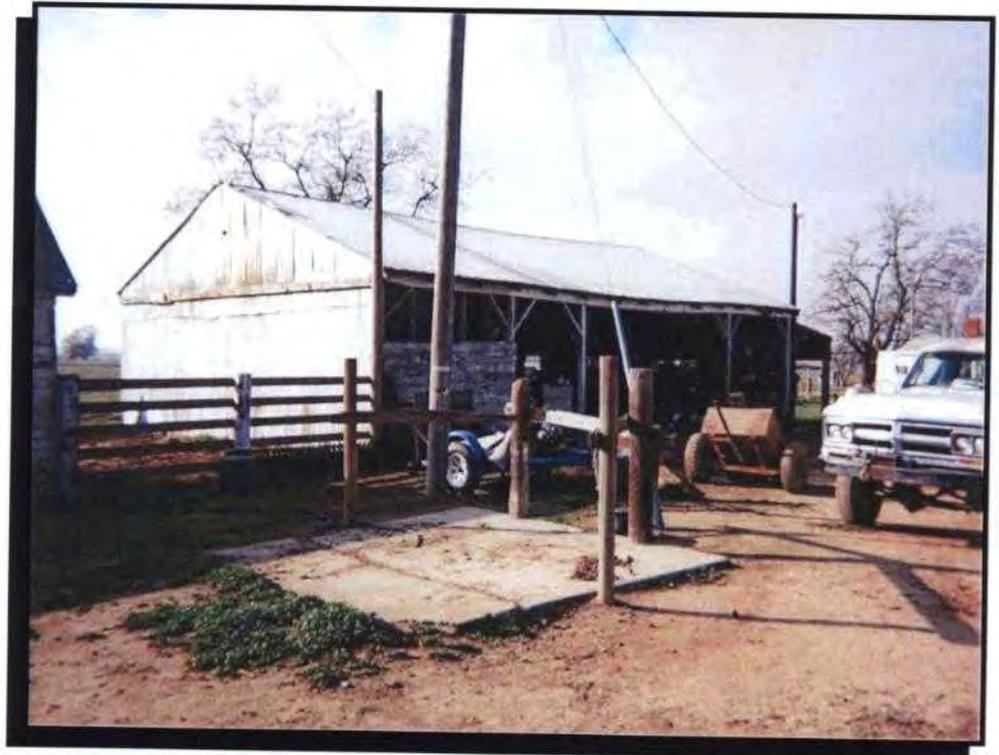
Photo 4: Looking southwest at the farm site equipment shed.

GeoTrans, Inc.

512-Acre Nader Property

2675 Moore Road

Lincoln, California

Photographic Record
December 21, 2000
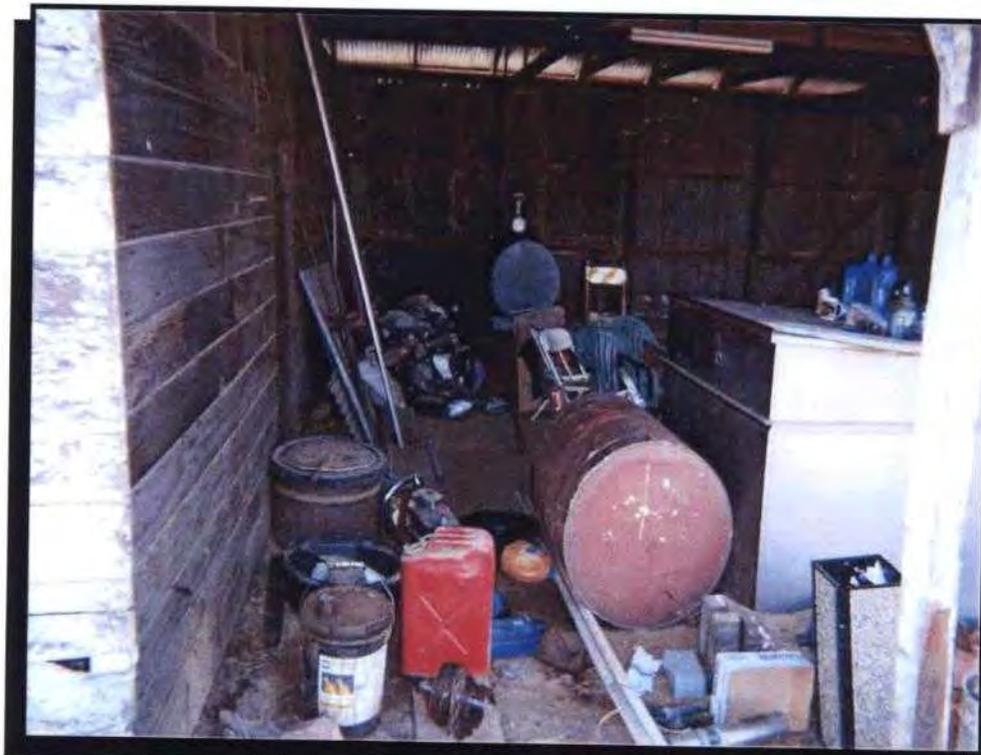
Photo 5: Miscellaneous containers, gasoline can, empty gasoline AST (red) stored in the equipment shed. The trailer-mounted diesel AST is visible in the rear of the shed.

Photo 6: Miscellaneous containers of lubricating oil and junk stored in the equipment shed. Workbench is visible along shed wall in background.

GeoTrans, Inc.

512-Acre Nader Property

2675 Moore Road
Lincoln, California

**Photographic Record
December 21, 2000**
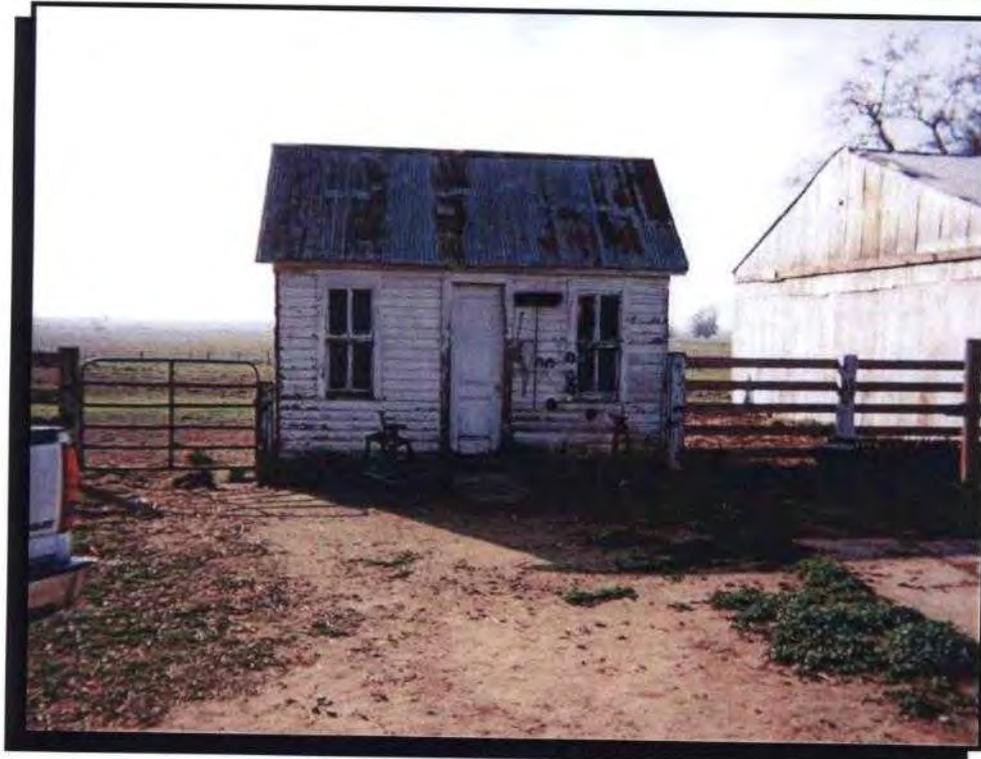
Photo 7: Looking south at the tack shed at the farm site.

Former 500-gallon UST
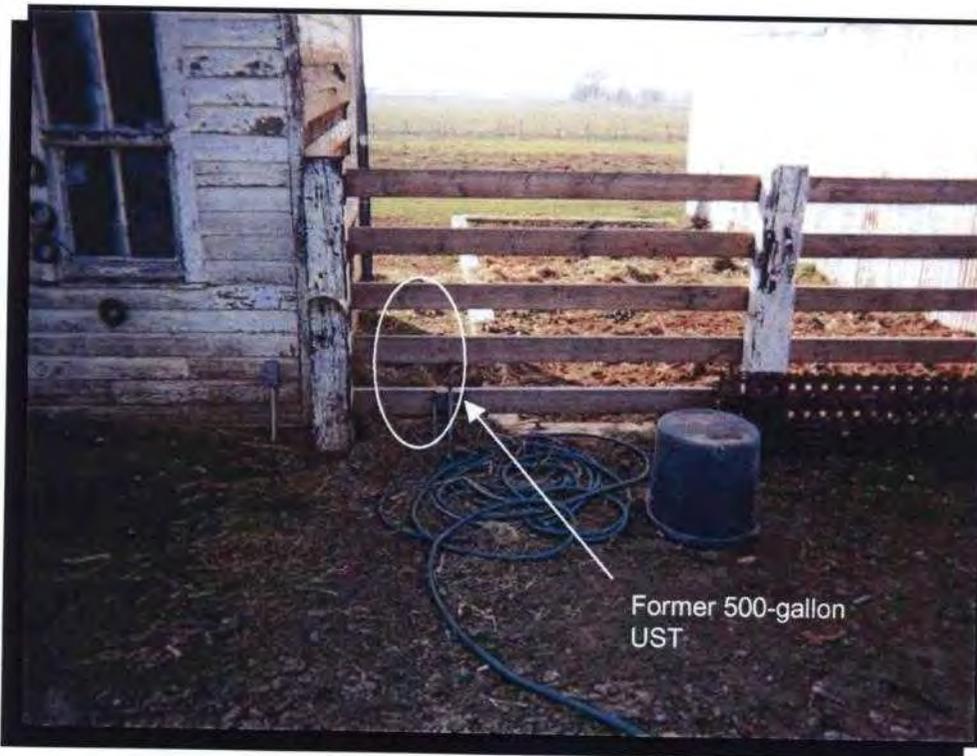
Photo 8: Looking south at the location of the former 500-gallon UST along exterior west wall of the tack shed.

GeoTrans, Inc.

512-Acre Nader Property

2675 Moore Road

Lincoln, California

Photographic Record
December 21, 2000

Photo 9: Looking northeast at the farm site barn.

Photo 10: Looking north-northwest at the residence site.

GeoTrans, Inc.

512-Acre Nader Property
2675 Moore Road
Lincoln, California

Photographic Record
December 21, 2000

Photo 11: Looking west at the domestic well located in the northeast corner of the yard at the residence site.

Photo 12: Looking north-northeast across the three ponds located east of the farm site.

GeoTrans, Inc.

512-Acre Nader Property
2675 Moore Road
Lincoln, California

Photographic Record
December 21, 2000

Photo 13: Looking east at the capped irrigation well located south of the farmsite.

Photo 14: Looking west across the Property from the two irrigation ponds located along the eastern Property boundary.

GeoTrans, Inc.

512-Acre Nader Property
2675 Moore Road
Lincoln, California

Photographic Record
December 21, 2000

Photo 15: Looking west across the large pond located south of the farmsite.

Photo 16: Looking north across the Property from the southern Property boundary.

GeoTrans, Inc.

512-Acre Nader Property

2675 Moore Road
Lincoln, California

Photographic Record
December 21, 2000

Photo 17: Pile of concrete rubble located along Ingram Slough on the southern half of the Property.

Photo 18: Old tires located at the drainage of the small irrigation pond near Ingram Slough on the southern half of the Property.

GeoTrans, Inc.

512-Acre Nader Property

2675 Moore Road

Lincoln, California

Photographic Record
December 21, 2000

Photo 19: City of Lincoln monitoring well located near the eastern Property boundary on the northern half of the Property.
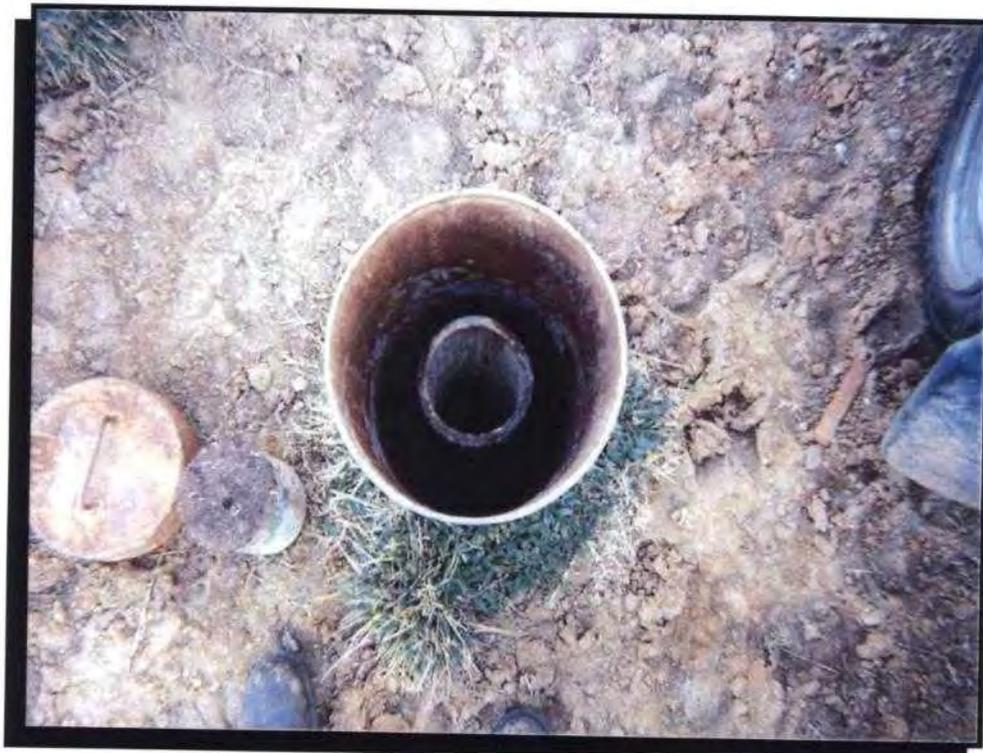
Photo 20: Close-up of City of Lincoln four-inch monitoring well casing.

GeoTrans, Inc.

512-Acre Nader Property
2675 Moore Road
Lincoln, California

Photographic Record
December 21, 2000

Photo 21: Looking east toward the adjacent City of Lincoln utility building and location of new City of Lincoln water supply well.

Photo 22: Looking north at the capped irrigation well located on the northern portion of the Property on the south side of the small pond.

GeoTrans, Inc.

512-Acre Nader Property

2675 Moore Road

Lincoln, California

Photographic Record
December 21, 2000

APPENDIX B

Regulatory Agency Database Report

The EDR-Radius Map
with GeoCheck®

EⅮR® Environmental
Data
Resources, Inc.

512-Acre Vacant Site
Moore Road
Lincoln, CA 95648

Inquiry Number: 575600.3s

December 15, 2000

The Source
For Environmental
Risk Management
Data

3530 Post Road
Southport, Connecticut 06490

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

EDR® Environmental Data Resources, Inc.

an edr company

"Linking Technology with Tradition"

Sanborn® Map Report

Ship to: Keith Hoofard

HSI Geotrans

3035 Prospect Park Drive

Rancho Cordova, CA 95670

1058351PEK   916-853-1800

Order Date: 12/15/2000   **Completion Date:** 12/18/2000

Inquiry #: 575600.4S

P.O. #: lincoln site

Site Name: 512-Acre Vacant Site

Address: Moore Road

City/State: Lincoln, CA 95648

Cross Streets: Fiddyment Road

This document reports that the largest and most complete collection of Sanborn fire insurance maps has been reviewed based on client-supplied information, and fire insurance maps depicting the target property at the specified address were not identified.

NO COVERAGE

TABLE OF CONTENTS

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc. (EDR). The report meets the government records search requirements of ASTM Standard Practice for Environmental Site Assessments, E 1527-00. Search distances are per ASTM standard or custom distances requested by the user.

TARGET PROPERTY INFORMATION

ADDRESS

MOORE ROAD
LINCOLN, CA 95648

COORDINATES

Latitude (North):	38.864800 - 38° 51' 53.3"
Longitude (West):	121.328100 - 121° 19' 41.2"
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	645056.0
UTM Y (Meters):	4302894.0

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property:	2438121-G3 ROSEVILLE, CA
Source:	USGS 7.5 min quad index

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the ASTM E 1527-00 search radius around the target property for the following databases:

FEDERAL ASTM STANDARD

NPL	National Priority List
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CERC-NFRAP	Comprehensive Environmental Response, Compensation, and Liability Information System
CORRACTS	Corrective Action Report
RCRIS-TSD	Resource Conservation and Recovery Information System
RCRIS-LQG	Resource Conservation and Recovery Information System
RCRIS-SQG	Resource Conservation and Recovery Information System
ERNS	Emergency Response Notification System

STATE ASTM STANDARD

AWP	AWP
Cal-Sites	Cal-Sites
CHMIRS	California Hazardous Material Incident Report System
Notify 65	Notify 65

EXECUTIVE SUMMARY

Toxic Pits...................... Toxic Pits
SWF/LF......................... State Landfill
WMUDS........................ WMUDS/SWAT
UST............................. Hazardous Substance Storage Container Database
Ca. BEP........................ CA Bond Exp. Plan
Ca. FID........................ CA FID

FEDERAL ASTM SUPPLEMENTAL

CONSENT..................... CONSENT
ROD............................ ROD
Delisted NPL................. NPL Deletions
FINDS......................... Facility Index System/Facility Identification Initiative Program Summary Report
HMIRS........................ Hazardous Materials Information Reporting System
MLTS.......................... Material Licensing Tracking System
MINES........................ Mines Master Index File
NPL Lien...................... NPL Liens
PADS.......................... PCB Activity Database System
RAATS........................ RCRA Administrative Action Tracking System
TRIS........................... Toxic Chemical Release Inventory System
TSCA.......................... Toxic Substances Control Act

STATE OR LOCAL ASTM SUPPLEMENTAL

AST............................. Aboveground Petroleum Storage Tank Facilities
Ca. WDS....................... CA WDS
CA SLIC....................... CA SLIC regions.
HAZNET....................... HAZNET
CA MS......................... MS: Master List of Facilities

EDR PROPRIETARY DATABASES

Coal Gas...................... Former Manufactured gas (Coal Gas) Sites.

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified.

Elevations have been determined from the USGS 1 degree Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. EDR's definition of a site with an elevation equal to the target property includes a tolerance of +/- 10 feet. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property (by more than 10 feet). Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in **bold italics** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

EXECUTIVE SUMMARY

CORTESE: This database identifies public drinking water wells with detectable levels of contamination, hazardous substance sites selected for remedial action, sites with known toxic material identified through the abandoned site assessment program, sites with USTs having a reportable release and all solid waste disposal facilities from which there is known migration. The source is the California Environmental Protection Agency/Office of Emergency Information.

A review of the Cortese list, as provided by EDR, has revealed that there is 1 Cortese site within approximately 1.5 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
ANTONIO MOUNTAIN RANCH	1735 FIDDYMENT RD	1/2 - 1 W	1	6

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the State Water Resources Control Board Leaking Underground Storage Tank Information System.

A review of the LUST list, as provided by EDR, and dated 07/05/2000 has revealed that there is 1 LUST site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
ANTONIO MOUNTAIN RANCH	1735 FIDDYMENT RD	1/2 - 1 W	1	6

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped:

Site Name	Database(s)
BOHEMIA INC	Cal-Sites,CA MS
PURDY COMPANY, THE	Cal-Sites
FERRARI LEAVELL AND GREY PROPERTY	Cal-Sites
WESTERN PLACER HHWCF	HAZNET,SWF/LF
LINCOLN DISPOSAL SITE	SWF/LF
LINCOLN SMALL LOG SAWMILL	UST
TRMT OF PETROLEUM CONTAM. SOIL	WMUDS
COMPOSTING FACILITY	WMUDS
ALPHA EXPLOSIVES	WMUDS
GREGORY LAWLEY	HAZNET
ALPHA-IRECO INC	HAZNET
RAMOS OIL CO INC	HAZNET
LINCOLN SUB-STATION	HAZNET
BOHEMIA, INC.	Ca. BEP

NELSON LN

5TH ST

5TH

7TH

Q ST

O ST

1ST ST

FIDDYMENT RD

TT RD

ATHENS AVE

FIDDY

INDUSTRIAL AVE

STATE HWY 65

▲ 1

★

* Target Property

▲ Sites at elevations higher than or equal to the target property

◆ Sites at elevations lower than the target property

▲ Coal Gasification Sites (if requested)

☐ National Priority List Sites

☐ Landfill Sites

Power transmission lines

Oil & Gas pipelines

100-year flood zone

500-year flood zone

Wetlands per National Wetlands Inventory

Areas of Concern

| 0 | 1/2 | 1 | 2 Miles |

N

TARGET PROPERTY:	512-Acre Vacant Site	CUSTOMER:	HSI Geotrans
ADDRESS:	Moore Road	CONTACT:	Keith Hoofard
CITY/STATE/ZIP:	Lincoln CA 95648	INQUIRY #:	575600.3s
LAT/LONG:	38.8648 / 121.3281	DATE:	December 15, 2000 7:52 pm

DETAIL MAP - 575600.3s - HSI Geotrans
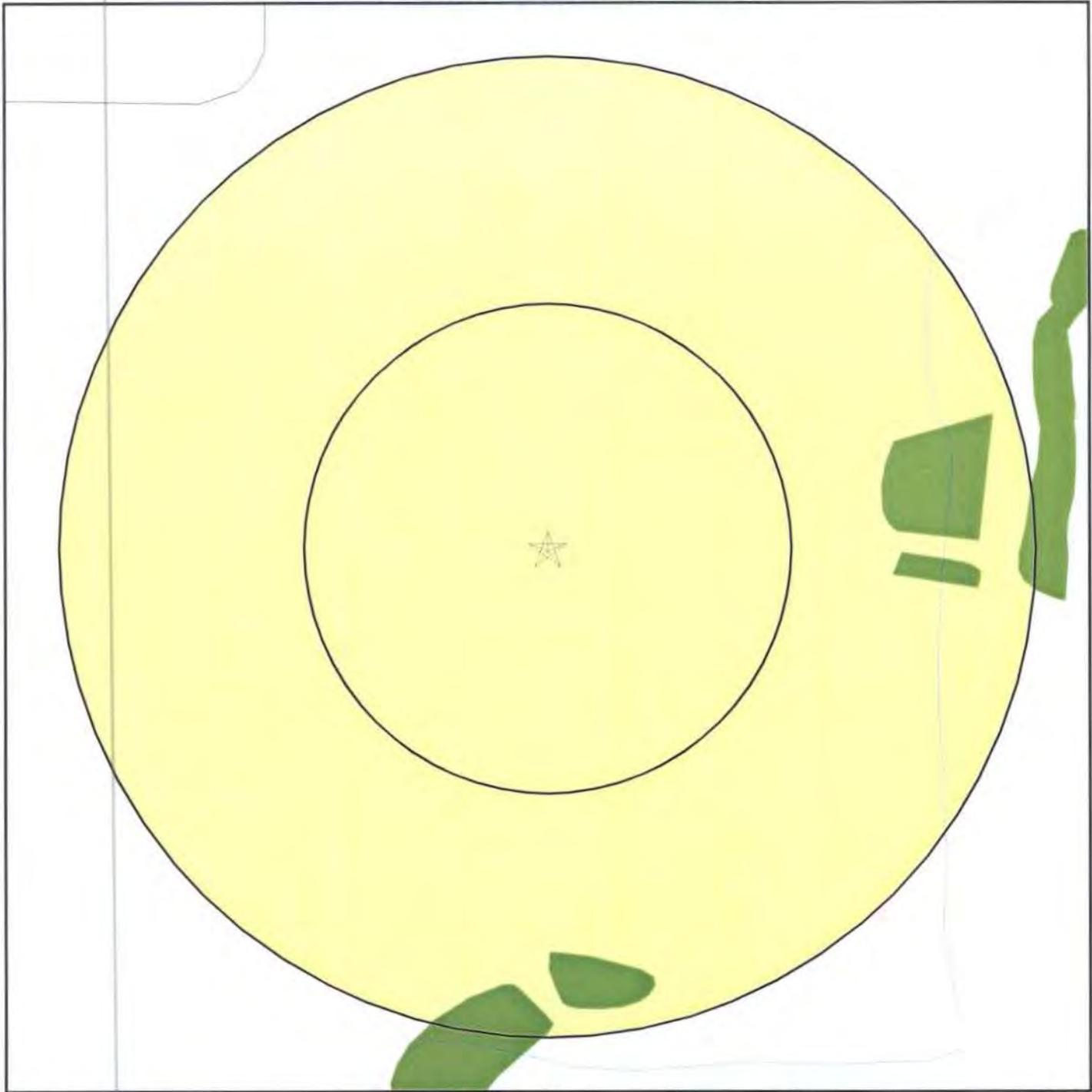
*	Target Property	
▲	Sites at elevations higher than or equal to the target property	
◆	Sites at elevations lower than the target property	
▲	Coal Gasification Sites (if requested)	
⌣	Sensitive Receptors	
☐	National Priority List Sites	
☐	Landfill Sites	

Power transmission lines
Oil & Gas pipelines
100-year flood zone
500-year flood zone
Wetlands per National Wetlands Inventory

Areas of Concern

0   1/16   1/8   1/4 Miles

TARGET PROPERTY:	512-Acre Vacant Site	
ADDRESS:	Moore Road	
CITY/STATE/ZIP:	Lincoln CA 95648	
LAT/LONG:	38.8648 / 121.3281	

CUSTOMER:	HSI Geotrans	
CONTACT:	Keith Hoofard	
INQUIRY #:	575600.3s	
DATE:	December 15, 2000 7:52 pm	

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FEDERAL ASTM STANDARD								
NPL		1.500	0	0	0	0	0	0
CERCLIS		1.000	0	0	0	0	NR	0
CERC-NFRAP		0.750	0	0	0	0	NR	0
CORRACTS		1.500	0	0	0	0	0	0
RCRIS-TSD		1.000	0	0	0	0	NR	0
RCRIS Lg. Quan. Gen.		0.750	0	0	0	0	NR	0
RCRIS Sm. Quan. Gen.		0.750	0	0	0	0	NR	0
ERNS		TP	NR	NR	NR	NR	NR	0
STATE ASTM STANDARD								
AWP		1.500	0	0	0	0	0	0
Cal-Sites		1.500	0	0	0	0	0	0
CHMIRS		1.500	0	0	0	0	0	0
Cortese		1.500	0	0	0	1	0	1
Notify 65		1.500	0	0	0	0	0	0
Toxic Pits		1.500	0	0	0	0	0	0
State Landfill		1.000	0	0	0	0	NR	0
WMUDS/SWAT		1.000	0	0	0	0	NR	0
LUST		1.000	0	0	0	1	NR	1
UST		0.750	0	0	0	0	NR	0
CA Bond Exp. Plan		1.500	0	0	0	0	0	0
CA FID		0.750	0	0	0	0	NR	0
FEDERAL ASTM SUPPLEMENTAL								
CONSENT		1.500	0	0	0	0	0	0
ROD		1.500	0	0	0	0	0	0
Delisted NPL		1.500	0	0	0	0	0	0
FINDS		TP	NR	NR	NR	NR	NR	0
HMIRS		TP	NR	NR	NR	NR	NR	0
MLTS		TP	NR	NR	NR	NR	NR	0
MINES		0.750	0	0	0	0	NR	0
NPL Liens		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
RAATS		TP	NR	NR	NR	NR	NR	0
TRIS		TP	NR	NR	NR	NR	NR	0
TSCA		TP	NR	NR	NR	NR	NR	0
STATE OR LOCAL ASTM SUPPLEMENTAL								
AST		TP	NR	NR	NR	NR	NR	0
CA WDS		TP	NR	NR	NR	NR	NR	0
CA SLIC		1.000	0	0	0	0	NR	0
HAZNET		0.750	0	0	0	0	NR	0
CA MS		TP	NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
EDR PROPRIETARY DATABASES								
Coal Gas		1.500	0	0	0	0	0	0
AQUIFLOW - see EDR Physical Setting Source Addendum								

TP = Target Property

NR = Not Requested at this Search Distance

* Sites may be listed in more than one database

Map ID
Direction
Distance
Distance (ft.)
Elevation   Site

MAP FINDINGS

Database(s)

EDR ID Number
EPA ID Number

Coal Gas Site Search: No site was found in a search of Real Property Scan's ENVIROHAZ database.

1	ANTONIO MOUNTAIN RANCH	Cortese	S101331639
West	1735 FIDDYMENT RD	LUST	N/A
1/2-1	LINCOLN, CA 95661	CA MS	
4271			
Higher			

State LUST:
    Cross Street: ATHENS ROAD
    Qty Leaked: Not reported
    Case Number   310195
    Reg Board: Central Valley Region
    Chemical: Gasoline
    Lead Agency: Local Agency
    Case Type: Soil only
    Status: Post remedial action monitoring in progress
    County: Placer
    Abate Method: Excavate and Treat - remove contaminated soil and treat (includes spreading or land farming)

Review Date:	Not reported	Confirm Leak:	Not reported
Workplan:	Not reported	Prelim Assess:	Not reported
Pollution Char:	Not reported	Remed Plan:	Not reported
Remed Action:	Not reported	Monitoring:	12/28/92
Close Date:	09/24/1992	Release Date:	09/24/1992

LUST Region 5:
Respble Party:	ANTONIO MOUNTAIN RANCH	Substance:	GASOLINE
Case Type:	Soil only		
Program:	Local Implementing Activity - County Run Activity		
Staff Initials:	PRS	Case Number:	310195
Status:	Post remedial action monitoring in progress		
MTBE:	Not reported		

CORTESE:
    Reg By: LTNKA
    Reg Id: 310195
    Region: CORTESE

Placer MS:
    Facility ID: PR0004204
    District Code: 11
    Facility Status: Active

City		EDR ID	Site Name	Site Address	Zip	Database(s)	Facility ID
LINCOLN		S100833486	BOHEMIA, INC.	HIGHWAY 65	95648	Ca. BEP	
LINCOLN		S101481496	BOHEMIA INC	1445 HIGHWAY 65	95648	Cal-Sites, CA MS	31240005
LINCOLN		S103644325	GREGORY LAWLEY	2330 HWY 65	95648	HAZNET	CAC001109560
LINCOLN		S103678973	ALPHA-IRECO INC	HWY 65 AT NADAR RD	95648	HAZNET	CAC001058560
LINCOLN		S104573380	RAMOS OIL CO INC	1185-1187 HWY 65	95648	HAZNET	CAC002234785
LINCOLN		U001613217	LINCOLN SMALL LOG SAWMILL	HIGHWAY 65	95648	UST	00000051580
LINCOLN		S102361597	WESTERN PLACER HHWCF	ATHENS ROAD_@ FIDDYMENT	95648	HAZNET, SWF/LF	31-AA-0001
LINCOLN		S100538758	PURDY COMPANY, THE	3460 CHAMBERLAIN ROAD	95648	Cal-Sites	31370001
LINCOLN		S104566774	LINCOLN SUB-STATION	GLADDINGS RD N OF HWY 55	95648	HAZNET	CAC001383704
LINCOLN		S102361601	LINCOLN DISPOSAL SITE	1 MI NE LINCOLN		SWF/LF	31-AA-0220
LINCOLN		S102564472	FERRARI LEAVELL AND GREY PROPERTY	ONE-FOURTH MILE SOUTHEAST OF LINCOLN	95648	Cal-Sites	31020002
LINCOLN	CA	S103442075	TRMT OF PETROLEUM CONTAM. SOIL	HWY 65	95648	WMUDS	
LINCOLN	CA	S103442074	COMPOSTING FACILITY	ATHENS / FIDDYMENT RDS	95648	WMUDS	
LINCOLN	CA	S104384457	ALPHA EXPLOSIVES	E. OF HWY 65, N. OF WISE RD	95648	WMUDS	

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Elapsed ASTM days: Provides confirmation that this EDR report meets or exceeds the 90-day updating requirement of the ASTM standard.

FEDERAL ASTM STANDARD RECORDS

NPL: National Priority List
Source: EPA
Telephone: N/A
National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC).

Date of Government Version: 06/13/00	Date of Data Arrival at EDR: 06/27/00
Date Made Active at EDR: 07/06/00	Elapsed ASTM days: 9
Database Release Frequency: Semi-Annually	Date of Last EDR Contact: 11/06/00

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System
Source: EPA
Telephone: 703-413-0223
CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 04/16/00	Date of Data Arrival at EDR: 06/05/00
Date Made Active at EDR: 08/16/00	Elapsed ASTM days: 72
Database Release Frequency: Quarterly	Date of Last EDR Contact: 08/28/00

CERCLIS-NFRAP: No Further Remedial Action Planned
Source: EPA
Telephone: 703-413-0223
As of February 1995, CERCLIS sites designated "No Further Remedial Action Planned" (NFRAP) have been removed from CERCLIS. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to require Federal Superfund action or NPL consideration. EPA has removed approximately 25,000 NFRAP sites to lift the unintended barriers to the redevelopment of these properties and has archived them as historical records so EPA does not needlessly repeat the investigations in the future. This policy change is part of the EPA's Brownfields Redevelopment Program to help cities, states, private investors and affected citizens to promote economic redevelopment of unproductive urban sites.

Date of Government Version: 04/16/00	Date of Data Arrival at EDR: 06/05/00
Date Made Active at EDR: 08/16/00	Elapsed ASTM days: 72
Database Release Frequency: Quarterly	Date of Last EDR Contact: 08/28/00

CORRACTS: Corrective Action Report
Source: EPA
Telephone: 800-424-9346
CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 04/20/00	Date of Data Arrival at EDR: 06/12/00
Date Made Active at EDR: 08/01/00	Elapsed ASTM days: 50
Database Release Frequency: Semi-Annually	Date of Last EDR Contact: 09/12/00

RCRIS: Resource Conservation and Recovery Information System
Source: EPA/NTIS
Telephone: 800-424-9346
Resource Conservation and Recovery Information System. RCRIS includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA).

Date of Government Version: 06/21/00
Date Made Active at EDR: 07/31/00
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 07/10/00
Elapsed ASTM days: 21
Date of Last EDR Contact: 11/09/00

ERNS: Emergency Response Notification System
Source: EPA/NTIS
Telephone: 202-260-2342
Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 08/08/00
Date Made Active at EDR: 09/06/00
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 08/11/00
Elapsed ASTM days: 26
Date of Last EDR Contact: 10/31/00

FEDERAL ASTM SUPPLEMENTAL RECORDS

BRS: Biennial Reporting System
Source: EPA/NTIS
Telephone: 800-424-9346
The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/97
Database Release Frequency: Biennially

Date of Last EDR Contact: 09/18/00
Date of Next Scheduled EDR Contact: 12/18/00

CONSENT: Superfund (CERCLA) Consent Decrees
Source: EPA Regional Offices
Telephone: Varies
Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: N/A
Database Release Frequency: Varies

Date of Last EDR Contact: N/A
Date of Next Scheduled EDR Contact: N/A

ROD: Records Of Decision
Source: NTIS
Telephone: 703-416-0223
Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 01/31/99
Database Release Frequency: Annually

Date of Last EDR Contact: 10/12/00
Date of Next Scheduled EDR Contact: 01/08/01

DELISTED NPL: NPL Deletions
Source: EPA
Telephone: N/A
The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 06/13/00
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 11/06/00
Date of Next Scheduled EDR Contact: 02/05/01

FINDS: Facility Index System/Facility Identification Initiative Program Summary Report
Source: EPA
Telephone: N/A
Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 07/07/00
Database Release Frequency: Quarterly

Date of Last EDR Contact: 10/10/00
Date of Next Scheduled EDR Contact: 01/08/01

HMIRS: Hazardous Materials Information Reporting System
Source: U.S. Department of Transportation
Telephone: 202-366-4526
Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 06/30/99
Database Release Frequency: Annually

Date of Last EDR Contact: 10/24/00
Date of Next Scheduled EDR Contact: 01/22/01

MLTS: Material Licensing Tracking System
Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which
possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency,
EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/23/00
Database Release Frequency: Quarterly

Date of Last EDR Contact: 10/10/00
Date of Next Scheduled EDR Contact: 01/08/01

MINES: Mines Master Index File
Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959

Date of Government Version: 08/01/98
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 10/02/00
Date of Next Scheduled EDR Contact: 01/01/01

NPL LIENS: Federal Superfund Liens
Source: EPA
Telephone: 205-564-4267
Federal Superfund Liens. Under the authority granted the USEPA by the Comprehensive Environmental Response, Compensation
and Liability Act (CERCLA) of 1980, the USEPA has the authority to file liens against real property in order
to recover remedial action expenditures or when the property owner receives notification of potential liability.
USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/91
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 08/21/00
Date of Next Scheduled EDR Contact: 11/20/00

PADS: PCB Activity Database System
Source: EPA
Telephone: 202-260-3936
PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers
of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 01/01/00
Database Release Frequency: Annually

Date of Last EDR Contact: 08/15/00
Date of Next Scheduled EDR Contact: 11/13/00

RAATS: RCRA Administrative Action Tracking System
Source: EPA
Telephone: 202-564-4104
RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA
pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration
actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of
the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources
made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/95
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 09/12/00
Date of Next Scheduled EDR Contact: 12/11/00

TRIS: Toxic Chemical Release Inventory System
Source: EPA
Telephone: 202-260-1531
Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/97	Date of Last EDR Contact: 09/25/00
Database Release Frequency: Annually	Date of Next Scheduled EDR Contact: 12/25/00

TSCA: Toxic Substances Control Act
Source: EPA
Telephone: 202-260-1444
Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/98	Date of Last EDR Contact: 09/12/00
Database Release Frequency: Every 4 Years	Date of Next Scheduled EDR Contact: 12/11/00

STATE OF CALIFORNIA ASTM STANDARD RECORDS

CAL-SITES (AWP): Annual Workplan
Source: California Environmental Protection Agency
Telephone: 916-323-3400
Known Hazardous Waste Sites. California DTSC's Annual Workplan (AWP), formerly BEP, identifies known hazardous substance sites targeted for cleanup.

Date of Government Version: 03/10/00	Date of Data Arrival at EDR: 04/10/00
Date Made Active at EDR: 05/10/00	Elapsed ASTM days: 30
Database Release Frequency: Annually	Date of Last EDR Contact: 10/31/00

CAL-SITES (ASPIS): Calsites
Source: Department of Toxic Substance Control
Telephone: 916-323-3400
The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database.

Date of Government Version: 10/01/00	Date of Data Arrival at EDR: 10/30/00
Date Made Active at EDR: 11/22/00	Elapsed ASTM days: 23
Database Release Frequency: Quarterly	Date of Last EDR Contact: 09/15/00

CHMIRS: California Hazardous Material Incident Report System
Source: Office of Emergency Services
Telephone: 916-464-3283
California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 12/31/94	Date of Data Arrival at EDR: 03/13/95
Date Made Active at EDR: 04/24/95	Elapsed ASTM days: 42
Database Release Frequency: No Update Planned	Date of Last EDR Contact: 08/28/00

CORTESE: Cortese
Source: CAL EPA/Office of Emergency Information
Telephone: 916-327-1848
The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 04/01/98	Date of Data Arrival at EDR: 08/26/98
Date Made Active at EDR: 09/23/98	Elapsed ASTM days: 28
Database Release Frequency: Varies	Date of Last EDR Contact: 11/03/00

NOTIFY 65: Proposition 65
  Source: State Water Resources Control Board
  Telephone: 916-657-0696
  Proposition 65 Notification Records. NOTIFY 65 contains facility notifications about any release which could impact
    drinking water and thereby expose the public to a potential health risk.

Date of Government Version: 10/21/93	Date of Data Arrival at EDR: 11/01/93
Date Made Active at EDR: 11/19/93	Elapsed ASTM days: 18
Database Release Frequency: No Update Planned	Date of Last EDR Contact: 10/24/00

TOXIC PITS: Toxic Pits
  Source: State Water Resources Control Board
  Telephone: 916-227-4364
  Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup
    has not yet been completed.

Date of Government Version: 07/01/95	Date of Data Arrival at EDR: 08/30/95
Date Made Active at EDR: 09/26/95	Elapsed ASTM days: 27
Database Release Frequency: No Update Planned	Date of Last EDR Contact: 11/06/00

SWF/LF (SWIS): Solid Waste Information System
  Source: Integrated Waste Management Board
  Telephone: 916-255-4035
  Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal
    facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section
    4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 09/27/00	Date of Data Arrival at EDR: 09/27/00
Date Made Active at EDR: 10/30/00	Elapsed ASTM days: 33
Database Release Frequency: Quarterly	Date of Last EDR Contact: 09/22/00

WMUDS/SWAT: Waste Management Unit Database
  Source: State Water Resources Control Board
  Telephone: 916-227-4448
  Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the
    Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed
    of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information,
    SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter
    15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure
    Information, and Interested Parties Information.

Date of Government Version: 04/01/00	Date of Data Arrival at EDR: 04/10/00
Date Made Active at EDR: 05/10/00	Elapsed ASTM days: 30
Database Release Frequency: Quarterly	Date of Last EDR Contact: 09/12/00

LUST: Leaking Underground Storage Tank Information System
  Source: State Water Resources Control Board
  Telephone: 916-445-6532
  Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground
    storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 07/05/00	Date of Data Arrival at EDR: 07/10/00
Date Made Active at EDR: 08/25/00	Elapsed ASTM days: 46
Database Release Frequency: Quarterly	Date of Last EDR Contact: 10/10/00

CA UST:

  UST: Hazardous Substance Storage Container Database
    Source: State Water Resources Control Board
    Telephone: 916-227-4408
    The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county
      source for current data.

Date of Government Version: 10/15/90
Date Made Active at EDR: 02/12/91
Database Release Frequency: No Update Planned

Date of Data Arrival at EDR: 01/25/91
Elapsed ASTM days: 18
Date of Last EDR Contact: 10/16/00

BEP: Bond Expenditure Plan
Source: Department of Health Services
Telephone: 916-255-2118
Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of
Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/89
Date Made Active at EDR: 08/02/94
Database Release Frequency: No Update Planned

Date of Data Arrival at EDR: 07/27/94
Elapsed ASTM days: 6
Date of Last EDR Contact: 05/31/94

FID: Facility Inventory Database
Source: California Environmental Protection Agency
Telephone: 916-445-6532
The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage
tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/94
Date Made Active at EDR: 09/29/95
Database Release Frequency: No Update Planned

Date of Data Arrival at EDR: 09/05/95
Elapsed ASTM days: 24
Date of Last EDR Contact: 12/28/98

STATE OF CALIFORNIA ASTM SUPPLEMENTAL RECORDS

AST: Aboveground Petroleum Storage Tank Facilities
Source: State Water Resources Control Board
Telephone: 916-227-4382
Registered Aboveground Storage Tanks.

Date of Government Version: 09/01/00
Database Release Frequency: Quarterly

Date of Last EDR Contact: 11/06/00
Date of Next Scheduled EDR Contact: 02/05/01

WDS: Waste Discharge System
Source: State Water Resources Control Board
Telephone: 916-657-1571
Sites which have been issued waste discharge requirements.

Date of Government Version: 08/21/00
Database Release Frequency: Quarterly

Date of Last EDR Contact: 08/30/00
Date of Next Scheduled EDR Contact: 12/25/00

HAZNET: Hazardous Waste Information System
Source: California Environmental Protection Agency
Telephone: 916-324-1781
Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year
by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately
350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain
some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method.

Date of Government Version: 12/31/99
Database Release Frequency: Annually

Date of Last EDR Contact: 08/15/00
Date of Next Scheduled EDR Contact: 11/13/00

LOCAL RECORDS

ALAMEDA COUNTY:

Local Oversight Program Listing of UGT Cleanup Sites
Source: Alameda County Environmental Health Services
Telephone: 510-567-6700

Date of Government Version: 08/01/00
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 10/31/00
Date of Next Scheduled EDR Contact: 01/29/01

Underground Tanks
Source: Alameda County Environmental Health Services
Telephone: 510-567-6700

Date of Government Version: 08/01/00
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 10/31/00
Date of Next Scheduled EDR Contact: 01/29/01

CONTRA COSTA COUNTY:

SL: Site List
Source: Contra Costa Health Services Department
Telephone: 925-646-2286
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 09/01/00
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 09/05/00
Date of Next Scheduled EDR Contact: 12/04/00

KERN COUNTY:

UST: Sites & Tanks Listing
Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Kern County Sites and Tanks Listing.

Date of Government Version: 06/09/00
Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/05/00
Date of Next Scheduled EDR Contact: 12/04/00

LOS ANGELES COUNTY:

SWF/LF: List of Solid Waste Facilities
Source: La County Department of Public Works
Telephone: 818-458-5185

Date of Government Version: 09/16/98
Database Release Frequency: Varies

Date of Last EDR Contact: 08/23/00
Date of Next Scheduled EDR Contact: 11/20/00

CA City of El Segundo UST
Source: City of El Segundo Fire Department
Telephone: 310-607-2239

Date of Government Version: 02/01/00
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 08/21/00
Date of Next Scheduled EDR Contact: 11/20/00

CA City of Long Beach UST
Source: City of Long Beach Fire Department
Telephone: 562-570-2543

Date of Government Version: 10/01/99
Database Release Frequency: Annually

Date of Last EDR Contact: 08/28/00
Date of Next Scheduled EDR Contact: 11/27/00

CA City of Torrance UST
Source: City of Torrance Fire Department
Telephone: 310-618-2973

Date of Government Version: 02/01/00
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 08/21/00
Date of Next Scheduled EDR Contact: 11/20/00

City of Los Angeles Landfills
Source: Engineering & Construction Division
Telephone: 213-473-7869

Date of Government Version: 08/31/99
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 09/22/00
Date of Next Scheduled EDR Contact: 12/18/00

HMS: Street Number List
Source: Department of Public Works
Telephone: 626-458-3517
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 08/31/00
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 08/25/00
Date of Next Scheduled EDR Contact: 11/20/00

Site Mitigation List
Source: Community Health Services
Telephone: 323-890-7806
Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 06/02/00
Database Release Frequency: Annually

Date of Last EDR Contact: 08/21/00
Date of Next Scheduled EDR Contact: 11/20/00

San Gabriel Valley Areas of Concern
Source: EPA Region 9
Telephone: 415-744-2407
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

Date of Government Version: 12/31/98
Database Release Frequency: N/A

Date of Last EDR Contact: 06/29/99
Date of Next Scheduled EDR Contact: N/A

MARIN COUNTY:

UST Sites
Source: Public Works Department Waste Management
Telephone: 415-499-6647
Currently permitted USTs in Marin County.

Date of Government Version: 08/08/00
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 11/06/00
Date of Next Scheduled EDR Contact: 02/05/01

NAPA COUNTY:

LUST: Sites With Reported Contamination
Source: Napa County Department of Environmental Management
Telephone: 707-253-4269

Date of Government Version: 08/27/99
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 10/03/00
Date of Next Scheduled EDR Contact: 01/01/01

UST: Closed and Operating Underground Storage Tank Sites
Source: Napa County Department of Environmental Management
Telephone: 707-253-4269

Date of Government Version: 08/30/99
Database Release Frequency: Annually

Date of Last EDR Contact: 10/03/00
Date of Next Scheduled EDR Contact: 01/01/01

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ORANGE COUNTY:

LUST: List of Underground Storage Tank Cleanups
Source: Health Care Agency
Telephone: 714-834-3446
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 08/21/00
Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/12/00
Date of Next Scheduled EDR Contact: 12/11/00

UST: List of Underground Storage Tank Facilities
Source: Health Care Agency
Telephone: 714-834-3446
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 08/31/00
Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/12/00
Date of Next Scheduled EDR Contact: 12/11/00

List of Industrial Site Cleanups
Source: Health Care Agency
Telephone: 714-834-3446
Petroleum and non-petroleum spills.

Date of Government Version: 01/19/99
Database Release Frequency: Annually

Date of Last EDR Contact: 09/12/00
Date of Next Scheduled EDR Contact: 12/11/00

PLACER COUNTY:

MS: Master List of Facilities
Source: Placer County Health and Human Services
Telephone: 530-889-7335
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 10/10/00
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 09/25/00
Date of Next Scheduled EDR Contact: 12/25/00

RIVERSIDE COUNTY:

LUST: Listing of Underground Tank Cleanup Sites
Source: Department of Public Health
Telephone: 909-358-5055
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 04/03/00
Database Release Frequency: Quarterly

Date of Last EDR Contact: 11/01/00
Date of Next Scheduled EDR Contact: 01/22/01

UST: Tank List
Source: Health Services Agency
Telephone: 909-358-5055

Date of Government Version: 08/01/00
Database Release Frequency: Quarterly

Date of Last EDR Contact: 11/01/00
Date of Next Scheduled EDR Contact: 01/22/01

SACRAMENTO COUNTY:

Toxisite List
Source: Sacramento County Environmental Management
Telephone: 916-875-8450

Date of Government Version: 08/30/00
Database Release Frequency: Quarterly

Date of Last EDR Contact: 11/07/00
Date of Next Scheduled EDR Contact: 02/05/01

ML: Regulatory Compliance Master List
Source: Sacramento County Environmental Management
Telephone: 916-875-8450
Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 08/30/00
Database Release Frequency: Quarterly

Date of Last EDR Contact: 11/07/00
Date of Next Scheduled EDR Contact: 02/05/01

SAN BERNARDINO COUNTY:

DEHS Permit System Print-Out By Location
Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 07/01/00
Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/12/00
Date of Next Scheduled EDR Contact: 12/11/00

SAN DIEGO COUNTY:

SWF/LF: Solid Waste Facilities
Source: Department of Health Services
Telephone: 619-338-2209
San Diego County Solid Waste Facilities.

Date of Government Version: 07/01/98
Database Release Frequency: Annually

Date of Last EDR Contact: 08/31/00
Date of Next Scheduled EDR Contact: 11/27/00

HMMD: Hazardous Materials Management Division Database
Source: Hazardous Materials Management Division
Telephone: 619-338-2268
The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 07/09/00
Database Release Frequency: Quarterly

Date of Last EDR Contact: 10/10/00
Date of Next Scheduled EDR Contact: 01/08/01

SAN FRANCISCO COUNTY:

LUST: Local Oversite Facilities
Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920

Date of Government Version: 09/01/00
Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/12/00
Date of Next Scheduled EDR Contact: 12/11/00

Underground Storage Tank Information
Source: Department of Public Health
Telephone: 415-252-3920

Date of Government Version: 09/01/00
Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/12/00
Date of Next Scheduled EDR Contact: 12/11/00

SAN MATEO COUNTY:

LUST: Fuel Leak List
Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921

Date of Government Version: 10/05/00
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 10/11/00
Date of Next Scheduled EDR Contact: 01/29/01

Business Inventory
Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 06/24/99
Database Release Frequency: Annually

Date of Last EDR Contact: 10/17/00
Date of Next Scheduled EDR Contact: 01/15/01

SANTA CLARA COUNTY:

LUST: Fuel Leak Site Activity Report
Source: Santa Clara Valley Water District
Telephone: 408-927-0710

Date of Government Version: 07/01/00
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 10/03/00
Date of Next Scheduled EDR Contact: 01/01/01

Hazmat Facilities
Source: City of San Jose Fire Department
Telephone: 408-277-4659

Date of Government Version: 03/20/00
Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/12/00
Date of Next Scheduled EDR Contact: 12/11/00

SOLANO COUNTY:

LUST: Leaking Undergroung Storage Tanks
Source: Solano County Department of Environmental Management
Telephone: 707-421-6770

Date of Government Version: 09/01/00
Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/18/00
Date of Next Scheduled EDR Contact: 12/18/00

UST: Underground Storage Tanks
Source: Solano County Department of Environmental Management
Telephone: 707-421-6770

Date of Government Version: 09/01/00
Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/18/00
Date of Next Scheduled EDR Contact: 12/18/00

SONOMA COUNTY:

LUST Sites
Source: Department of Health Services
Telephone: 707-525-6565

Date of Government Version: 05/16/00	Date of Last EDR Contact: 10/30/00
Database Release Frequency: Quarterly	Date of Next Scheduled EDR Contact: 01/29/01

SUTTER COUNTY:

UST: Underground Storage Tanks
Source: Sutter County Department of Agriculture
Telephone: 530-741-7504

Date of Government Version: 07/01/00	Date of Last EDR Contact: 10/10/00
Database Release Frequency: Semi-Annually	Date of Next Scheduled EDR Contact: 01/08/01

VENTURA COUNTY:

SWF/LF: Inventory of Illegal Abandoned and Inactive Sites
Source: Environmental Health Division
Telephone: 805-654-2813
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 06/01/99	Date of Last EDR Contact: 08/17/00
Database Release Frequency: Annually	Date of Next Scheduled EDR Contact: 11/27/00

LUST: Listing of Underground Tank Cleanup Sites
Source: Environmental Health Division
Telephone: 805-654-2813
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 02/24/00	Date of Last EDR Contact: 09/18/00
Database Release Frequency: Quarterly	Date of Next Scheduled EDR Contact: 12/18/00

UST: Underground Tank Closed Sites List
Source: Environmental Health Division
Telephone: 805-654-2813
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 04/24/00	Date of Last EDR Contact: 10/17/00
Database Release Frequency: Quarterly	Date of Next Scheduled EDR Contact: 01/15/01

BWT: Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 09/06/00	Date of Last EDR Contact: 09/18/99
Database Release Frequency: Quarterly	Date of Next Scheduled EDR Contact: 12/18/00

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report
Source: Yolo County Department of Health
Telephone: 530-666-8646

Date of Government Version: 07/07/00
Database Release Frequency: Annually

Date of Last EDR Contact: 10/23/00
Date of Next Scheduled EDR Contact: 01/22/01

California Regional Water Quality Control Board (RWQCB) LUST Records

LUST REG 1: Active Toxic Site Investigation
Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-576-2220

Date of Government Version: 08/01/00
Database Release Frequency: Quarterly

Date of Last EDR Contact: 08/31/00
Date of Next Scheduled EDR Contact: 11/27/00

LUST REG 2: Fuel Leak List
Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457

Date of Government Version: 09/01/00
Database Release Frequency: Quarterly

Date of Last EDR Contact: 10/16/00
Date of Next Scheduled EDR Contact: 01/15/00

LUST REG 3: LUSTIS Database
Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147

Date of Government Version: 08/01/00
Database Release Frequency: Quarterly

Date of Last EDR Contact: 08/21/00
Date of Next Scheduled EDR Contact: 11/20/00

LUST REG 4: Underground Storage Tank Leak List
Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-266-6600

Date of Government Version: 05/16/00
Database Release Frequency: Quarterly

Date of Last EDR Contact: 10/03/00
Date of Next Scheduled EDR Contact: 01/01/01

LUST REG 5: Leaking Underground Storage Tank Database
Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-255-3125

Date of Government Version: 10/01/00
Database Release Frequency: Quarterly

Date of Last EDR Contact: 10/10/00
Date of Next Scheduled EDR Contact: 01/08/01

LUST REG 6L: Leaking Underground Storage Tank Case Listing
Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 916-542-5424

Date of Government Version: 10/01/00
Database Release Frequency: Quarterly

Date of Last EDR Contact: 10/10/00
Date of Next Scheduled EDR Contact: 01/08/01

LUST REG 6V: Leaking Underground Storage Tank Case Listing
Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-346-7491

Date of Government Version: 10/01/00
Database Release Frequency: Quarterly

Date of Last EDR Contact: 10/10/00
Date of Next Scheduled EDR Contact: 01/08/01

LUST REG 7: Leaking Underground Storage Tank Case Listing
Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-346-7491

Date of Government Version: 10/23/00
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 10/03/00
Date of Next Scheduled EDR Contact: 01/01/01

LUST REG 8: (LUSTIS) Leaking Underground Storage Tanks
Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4498

Date of Government Version: 05/10/00
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 09/12/00
Date of Next Scheduled EDR Contact: 11/13/00

LUST REG 9: Leaking Underground Storage Tank Report
Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 619-467-2952

Date of Government Version: 09/08/00
Database Release Frequency: Quarterly

Date of Last EDR Contact: 10/23/00
Date of Next Scheduled EDR Contact: 01/22/01

California Regional Water Quality Control Board (RWQCB) SLIC Records

SLIC REG 1: Active Toxic Site Investigations
Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220

Date of Government Version: 08/01/00
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 08/31/00
Date of Next Scheduled EDR Contact: 11/27/00

SLIC REG 2: North and South Bay Slic Report
Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Any contaminated site that impacts groundwater or has the potential to impact groundwater.

Date of Government Version: 09/01/00
Database Release Frequency: Quarterly

Date of Last EDR Contact: 10/16/00
Date of Next Scheduled EDR Contact: 01/15/01

SLIC REG 3: SLIC Data
Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Any contaminated site that impacts groundwater or has the potential to impact groundwater.

Date of Government Version: 08/01/00
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 08/21/00
Date of Next Scheduled EDR Contact: 11/20/00

SLIC REG 4: SLIC Sites
Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Any contaminated site that impacts groundwater or has the potential to impact groundwater.

Date of Government Version: 08/01/00
Database Release Frequency: Quarterly

Date of Last EDR Contact: 10/31/00
Date of Next Scheduled EDR Contact: 01/29/01

SLIC REG 5: SLIC List
Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-855-3075
Unregulated sites that impact groundwater or have the potential to impact groundwater.

Date of Government Version: 10/04/00
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 10/10/00
Date of Next Scheduled EDR Contact: 01/08/00

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583

Date of Government Version: 12/01/98
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 10/12/00
Date of Next Scheduled EDR Contact: 01/08/01

SLIC REG 8: SLIC List
Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-3298

Date of Government Version: 06/01/00
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 10/11/00
Date of Next Scheduled EDR Contact: 01/08/01

SLIC REG 9: SLIC List
Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980

Date of Government Version: 06/01/00
Database Release Frequency: Annually

Date of Last EDR Contact: 09/05/00
Date of Next Scheduled EDR Contact: 12/04/00

EDR PROPRIETARY DATABASES

Former Manufactured Gas (Coal Gas) Sites: The existence and location of Coal Gas sites is provided exclusively to EDR by Real Property Scan, Inc. ©Copyright 1993 Real Property Scan, Inc. For a technical description of the types of hazards which may be found at such sites, contact your EDR customer service representative.

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The information contained in this report has predominantly been obtained from publicly available sources produced by entities other than Real Property Scan. While reasonable steps have been taken to insure the accuracy of this report, Real Property Scan does not guarantee the accuracy of this report. Any liability on the part of Real Property Scan is strictly limited to a refund of the amount paid. No claim is made for the actual existence of toxins at any site. This report does not constitute a legal opinion.

HISTORICAL AND OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

Oil/Gas Pipelines/Electrical Transmission Lines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines and electrical transmission lines.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 1999 from the U.S. Fish and Wildlife Service.

GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

512-ACRE VACANT SITE
MOORE ROAD
LINCOLN, CA 95648

TARGET PROPERTY COORDINATES

Latitude (North):	38.864799 - 38° 51' 53.3"
Longitude (West):	121.328102 - 121° 19' 41.2"
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	645056.0
UTM Y (Meters):	4302894.0

EDR's GeoCheck Physical Setting Source Addendum has been developed to assist the environmental professional with the collection of physical setting source information in accordance with ASTM 1527-00, Section 7.2.3. Section 7.2.3 requires that a current USGS 7.5 Minute Topographic Map (or equivalent, such as the USGS Digital Elevation Model) be reviewed. It also requires that one or more additional physical setting sources be sought when (1) conditions have been identified in which hazardous substances or petroleum products are likely to migrate to or from the property, and (2) more information than is provided in the current USGS 7.5 Minute Topographic Map (or equivalent) is generally obtained, pursuant to local good commercial or customary practice, to assess the impact of migration of recognized environmental conditions in connection with the property. Such additional physical setting sources generally include information about the topographic, hydrologic, hydrogeologic, and geologic characteristics of a site, and wells in the area.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata. EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

USGS TOPOGRAPHIC MAP ASSOCIATED WITH THIS SITE

Target Property: 2438121-G3 ROSEVILLE, CA
Source: USGS 7.5 min quad index

GENERAL TOPOGRAPHIC GRADIENT AT TARGET PROPERTY

Target Property: General SSW

Source: General Topographic Gradient has been determined from the USGS 1 Degree Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County PLACER, CA	FEMA Q3 Flood Data Electronic Coverage YES - refer to the Overview Map and Detail Map
Flood Plain Panel at Target Property: Additional Panels in search area:	0602390403C / CBPP 0602410004B / CBPP 0602410005B / CBPP 0602390400C / CBPP 0602390411C / CBPP

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property ROSEVILLE	NWI Electronic Coverage YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Site-Specific Hydrogeological Data*:
Search Radius: 2.0 miles
Status: Not found

AQUIFLOW®

Search Radius: 2.000 Miles.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

GEOLOGIC AGE IDENTIFICATION   **ROCK STRATIGRAPHIC UNIT**

Geologic Code:	Tec	
Era:	Cenozoic	Category: Continental Deposits
System:	Tertiary	
Series:	Eocene	

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Component Name: COMETA

Soil Surface Texture: sandy loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained. Soils have intermediate water holding capacity. Depth to water table is more than 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: MODERATE

Depth to Bedrock Min: > 60 inches

Depth to Bedrock Max: > 60 inches

Soil Layer Information						
	Boundary			Classification		
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)
1	0 inches	17 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COURSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 2.00 Min: 0.60
2	17 inches	27 inches	sandy clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 0.06 Min: 0.00
3	27 inches	60 inches	stratified	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COURSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 0.06 Min: 0.00

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: gravelly - sand
loam
gravelly - sandy loam
sand

Surficial Soil Types: gravelly - sand
loam
gravelly - sandy loam

sand

Shallow Soil Types: fine sandy loam
                        gravelly - loam

Deeper Soil Types: sandy clay loam
                        gravelly - sandy loam

ADDITIONAL ENVIRONMENTAL RECORD SOURCES

According to ASTM E 1527-00, Section 7.2.2, "one or more additional state or local sources of environmental records may be checked, in the discretion of the environmental professional, to enhance and supplement federal and state sources... Factors to consider in determining which local or additional state records, if any, should be checked include (1) whether they are reasonably ascertainable, (2) whether they are sufficiently useful, accurate, and complete in light of the objective of the records review (see 7.1.1), and (3) whether they are obtained, pursuant to local, good commercial or customary practice."   One of the record sources listed in Section 7.2.2 is water well information. Water well information can be used to assist the environmental professional in assessing sources that may impact groundwater flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

PHYSICAL SETTING SOURCE MAP - 575600.3s
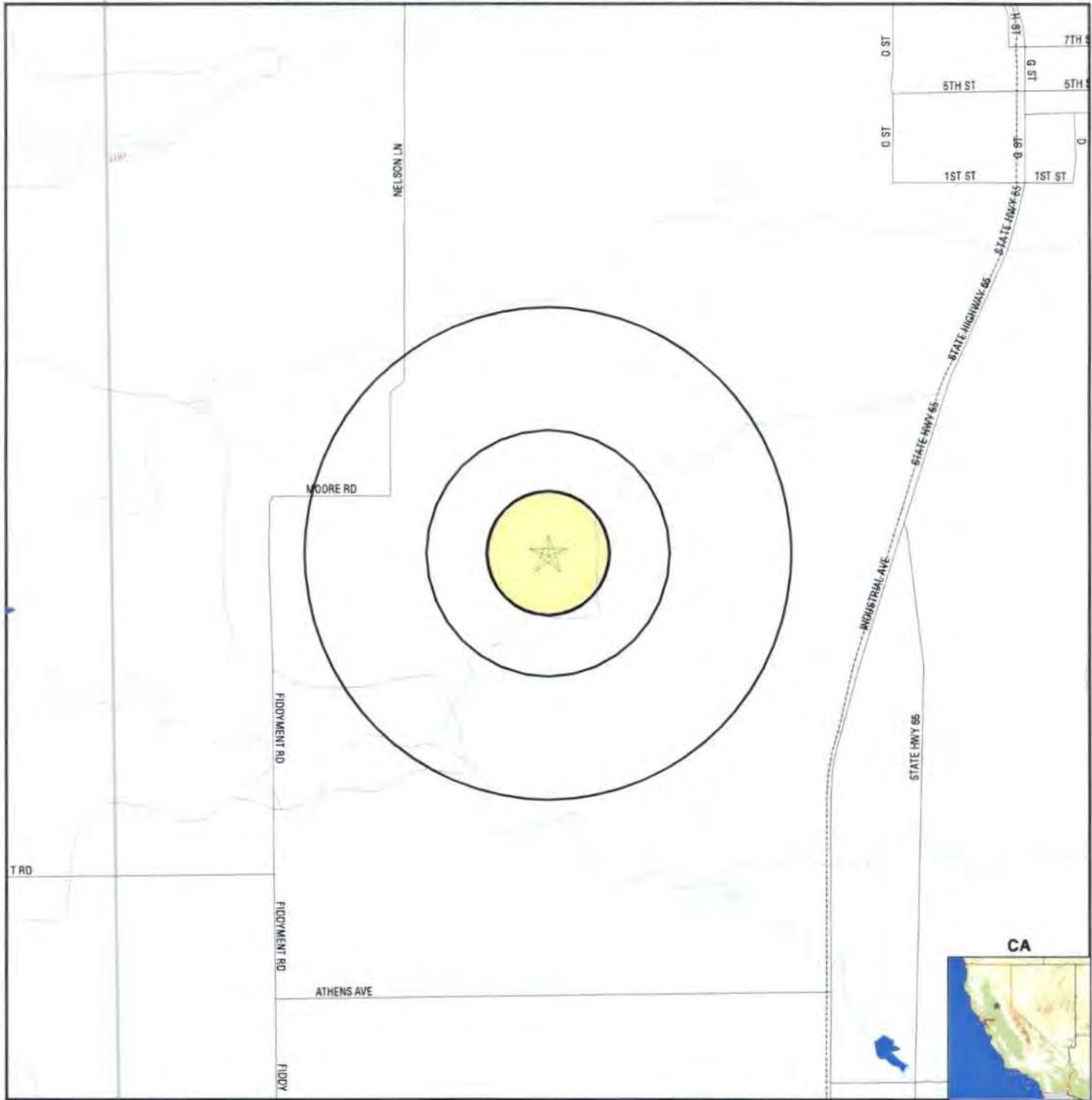
Major Roads
Contour Lines
Earthquake Fault Lines
W Water Wells
P Public Water Supply Wells
Groundwater Flow Direction
Indeterminate Groundwater Flow at Location
Groundwater Flow Varies at Location
Cluster of Multiple Icons

Earthquake epicenter, Richter 5 or greater
HD Closest Hydrogeological Data
Oil, gas or related wells

0   1/2   1   2 Miles

TARGET PROPERTY:	512-Acre Vacant Site	CUSTOMER:	HSI Geotrans
ADDRESS:	Moore Road	CONTACT:	Keith Hoofard
CITY/STATE/ZIP:	Lincoln CA 95648	INQUIRY #:	575600.3s
LAT/LONG:	38.8648 / 121.3281	DATE:	December 15, 2000 7:52 pm

AREA RADON INFORMATION

Federal EPA Radon Zone for PLACER County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Zip Code: 95648

Number of sites tested: 1

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.000 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 1999 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW[R]   Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the national Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

ADDITIONAL ENVIRONMENTAL RECORD SOURCES

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-260-2805
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-260-2805
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: In November 1971 the United States Geological Survey (USGS) implemented a national water resource information tracking system. This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on more than 900,000 wells, springs, and other sources of groundwater.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STATE RECORDS

California Drinking Water Quality Database
  Source: Department of Health Services
  Telephone: 916-324-2319
  The database includes all drinking water compliance and special studies monitoring for the state of California
      since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

California Oil and Gas Well Locations for District 2 and 6
  Source: Department of Conservation
  Telephone: 916-323-1779

RADON

Area Radon Information: The National Radon Database has been developed by the U.S. Environmental Protection Agency
(USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The
study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources
such as universities and research institutions.

EPA Radon Zones: Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for
elevated indoor radon levels.

OTHER

Epicenters: World earthquake epicenters, Richter 5 or greater
  Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines,
prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault
lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

APPENDIX C

1998 HLA Field Investigation Report

Lewis Operating Corp.

9216 Kiefer Boulevard / Sacramento, California 95826
Telephone: (916) 363-2617   FAX: (916) 364-9353

Letter of Transmittal

To: Mr. Tim Costello   **Date:**   July 13, 2000
McLaren/Hart, Inc.   **Project:**   Nader Property
P.O. Box 751421
Charlotte, NC 28275
                                         Tract/W.O. No:

We are forwarding: ☒ By Mail   ☐ By Messenger   ☐ By Air   ☐ By Bus   ☐ By Overnight Courier

No. Copies	Description	Sheet No.
1	HLA Report - Nader Property	

Remarks: RE: Nader Property

This material is sent for: ☐ Checking   ☐ Approval   ☐ Your Files
                                 ☒ Other: Use

☐ **Please sign** _____ copies and return to our office.

By: _____
                  Bev Littlejohn

Above material received by: _____   Date: _____ 7 – 13–00

July 7, 2000

40282

RECEIVED

JUL 1 1 2000

SACRAMENTO

HLA

Mr. Doug Mull
Lewis Operating Corporation
9216 Keifer Boulevard
Sacramento, California 95827

Field Investigation Report
Former Underground Storage Tank
Bergendahl Property
Placer County, California

Dear Mr. Mull:

Per the request of Mr. Bob Hamel with Teichert Land Co. this letter transmits one copy of our March 1998 report entitled *Bergandahl Property, Field Investigation-Former UST, Teichert Property, Lincoln, California*. The report describes work performed by Harding Lawson Associates (HLA) on behalf of Teichert Aggregates. Please note that the report is provided to Lewis Operating Corporation for information purposes only. Lewis Operating Corporation should not rely on this information in any manner and should perform it's own due diligence work. HLA shall not be held responsible for any use of the information and Lewis Operating Corporation shall indemnify HLA against any and all claims and actions arising from Lewis Operating Corporation's use of the information.

Please acknowledge the conditions under which this information is transmitted by signing and returning this letter. If Lewis Operating Corporation does not sign and return this letter, or chooses not to accept these conditions, they shall not be entitled to the information, and the document shall be destroyed immediately.

If you have any questions regarding this report, please feel free to call.

Yours very truly,

HARDING LAWSON ASSOCIATES
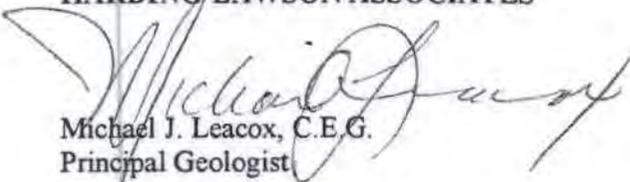
Michael J. Leacox, C.E.G.
Principal Geologist

Attachments:

Cc: Mr. Bob Hamel
        Mr. Wayne Nadar

I acknowledge and understand that conditions under which this document has been provided.

Authorized Representative of Lewis Operating Corporation   _____

                                                            (Signature)

                                                            _____

                                                            (Title)

Harding Lawson Associates

HLA

March 9, 1998

40282 1

Mr. Troy Reimche
Teichert Aggregates
3500 American River Drive
Sacramento, CA 95851

Bergendahl Property
Field Investigation-Former UST
Teichert Property
Lincoln, California

Dear Mr. Reimche:

INTRODUCTION

Harding Lawson Associates (HLA) is pleased to submit this letter report to Teichert Aggregates (Teichert) which describes the results of a field investigation at the above referenced site (Plates 1 and 2). The work was conducted in accordance with HLA's proposal titled *Proposal and Cost Estimate, Field Investigation-Former UST, Teichert Property, Lincoln, California* dated January 15, 1998. The purpose of the investigation was to assess the soil conditions at a former underground storage tank (UST) location on the Teichert property near Lincoln, California (Site). Based on information provided by Teichert, the 500 gallon UST had been previously removed from the Site and no records exist.

SCOPE OF WORK

HLA evaluated subsurface conditions at the former UST location using a backhoe. The backhoe pit was excavated on January 26, 1998 by Norcal Construction of Woodland California at the location indicated in the field by a Teichert representative and shown on Plate 2. During excavation operations, soils were visually inspected and monitored for the presence of volatile organic compounds (VOC's) utilizing a photoionization detector (PID). The pit was excavated to a maximum depth of 8 feet below ground surface (bgs). HLA collected a total of three soil samples (S-1, S-2, and S-3) from the excavation and submitted them for laboratory analyses. Soil samples were contained and sealed in clean brass tubes. Samples were kept cool on ice and transported under chain of custody procedures to California Laboratory Services in Rancho Cordova California. The samples were tested for total petroleum hydrocarbons as gasoline (TPH-G), total petroleum hydrocarbons as gasoline (TPH-D), and benzene, toluene, ethylbenzene, and total xylenes (BTEX).

RESULTS

The backhoe pit was excavated to a maximum depth of 8 feet bgs. From the surface to a depth of 7.5 feet bgs soil consisted of reddish brown sandy clay (Plate 3). At a depth of 7.5 feet bgs hardpan consisting of light brown sandy clay was encountered. During the course of backhoe operations, VOC's above background levels were not detected with the PID in soil samples obtained from the bucket of the backhoe. In addition, hydrocarbon odors were not detected and hydrocarbon stained soils were not observed on backhoe pit walls or in any excavated soils. Analyses of soil samples S-1, S-2, and S-3, obtained from backhoe pit walls at depths of 3 feet bgs, 5 and 7 feet bgs, respectively, did not detect

March 5, 1998
40282 1
Mr. Troy Reimche
Teichert Aggregates
Page 2

Harding Lawson Associates

concentrations of TPH-G, TPH-D, and BTEX above reporting limits. Laboratory reports are included in Appendix A.

Upon completion of excavation operations the backhoe pit was refilled with excavation spoils and recompacted in approximately 1.5 foot thick lifts with the bucket of the backhoe, to as near original conditions as possible.

CONCLUSIONS

Results of laboratory analyses on soil samples obtained from the backhoe pit, and visual observations during excavation operations, indicate that the site has not been impacted by hydrocarbon contamination in the vicinity of the backhoe pit.

HLA is pleased to have this opportunity to submit this letter report to Teichert. If we can be of further assistance or if you any questions, please do not hesitate to call.

Yours very truly,

HARDING LAWSON ASSOCIATES

Frank Drewes
Staff Geologist
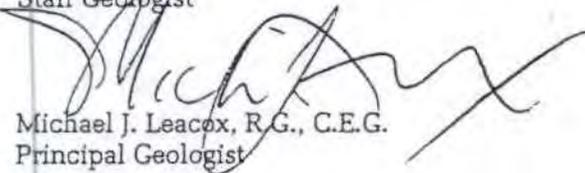
Michael J. Leacox, R.G., C.E.G.
Principal Geologist

Attachments: Plate 1 Site Vicinity Map
Plate 2 Site Map
Plate 3 Backhoe Pit Cross Section
Appendix A Laboratory Reports

FD/MJL/tb/G:\WP\FD\FD40282I.119

PLATES

SITE ●

Site Vicinity Map
Field Investigation — Former UST
Teichert Property
Lincoln, California

DRAWN	PROJECT NUMBER	APPROVED	DATE	REVISED DATE
YVG	40282.001		2/98	

PLATE

1

SAC21 G:\CADD\10282\40282002.DWG

PASTURE

WOODEN
FENCE

GATE

CORRAL

BARBED WIRE
FENCE

R O A D (DRIVEWAY)

BARN

CORRALS

BACKHOE PIT

CORRAL

WOODEN
FENCE

RESIDENCE

VEHICLE SHED

TACK SHED

WOODEN
FENCE

BARBED WIRE
FENCE

PASTURE

N

0   25   50

1 INCH = 50 FEET

FARM BUILDING

North

South

2

4

6

8

FEET, BGS

S-1@3ft

S-2@5ft

S-3@7ft

REDDISH BROWN SANDY CLAY (CL)
moist to wet, soft, ~30% medium-coarse
sand

LIGHT BROWN SANDY CLAY (CL)
dry, hard, ~30% medium to coarse sand

LEGEND

S-3@7ft

SAMPLE LOCATION AND DEPTH

0   2   4

1 INCH = 4 FEET

Backhoe Pit Cross Section
Field Investigation — Former UST
Teichert Property
Lincoln, California

PLATE

3

DRAWN	PROJECT NUMBER	APPROVED	DATE	REVISED DATE
YVG	40282.001		2/98	

APPENDIX A

LABORATORY REPORTS

CHAIN OF CUSTODY FORM P1685

Hardin ...son ...iate
10324 Placer Lane
Sacramento, California 95827
916/364-0793
Telecopy: 916/364-5633

Lab: _Cal. Lab._

Samplers: _Frank Draves_

Job Number: 40282.1

Name/Location: _Teichert / Placer Co._

Project Manager: _Mike Leacox_   **Recorder:** _Field Mgr_ (Signature Required)

SOURCE CODE	MATRIX				#CONTAINERS & PRESERV.			SAMPLE NUMBER OR LAB NUMBER			DATE				STATION DESCRIPTION / NOTES	EPA 601/8010	EPA 602/8020	EPA 624/8240	EPA 625/8270	ICP METALS	EPA 8015M/TPH		
	Water	Sediment	Soil	Oil	Unpres.	H₂SO₄	HNO₃	Yr	Wk	Seq	Yr	Mo	Dy	Time									
4 8 / 5			X / 2		1 / 6				5-1 5-2 5-3		980928 5					@ 3' @ 5' @ 7'	X		X			X		

LAB NUMBER			DEPTH IN FEET	COL MTD CD	QA CODE	MISCELLANEOUS	CHAIN OF CUSTODY RECORD		
Yr	Wk	Seq							

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
F. Mgr	_Jett Jam_	1/28/98 1209
RELINQUISHED BY: (Signature) _Jc_	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME

DISPATCHED BY: (Signature)   DATE/TIME   RECEIVED FOR LAB BY (Signature) 1/28/98 DATE/TIME 12:09

METHOD OF SHIPMENT

Laboratory Copy   Project Office Copy   Field or Office Copy
White   Yellow   Pink

G533

CLS Labs

Harding Lawson Associates
10265 Rockingham Dr. STE 150
Sacramento, CA 95827

02/13/98

Attention: Mike Leacox

Reference: Analytical Results

Project Name: Teichert/Placer Co.
Project No.: 40282.1
Date Received: 01/28/98
Chain Of Custody: NO NUMBER

CLS ID No.: P1685
CLS Job No.: 811685

The following analyses were performed on the above referenced project:

No. of Samples	Turnaround Time	Analysis Description
3	10 Days	TPH Diesel by DHS Method - M8015 (soil)
3	10 Days	TPH Gasoline and BTXE (soil)

These samples were received by CLS Labs in a chilled, intact state and accompanied by a valid chain of custody document.

Calibrations for analytical testing have been performed in accordance to and pass the EPA's criteria for acceptability.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,
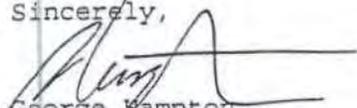
George Hampton
Laboratory Director

CLS Labs

Analysis Report: Total Petroleum Hydrocarbons, EPA Method 8015
Sonication, EPA Method 3550

Client: Harding Lawson Associates
10265 Rockingham Dr.   STE 150
Sacramento, CA 95827

Project No.: 40282.1
Contact: Mike Leacox
Phone: (916)364-0793

Project: Teichert/Placer Co.

Date Sampled: 01/26/98
Date Received: 01/28/98
Date Extracted: 01/28/98
Date Analyzed: 01/30/98
Date Reported: 02/12/98
Client ID No.: S-1 @ 3'

Lab Contact: George Hampton
Lab ID No.: P1685-1A
Job No.: 811685
COC Log No.: NO NUMBER
Batch No.: 21518
Instrument ID: PGC04
Analyst ID: SEPIDEHS
Matrix: SOIL

Sample: S-1 @ 3'

Analyte	CAS No.	Results (mg/kg)	Rep. Limit (mg/kg)	Dilution (factor)
TPH as Diesel	N/A	ND	1.0	1.0

ND = Not detected at or above indicated Reporting Limit

CLS Labs

Analysis Report: Total Petroleum Hydrocarbons, EPA Method 8015
Sonication, EPA Method 3550

Client: Harding Lawson Associates
10265 Rockingham Dr. STE 150
Sacramento, CA 95827

Project No.: 40282.1
Contact: Mike Leacox
Phone: (916)364-0793

Project: Teichert/Placer Co.

Date Sampled: 01/26/98
Date Received: 01/28/98
Date Extracted: 01/28/98
Date Analyzed: 01/30/98
Date Reported: 02/12/98
Client ID No.: S-2 @ 5'

Lab Contact: George Hampton
Lab ID No.: P1685-2A
Job No.: 811685
COC Log No.: NO NUMBER
Batch No.: 21518
Instrument ID: PGC04
Analyst ID: SEPIDEHS
Matrix: SOIL

_____ Sample: S-2 @ 5' _____

Analyte	CAS No.	Results (mg/kg)	Rep. Limit (mg/kg)	Dilution (factor)
TPH as Diesel	N/A	ND	1.0	1.0

ND = Not detected at or above indicated Reporting Limit

CLS Labs

Analysis Report: Total Petroleum Hydrocarbons, EPA Method 8015
Sonication, EPA Method 3550

Client: Harding Lawson Associates
10265 Rockingham Dr. STE 150
Sacramento, CA 95827

Project: Teichert/Placer Co.

Date Extracted: 01/28/98
Date Analyzed: 02/09/98
Date Reported: 02/12/98

Project No.: 40282.1
Contact: Mike Leacox
Phone: (916)364-0793

Lab Contact: George Hampton
Lab ID No.: P1685
Job No.: 811685
COC Log No.: NO NUMBER
Batch No.: 21518
Instrument ID: PGC04
Analyst ID: SEPIDEHS
Matrix: SOIL

_____ METHOD BLANK _____

Analyte	CAS No.	Results (mg/kg)	Reporting Limit (mg/kg)
TPH as Diesel	N/A	ND	1.0

ND = Not detected at or above indicated Reporting Limit

CLS Labs

Analysis Report: Total Petroleum Hydrocarbons, EPA Method 8015
Sonication, EPA Method 3550

Client: Harding Lawson Associates
10265 Rockingham Dr. STE 150
Sacramento, CA 95827

Project: Teichert/Placer Co.

Date Extracted: 01/28/98
Date Analyzed: 02/09/98
Date Reported: 02/12/98

Project No.: 40282.1
Contact: Mike Leacox
Phone: (916)364-0793

Lab Contact: George Hampton
Lab ID No.: P1685
Job No.: 811685
COC Log No.: NO NUMBER
Batch No.: 21518
Instrument ID: PGC04
Analyst ID: SEPIDEHS
Matrix: SOIL

_____ LAB CONTROL SAMPLE _____

Analyte	CAS No.	LCS Conc. (mg/kg)	LCS Recovery (percent)
Diesel	N/A	5.00	99

_____ LAB CONTROL SAMPLE DUPLICATE _____

Analyte	CAS No.	LCS Conc. (mg/kg)	LCSD Recovery (percent)
Diesel	N/A	5.00	106

_____ LCS RPD _____

Analyte	CAS No.	LCS Relative Percent Difference (percent)
Diesel	N/A	7

CLS Labs

Analysis Report: BTEX, EPA Method 8020
Purge and Trap, EPA Method 5030

Client: Harding Lawson Associates
10265 Rockingham Dr. STE 150
Sacramento, CA 95827

Project: Teichert/Placer Co.

Date Sampled: 01/26/98
Date Received: 01/28/98
Date Extracted: 01/29/98
Date Analyzed: 01/29/98
Date Reported: 01/30/98
Client ID No.: S-1 @ 3'

Project No.: 40282.1
Contact: Mike Leacox
Phone: (916)364-0793

Lab Contact: George Hampton
Lab ID No.: P1685-1A
Job No.: 811685
COC Log No.: NO NUMBER
Batch No.: 21522
Instrument ID: GC018
Analyst ID: JENNDC
Matrix: SOIL

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/kg)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	100	105

S-1 @ 3'

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)	Dilution (factor)
Benzene	71-43-2	ND	5.0	1.0
Toluene	108-88-3	ND	5.0	1.0
Ethylbenzene	100-41-4	ND	5.0	1.0
Xylenes, total	1330-20-7	ND	10	1.0

ND = Not detected at or above indicated Reporting Limit

CLS Labs

Client: Harding Lawson Associates
10265 Rockingham Dr.   STE 150
Sacramento, CA 95827

Project: Teichert/Placer Co.

Date Sampled: 01/26/98
Date Received: 01/28/98
Date Extracted: 01/29/98
Date Analyzed: 01/29/98
Date Reported: 01/30/98
Client ID No.: S-2 @ 5'

Project No.: 40282.1
Contact: Mike Leacox
Phone: (916)364-0793

Lab Contact: George Hampton
Lab ID No.: P1685-2A
Job No.: 811685
COC Log No.: NO NUMBER
Batch No.: 21522
Instrument ID: GC018
Analyst ID: JENNDC
Matrix: SOIL

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/kg)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	100	105

S-2 @ 5'

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)	Dilution (factor)
Benzene	71-43-2	ND	5.0	1.0
Toluene	108-88-3	ND	5.0	1.0
Ethylbenzene	100-41-4	ND	5.0	1.0
Xylenes, total	1330-20-7	ND	10	1.0

ND = Not detected at or above indicated Reporting Limit

CLS Labs

Analysis Report: BTEX, EPA Method 8020
Purge and Trap, EPA Method 5030

Client: Harding Lawson Associates
10265 Rockingham Dr. STE 150
Sacramento, CA 95827

Project: Teichert/Placer Co.

Date Sampled: 01/26/98
Date Received: 01/28/98
Date Extracted: 01/29/98
Date Analyzed: 01/29/98
Date Reported: 01/30/98
Client ID No.: S-3 @ 7'

Project No.: 40282.1
Contact: Mike Leacox
Phone: (916)364-0793

Lab Contact: George Hampton
Lab ID No.: P1685-3A
Job No.: 811685
COC Log No.: NO NUMBER
Batch No.: 21522
Instrument ID: GC018
Analyst ID: JENNDC
Matrix: SOIL

--------------------------------- SURROGATE ---------------------------------

Analyte	CAS No.	Surr Conc. (ug/kg)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	100	103

--------------------------------- S-3 @ 7' ---------------------------------

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)	Dilution (factor)
Benzene	71-43-2	ND	5.0	1.0
Toluene	108-88-3	ND	5.0	1.0
Ethylbenzene	100-41-4	ND	5.0	1.0
Xylenes, total	1330-20-7	ND	10	1.0

ND = Not detected at or above indicated Reporting Limit

CLS Labs

Analysis Report: BTEX, EPA Method 8020
Purge and Trap, EPA Method 5030

Client: Harding Lawson Associates
10265 Rockingham Dr. STE 150
Sacramento, CA 95827

Project: Teichert/Placer Co.

Date Extracted: 01/29/98
Date Analyzed: 01/28/98
Date Reported: 01/30/98

Project No.: 40282.1
Contact: Mike Leacox
Phone: (916)364-0793

Lab Contact: George Hampton
Lab ID No.: P1685
Job No.: 811685
COC Log No.: NO NUMBER
Batch No.: 21522
Instrument ID: GC018
Analyst ID: JENNDC
Matrix: SOIL

MB SURROGATE

Analyte	CAS No.	Surr Conc. (ug/kg)	MB Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	100	99

METHOD BLANK

Analyte	CAS No.	Results (ug/kg)	Reporting Limit (ug/kg)
Benzene	71-43-2	ND	5.0
Toluene	108-88-3	ND	5.0
Ethylbenzene	100-41-4	ND	5.0
Xylenes, total	1330-20-7	ND	10

ND = Not detected at or above indicated Reporting Limit

CLS Labs

Analysis Report: BTEX, EPA Method 8020
Purge and Trap, EPA Method 5030

Client: Harding Lawson Associates
10265 Rockingham Dr. STE 150
Sacramento, CA 95827

Project: Teichert/Placer Co.

Date Extracted: 01/29/98
Date Analyzed: 01/29/98
Date Reported: 01/30/98

Project No.: 40282.1
Contact: Mike Leacox
Phone: (916)364-0793

Lab Contact: George Hampton
Lab ID No.: P1685
Job No.: 811685
COC Log No.: NO NUMBER
Batch No.: 21522
Instrument ID: GC018
Analyst ID: JENNDC
Matrix: SOIL

MS SURROGATE

Analyte	CAS No.	MS Surr. Conc. (ug/kg)	MS Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	100	105

MATRIX SPIKE

Analyte	CAS No.	MS Conc. (ug/kg)	MS Recovery (percent)
Benzene	71-43-2	100	126
Toluene	108-88-3	100	132
Ethylbenzene	100-41-4	100	127
Xylenes, total	1330-20-7	300	123

MSD SURROGATE

Analyte	CAS No.	Surr. Conc. (ug/kg)	MSD Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	100	92

MATRIX SPIKE DUPLICATE

Analyte	CAS No.	MSD Conc. (ug/kg)	MSD Recovery (percent)
Benzene	71-43-2	100	112
Toluene	108-88-3	100	119
Ethylbenzene	100-41-4	100	114
Xylenes, total	1330-20-7	300	111

RELATIVE % DIFFERENCE

Analyte	CAS No.	Relative Percent Difference (percent)

CLS Labs

Analysis Report: BTEX, EPA Method 8020
              Purge and Trap, EPA Method 5030

Client: Harding Lawson Associates
        10265 Rockingham Dr.   STE 150
        Sacramento, CA 95827

Project: Teichert/Placer Co.

Date Extracted: 01/29/98
Date Analyzed: 01/28/98
Date Reported: 01/30/98

Project No.: 40282.1
    Contact: Mike Leacox
      Phone: (916)364-0793

Lab Contact: George Hampton
  Lab ID No.: P1685
    Job No.: 811685
COC Log No.: NO NUMBER
  Batch No.: 21522
Instrument ID: GC018
  Analyst ID: JENNDC
     Matrix: SOIL

RELATIVE % DIFFERENCE(cont.)

Analyte	CAS No.	Relative Percent Difference (percent)
Benzene	71-43-2	12
Toluene	108-88-3	10
Ethylbenzene	100-41-4	11
Xylenes, total	1330-20-7	10

CLS Labs

Client: Harding Lawson Associates
         10265 Rockingham Dr.   STE 150
         Sacramento, CA 95827

Project: Teichert/Placer Co.

Date Extracted: 01/29/98
Date Analyzed: 01/28/98
Date Reported: 01/30/98

Project No.: 40282.1
   Contact: Mike Leacox
     Phone: (916)364-0793

Lab Contact: George Hampton
   Lab ID No.: P1685
     Job No.: 811685
COC Log No.: NO NUMBER
   Batch No.: 21522
Instrument ID: GC018
   Analyst ID: JENNDC
       Matrix: SOIL

LCS SURROGATE

Analyte	CAS No.	LCS Conc. (ug/kg)	LCS Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	100	98

LAB CONTROL SAMPLE

Analyte	CAS No.	LCS Conc. (ug/kg)	LCS Recovery (percent)
Benzene	71-43-2	100	118
Toluene	108-88-3	100	116
Ethylbenzene	100-41-4	100	117
Xylenes, total	1330-20-7	300	111

CLS Labs

Analysis Report: Total Petroleum Hydrocarbons, EPA Method 8015
Purge and Trap, EPA Method 5030

Client: Harding Lawson Associates
10265 Rockingham Dr. STE 150
Sacramento, CA 95827

Project: Teichert/Placer Co.

Date Sampled: 01/26/98
Date Received: 01/28/98
Date Extracted: 01/29/98
Date Analyzed: 01/29/98
Date Reported: 01/30/98
Client ID No.: S-1 @ 3'

Project No.: 40282.1
Contact: Mike Leacox
Phone: (916)364-0793

Lab Contact: George Hampton
Lab ID No.: P1685-1A
Job No.: 811685
COC Log No.: NO NUMBER
Batch No.: 21522
Instrument ID: GC018
Analyst ID: JENNDC
Matrix: SOIL

SURROGATE

Analyte	CAS No.	Surr Conc. (mg/kg)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	0.100	80

S-1 @ 3'

Analyte	CAS No.	Results (mg/kg)	Rep. Limit (mg/kg)	Dilution (factor)
TPH as Gasoline	N/A	ND	1.0	1.0

ND = Not detected at or above indicated Reporting Limit

CLS Labs

Analysis Report: Total Petroleum Hydrocarbons, EPA Method 8015
Purge and Trap, EPA Method 5030

Client: Harding Lawson Associates
    10265 Rockingham Dr. STE 150
    Sacramento, CA 95827

Project: Teichert/Placer Co.

Date Extracted: 01/29/98
Date Analyzed: 01/28/98
Date Reported: 01/30/98

Project No.: 40282.1
    Contact: Mike Leacox
     Phone: (916)364-0793

Lab Contact: George Hampton
  Lab ID No.: P1685
    Job No.: 811685
COC Log No.: NO NUMBER
   Batch No.: 21522
Instrument ID: GC018
  Analyst ID: JENNDC
     Matrix: SOIL

MB SURROGATE

Analyte	CAS No.	Surr Conc. (mg/kg)	MB Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	0.100	103

METHOD BLANK

Analyte	CAS No.	Results (mg/kg)	Reporting Limit (mg/kg)
TPH as Gasoline	N/A	ND	1.0

ND = Not detected at or above indicated Reporting Limit

APPENDIX D

NCIC Archeological Database Report

California
Historical
Resources
Information
System

NORTH CENTRAL
INFORMATION
CENTER

AMADOR
EL DORADO
NEVADA
PLACER
SACRAMENTO
YUBA

Department of Anthropology
California State University, Sacramento
6000 J Street, Sacramento, CA 95819-6106
(916) 278-6217
FAX (916) 278-5162

January 29, 2001

Keith Hoofard
GeoTrans Inc.
3035 Prospect Park Drive Suite 40
Rancho Cordova, CA 95670-6070   IC# PLA-01-05

RE: RECORD SEARCH FOR THE NADER PROPERTY IN PLACER COUNTY.

Dear Mr. Hoofard:

In response to your request, received on Jan. 11, 2001, a record
search for the above location (USGS Roseville 7.5' Quad. T12N R6E
Sections 20, 28 & 29) has been completed with the following
results:

PREHISTORIC RESOURCES: Our records indicated that no previously
recorded sites of this type are known to be located within or
immediately adjacent to this project. There is one site, P-31-
21 (a scatter of stone tools), located within 1000 feet however.
Other such sites have been recorded within a mile.

HISTORIC RESOURCES: According to our records the nearest
previously recorded historic archeological resources are just
over a 1/2 mile away and consist mostly of early ranching
remains.

Our office copy of the 1855 GLO Plat for the project township
shows two branches of the Sacramento & Virginia Road to the north
and southeast of the project. These roads suggest that the area
was beginning to develop soon after the beginning of the Gold
Rush. See map copy with project indicated.

A review of the listed historic references did not reveal any
landmarks, National Register sites, historic districts or other
listed or mentioned properties within close range of the project.

PREVIOUS ARCHEOLOGICAL INVESTIGATIONS: Our records show that a
small portion of the project area has been previously surveyed,
as reported in Lindstrom with Wells (1989) and Jones & Stokes
(1999). Surveys of some adjacent parcels have also been
completed as documented in Report No. 452, Derr (1997) and Jones
& Stokes (1998). Addition work in these nearby areas is also
shown in Jones & Stokes (1999) and Lindstrom with Wells (1989.
Finally, an overview of the area south of the project was done by
Derr in 1996. See map and copies of library cards or title pages.

January 29, 2001
K. Hoofard
Pg. 2

SENSITIVITY AND RECOMMENDATIONS: Based upon the above
information and the local topography the sensitivity is estimated
to be the moderate to high range for historic resources and in
the moderate to low range for those of prehistoric origins.

In view of this, an archeological field survey is recommended in
order to identify and record any resources which may be present
on the property and to adequately assess possible project impact
to those resources. See attachment "A" for further instructions.
Enclosed is also a copy of our referral list of archeological
consultants for your reference.

LITERATURE SEARCH: In addition to the official records and maps
for archeological sites and surveys in _Placer_ County, the
following historic references were also reviewed: the National
Register of Historic Places - Listed properties (1996) and
Determinations of Eligibility (Aug. 2000), the California
Inventory of Historic Resources (1976), California Historical
Landmarks (1996 and updates), California Points of Historical
Interest (1992 and updates), Gold Districts of California (1979),
California Gold Camps (1975), California Place Names (1969),
Survey of Surveys (Historic and Architectural Resources) (1989),
Directory of Properties in the Historical Resources Inventory
(HRI) (Aug. 2000), Caltrans State and Local Bridge Surveys
(2000), Historic Spots in California (1966 and 1990) and the
Historical, Architectural, and Archeological Resources of Placer
County, California (1992).

As indicated on the attached agreement form the charge for this
record search is **$181.20**.   Payment instructions are included at
the bottom of the form. Please sign where indicated and return
the **YELLOW** copy with your payment. Thank you.

If you have any questions please do not hesitate to call.

Sincerely,
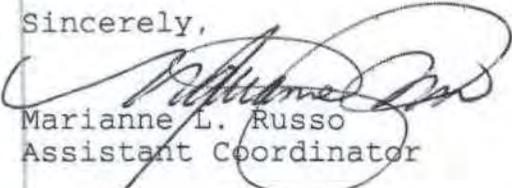
Marianne L. Russo
Assistant Coordinator

California
Historical
Resources
File System

NORTH CENTRAL
INFORMATION
CENTER

AMADOR
EL DORADO
NEVADA
PLACER
SACRAMENTO
YUBA

Department of Anthropology
California State University, Sacramento
6000 J Street, Sacramento, CA 95819-6106
(916) 278-6217
FAX (916) 278-5162

RECORD SEARCH ATTACHMENT "A" - <u>SURVEY RECOMMENDATION ADVISORY</u>

The survey field work and cultural resources evaluation should be performed by a qualified professional archeologist who can demonstrate that he/she has a record of full cooperation with the Information Center program and has an acceptable report review record with the State Office of Historic Preservation and/or other governmental agencies which must comply with NEPA or CEQA. The resulting report should include at a minimum, a description of the project and background of the history and archeology of the area, results of the field survey, complete records of any remains found (eligible for State Trinomial designations), an analysis of the potential significance of those remains if they do occur, and recommendations for their preservation and/or mitigation.

As indicated on the "Agreement of Confidentiality" form, a copy of any archeological report that is produced in connection with this project should be submitted to this office for inclusion in our record and report archive either by the archeologist or your office. <u>When you contract with someone to perform this work you should provide them with a copy of this record search</u>. They will probably wish to review the records for themselves and gather additional background data. By providing the archeologist with the record search information, you can avoid costly duplication of services.

Site Location Map — 512 Acre Nader Property — 2675 Moore Road
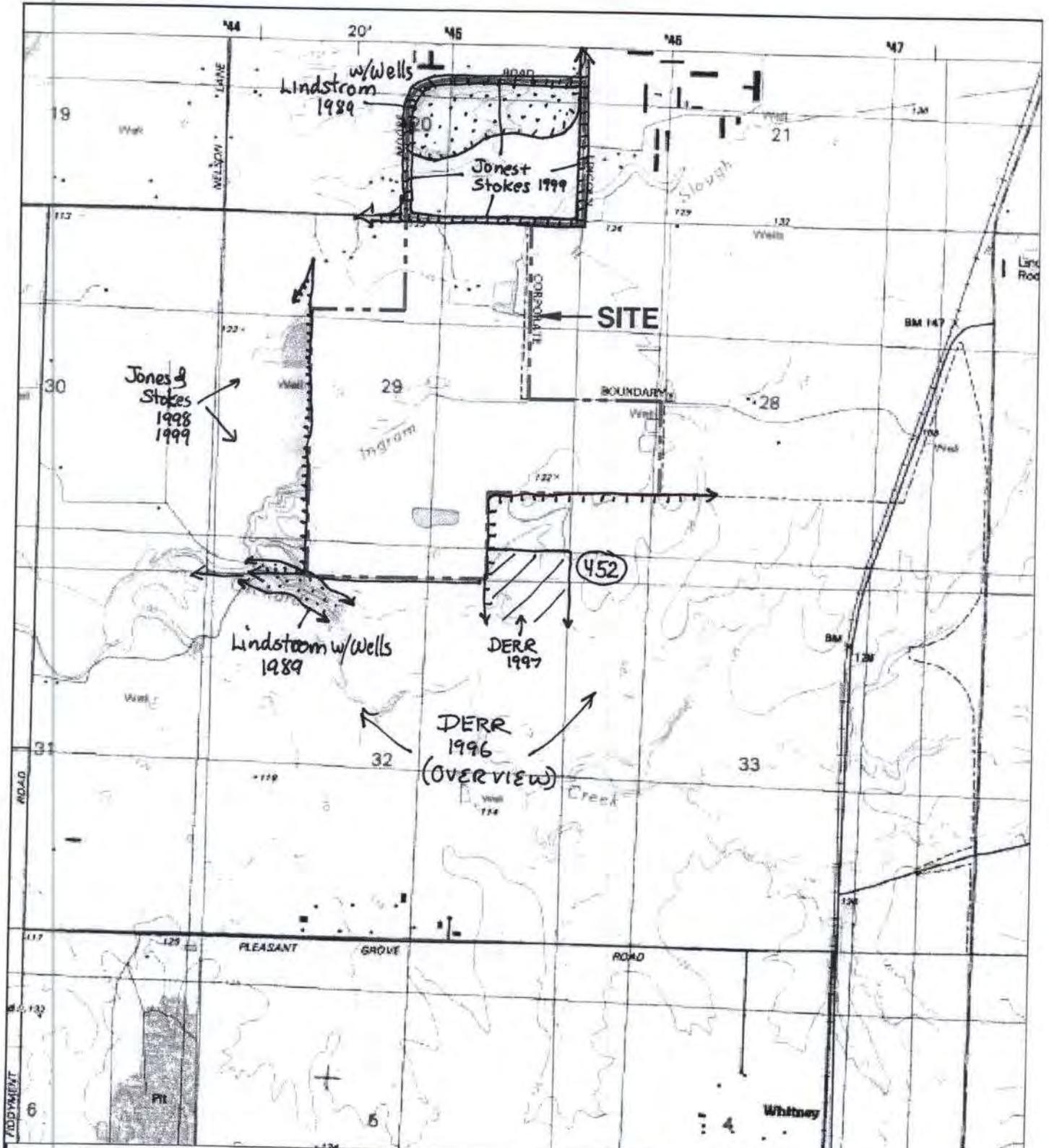
Lewis Operating Corp.
Lincoln, California

Site Location Map
512 Acre Nader Property
2675 Moore Road

DATE:	12/28/00
DESIGNED:	RDH
CHECKED:	KDH
APPROVED:	KDH
DRAWN:	RDH
PROJ.:	L318-101

Scale 1"=2000'

0   1000'   2000'

GeoTrans, Inc.
A TETRA TECH COMPANY

Figure 1

D:\Projects\GeoTrans\Sacto\LewisCorp\L318\drawings\18sm01-a.dwg 12/28/2000 12:56:44

Dry Run.

A.160

A.80

A.37.30

Sec.18
A.629.24

Sec.17
640

Sec.16
640

Sec.15
640

Dry Run.

137.32 N°1   A.160

44½

37.35 A.80

79.68

V.16.15'E.

V.16.09'E.

V.16.09'E.

Auburn Ravine

Sacramento & Virginia Road

V.16°15'E.

V.16°20'E.

V.16.16½E.

37.33 N°1.

44½

A.160

77.27 A.80

Sec.19
A.629

Sec.20
640

Sec.21
640

Sec.22
640

Slough

A.37.23 N°1

44½ A.160

A.37.19 A.80

V.16.34½E. 79.99

V.16.15'E.

V.16.09'E.

Ravine

V.16.09'E.

V.16.09'E.

V.16.15'E.

89.08

60

79.95

V.16.23'E.

A.37.16 N°1

44½ A.160

Slough A.80

A.37.17

Sec.30
A.628.70

Sec.29
640

Sec.28
640

Sec.27
640

Virginia

37.18 N°1

44½ A.160

37.19 A.80

V.16.15'E.

V.16.09'E.

V.16.09'E.

V.16.09'E.

V.16.00'E.

79.60 Dry Slough

7989

V.16.22'E. Dry Slough.

7982

V.16.15'E. Dry Run.

7984

V.16.06'E.

V.16.06'E.

V.16.06'E.

37.23 N°1

44½ A.160

77.29 A.80

Sec.31.
A.629.28

Sec.32
640

Sec.33
640

Sec.34
640

Slough

A.37.35 N°1

44½ A.160

A.37.41 Slough

V.16.15'E.

V.16.09'E.

V.16.09'E.

V.16.09'E.

78.72

Dry Run

Dry Slough

Dry Run

Sloughs

Var. 16°08'E.

Surveys Designated	By Whom Surveyed.	Date of Contract.	Amount of Surveys Miles Chs. lks.			When Surveyed.
North boundary of Township	E. D. Richardson.	July 10th 1854	5.	78.	95.	1855
East " " "	" " "	" " "	6.	00.	00.	"
South " " "	" " "	" " "	5.	78.	72.	"
West " " "	" " "	" " "	6.	00.	10.	"
Section lines " " "	" " "	" " "	59.	72.	24.	"

T12N R6E
Oct 19th 1855

Roop, William

   1978   <u>An Archeological Evaluation of 1100 Acres</u>
           <u>Near Roseville</u>.

   <u>SURVEY</u>

   USGS: Roseville 7.5' T12N R6E Sec. 27, 18, 19, 32,
                                      33 & 34.

   Area: 1100 acres
   Prepared For: Hewlett-Packard, Roseville, CA
   Cultural Resources: AF-31-9, 10-H, 11-H, 12, 13,
                       14, 15, 16/H, 17-H, 18,
                       19, 20-H, 21 & 22-H.

SUNSET INDUSTRIAL AREA PLAN: Cultural Resources Background Report

Prepared for
Environmental Science Associates, 1930 9th Street, Sacramento,
California, 95814

by
Eleanor H. Derr, Cultural Resources Unlimited, 2614 Aramon Drive,
Rancho Cordova, California, 95670

November 1996

CULTURAL RESOURCE STUDIES - CITY of LINCOLN WASTE WATER TREATMENT PLANT PROJECT

Prepared for
Sugnet & Associates   2260 Douglas Blvd., Suite 160
Roseville, California 95661

by
Eleanor H. Derr   Cultural Resources Unlimited
2614 Aramon Drive
Rancho Cordova, California 95670

March 1997

Archaeological Survey Report for the City of Lincoln Permanent Wastewater Treatment Plant, Placer County, California

Prepared for:

City of Lincoln
1390 First Street
Lincoln, CA 95648
Contact: John E. Pedri
916/645-8576

Prepared by:

Jones & Stokes Associates, Inc.
2600 V Street, Suite 100
Sacramento, CA 95818-1914
Contacts: Trish Fernandez/Dana McGowan
916/737-3000

June 12, 1998

Cultural Resources Inventory Report
for the City of Lincoln
Wastewater Treatment Plant Expansion,
Placer County, California

Prepared for:

City of Lincoln
1390 First Street
Lincoln, CA 95648
Contact: John E. Pedri
916/645-8576

Prepared by:

Jones & Stokes Associates, Inc.
2600 V Street, Ste. 100
Sacramento, CA 95818
Contact: Shahira Ashkar/Dana McGowan
916/737-3000

March 1999

A CULTURAL RESOURCE EVALUATION OF THE

SPHERE OF THE CITY OF LINCOLN

PLACER COUNTY

TO INCLUDE

THE FERRARI RANCH/SOUTHEAST LINCOLN PROJECT

AND

THE LINCOLN CROSSING PROJECT

BY

SUSAN LINDSTROM
ARCHAEOLOGICAL CONSULTANT

WITH CONTRIBUTIONS BY

JOHN WELLS
CONSULTING MINING ENGINEER

PREPARED FOR

EIP ASSOCIATES
SACRAMENTO, CALIFORNIA

APRIL 14, 1989

Climate Change Technical Report

The Lewis Property
at Village 7

Prepared for:
Lewis Planned Communities
Sacramento, California

Prepared by:
ENVIRON International Corporation
San Francisco, California

Date:
March 25, 2010

Project Number:
03-22097D

ENVIRON

Contents

List of Tables

List of Appendices

Acronyms

AB	Assembly Bill
AB 32	California Global Warming Solutions Act of 2006
AF	acre feet
ARB	California Air Resources Board
B20	biodiesel (20%)
C	carbon
CAFE	corporate average fuel economy
CAPCOA	California Air Pollution Control Officers Association
CCAR	California Climate Action Registry
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CEUS	California Commercial End-Use Survey
CFC	chlorinated fluorocarbons
CH_4	methane
CO_2	carbon dioxide
CO_2e	CO_2 equivalents
DEIR	Draft Environmental Impact Report
EF	emission factor
EIA	United States Energy Information Administration
EIR	Environmental Impact Report
EISA	Energy Independence and Security Act of 2007
EMFAC	emissions estimation software programs
ENVIRON	ENVIRON International Corporation
GHG	greenhouse gas
GRP	General Reporting Protocol
GWP	global warming potential
HBO	home-based other (trip)
HBW	home-based work (trip)
HFC	hydrofluorocarbons
HVAC	heating, ventilating, and air conditioning
IPCC	Intergovernmental Panel on Climate Change
kW	kilowatt
kWh	kilowatt-hour
kW-hr/yr	kilowatt-hours/year
lbs	pounds
LCA	Life Cycle Assessment
LDA	light-duty auto
LDT	light-duty truck
MEL	miscellaneous energy load
MW	megawatts
NHB	non-home-based (trip)
N_2O	nitrous oxide
O_2	oxygen
PG&E	Pacific Gas and Electric
RASS	Residential Appliance Saturation Survey
RPS	California's Renewables Portfolio Standard
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
sqft	square feet
TDV	Time Dependent Valuation
tonnes	Metric tonnes; 1,000 kilograms

UNEP   United Nations Environment Programme
URBEMIS Urban Emissions Model
US   United States
USEPA   United States Environmental Protection Agency
VMT   vehicle miles traveled
WMO   World Meteorological Organization

1 Introduction

The Village 7 Specific Plan site is located in an unincorporated area of Placer County, southwest of the City of Lincoln. The 703-acre Village 7 Specific Plan project is categorized into four planning areas for future development. One of these planning areas, the 516-acre Lewis Property (the Project), is the focus of this report. The Project will result in approximately 2,268 new residences at full build out and will include 125,000 square feet (sq. ft.) of commercial land use (i.e., office, services and retail uses) and a 64,800 sqft elementary school.

The Project will result in one-time and annual (direct and indirect) emissions of greenhouse gases (GHGs). Direct emissions of GHGs are those that are emitted directly as a result of the Project and include land use change and construction emissions. Indirect emissions are those emissions that the project entitlement will enable, but that are not controlled by the project proponent. This report provides an estimate of an emissions inventory that would result from entitling the Project.

Residents, employees, and patrons of commercial and municipal buildings use electricity, heat their homes and water (typically with natural gas), and are transported in motor vehicles, all of which directly or indirectly emit GHGs. The principal GHGs resulting from such developments are emissions of carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). CO_2 is considered the most important GHG, due primarily to the large emissions produced by fossil fuel combustion, especially for the generation of electricity and powering of motor vehicles. CH_4 and N_2O are also emitted by fossil fuel combustion, though their emissions are much less significant than CO_2 emission. CH_4 is also emitted from the transmission, storage, and incomplete combustion of natural gas. In emissions inventories, GHG emissions are typically reported in terms of mass (pounds or tonnes[1]) of CO_2 equivalents (CO_2e), calculated as the product of the mass emitted of a given GHG and its specific global warming potential (GWP).

The Project is located within the jurisdiction of the Placer County Air Pollution Control District (PCAPCD). However, as PCAPCD guidelines for the preparation of GHG inventories are under development and have not yet been finalized, this inventory has been developed consistent with the methodologies established by the California Climate Action Registry (CCAR) where possible.[2] When guidance from the CCAR is lacking, methodologies established by the Intergovernmental Panel on Climate Change (IPCC)[3] and best available science are used. Legislation and rules regarding climate change, as well as scientific understanding of the extent

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[1] In this report, "tonnes" will be used to refer to metric tonnes (1,000 kilograms). "Tons" will be used to refer to short tons (2,000 pounds).

[2] On August 26, 2009, PCAPCD held a Climate Change/GHG and Land Use Workshop to assist planners, decision makers and others involved in analyzing climate change relating to land use projects. The presentation from that workshop is available online: http://www.placer.ca.gov/Departments/Air/~/media/apc/documents/Planning/ 2009GHGWorkshopPresentationReduced.ashx

[3] The World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP) established the IPCC in 1988; it is open to all members of the United Nations and WMO.

ENVIRON

to which different activities emit GHGs, continue to evolve; as such, the inventory in this report is a reflection of the guidance and knowledge currently available.

At the entitlement stage of a development, while the number of homes, the approximate size of commercial areas and the locations of both are known, the exact designs of the homes, businesses, and facilities are not. Even so, the types of buildings and the types of facilities at the future Project site can be used for developing an estimate of the Project's anticipated GHG emissions. Energy used in a building depends in part on the built environment; however, actual future emissions from the site will also depend heavily upon the future homeowners' and business owners' habits. Because the actual future occupants and their habits are not yet known, average current behavior is assumed. That assumption is likely to be a "worst-case" assumption. Given the current regulatory environment and the media focus on global climate change, it is likely that the actual future occupants will be more sensitive to the GHG emissions caused by their activities and, therefore, their activities will result in lower GHG emissions than average current behavior shows.

1.1 Emissions Inventory

The emissions inventory for the Project includes the following categories of GHG emissions:

- emissions due to land use (vegetation) changes,
- emissions from construction activities,
- residential building operations emissions,
- non-residential building operations emissions,
- mobile source operations emissions,
- municipal operations emissions, and
- area source (fireplaces and lawn maintenance) emissions

In addition, estimates of "life-cycle" GHG emissions from building materials are presented. Life-cycle emissions include all of the emissions caused by the existence of a product or project, for example, GHG emissions from the processes used to manufacture and transport materials used in the buildings and infrastructure. This estimate is to be used for comparison purposes only and is not included in the final inventory as these emissions would be accounted for in other industry sectors under California Global Warming Solutions Act of 2006 (AB 32). In addition, life-cycle analyses inherently involve many uncertainties. These include the somewhat arbitrary nature of the boundaries and the definition of the useful life of a building or road, and are discussed more fully in Appendix B.

The inventory does not consider GHG emissions from sources outside of the Lewis Property that may indirectly service Lewis Property residents and would be covered by other GHG emissions inventories (e.g., a landfill). The inventory also does not consider whether the emissions from the Project are "new" in the sense that, absent the Project, these emissions may

ENVIRON

not occur. However, emissions from water use, wastewater treatment, and construction worker commuting are included.

The timeframe over which GHGs are emitted varies from category to category, which is taken into consideration in the emissions inventory. For most of the categories, GHGs will be emitted every year that the development is inhabited. For these categories (residential buildings, non-residential buildings, mobile sources, municipal services, and area sources), the inventory includes estimates of annual GHG emissions from ongoing Project operations. GHG emissions from two of the categories, construction and changes in vegetation, are one-time events that will not be part of the development's ongoing activity. These one-time emissions can be divided by the estimated lifetime of the Project to allow direct comparison with annually recurring emissions. The inventory presents estimates of these one-time emissions, converts them to annualized estimates[4], and integrates them into the annual inventory.

The GHG emissions estimates in this inventory assume there are no reductions in GHG-generating activities over time. This is clearly unlikely, and represents a conservative analysis, given the expected reductions in GHG emissions from most activities that will take place over the years due to future regulations, greater public awareness, and the likely increasing costs of energy.

A variety of methods are employed to develop a complete GHG emissions inventory. In addition to well established emission factors for certain activities and emission estimates based on similar activities in other representative communities, several emissions estimation software programs are used. These include EMFAC, OFFROAD2007, and the Urban Emissions (URBEMIS) model. Later sections of the report describe these models and other estimation methods. The major emissions sources that exist in residential and mixed use developments are described later in this report.

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[4] For the purposes of this inventory, a project lifetime of 40 years is assumed. This is on the low end of commonly used estimates of building lifetime, and consequently is a conservative estimate.

2 Greenhouse Gas Inventory

This section describes the methods that ENVIRON International Corporation (ENVIRON) used to estimate GHG emissions from the Project after development and full build out. It includes some aspects that are fully within the control of Lewis Planned Communities (Lewis), such as grading and the placement of utilities; some aspects that are in control of the individuals building the houses and commercial buildings, such as construction emissions; and some aspects for which control over emissions is shared by the developers and the residents, such as energy use in the built environment and emissions from traffic by the development's future residents and employees in the commercial areas. In addition, an estimate of "life-cycle" GHG emissions (i.e., GHG emissions from the processes used to manufacture and transport materials used in the buildings and infrastructure) is presented. This estimate is to be used for comparison purposes only and is not included in the final inventory as these emissions would be attributable to other industry sectors under AB 32. The inventory does not consider GHG emissions from most sources outside of the Lewis Property that may indirectly service the residents (e.g., a landfill) or whether the emissions from the development are "new" in the sense that, absent the development, the emissions may not occur. Each aspect of the GHG inventory is described in this section. Actual GHG emissions at full build-out at the Lewis Property are expected to be lower due to regulatory developments; therefore, the GHG emissions reported in this section are a conservative estimate.

2.1 Evaluation of "New" Emissions

Given the global nature of GHG impacts, it is difficult to determine which emissions from a given project are "new" on a global scale. As described in this section, there are methods of estimating emissions from certain aspects of projects, such as that from the additional vehicle travel associated with the project. However, it is not clear how to determine what proportion of those emissions are truly additional, or new, in the global sense, or what proportion of those emissions would have occurred globally without the project.

Analyses for evaluating the airborne criteria pollutant impacts of new projects for inclusion in environmental documents have already, in a sense, addressed the issue of what is "new". However, the impacts of GHG emissions differ from those of criteria pollutants in that they are a function of global concentrations rather than local concentrations and, therefore, specific locations of where emissions occur is less important than for criteria pollutants. The calculation of "project" criteria pollutants (oxides of nitrogen, sulfur oxides, carbon monoxide, volatile organic compounds, lead, and particulate matter) in air quality emissions inventories for use in EIRs has a long history. The South Coast Air Quality Management District (SCAQMD) first published a comprehensive manual on the analysis of air quality impacts in 1993, and the Bay Area Air Quality Management District (BAAQMD) followed in 1999. Other smaller districts have prepared detailed guidance documents that describe the methods that should be used to calculate emissions inventories for EIRs from projects, including residential and commercial projects.

The goal of estimating emissions of criteria pollutants from projects is to understand whether there are significant new emissions in California's air basins, which have a limited ability to

absorb additional criteria pollutant emissions without adverse air quality impacts. A review of how air quality analyses typically address the issue of whether emissions are "new" is instructive as to how to address the emissions of GHGs. However, unlike with criteria pollutants, the impacts of GHG emissions are a function of their global concentrations, rather than local concentrations. Thus, the question of whether or not a project's GHG impacts are significant, both on a project basis and on a cumulative basis, must be asked based on global, rather than basin-wide, considerations.

When evaluating the air quality impacts for a new project, such as a residential development, the vehicular emissions associated with the residents as they work and shop within the basin are counted as new emissions in traditional air quality analyses, even if those new residents would have moved from another house in the same air basin. The typical rationale for this approach is that the new residential development represents growth in the basin. As a result, all emissions associated with its residents' vehicle travel should be counted as new emissions, even if this might lead to some over-counting of criteria pollutant emissions from the project.

World rankings of nations' GHG emissions generally depend on which gases are accounted for, and whether land use changes are considered. Without considering land use changes, in recent years, the US has been the top GHG-emitting country in the world. When all of the developed countries are grouped together, they contribute approximately 52% of the world-wide GHG emissions.[5]

To understand the global scale impact of GHGs, it is useful to understand that the increase of new GHG emissions globally is caused by economic and population growth. Emission growth rates are the highest among developing countries. While GHG emissions in developed countries were unchanged over the 1990-2002 period, emissions increased by 47% in developing countries during that same time period. Emissions in China grew about 50% during that time period -- preliminary estimates show that China's GHG emissions increased 35% in 2003 and 2004 alone. This increase in developing country GHG emissions is due to the increasing demand for higher standards of living as a result of GDP growth, requiring more vehicles and greater electricity demand. Also, developing countries often lack the technology or capital to utilize energy efficient products or to construct cleaner burning power plants. GHG emissions in China are growing slightly faster than primary energy use as the fuel mix increasingly favors coal, a high-carbon fuel. China accounts for 39% of the projected increase between 2004 and 2030, and will overtake the United States as the world's biggest emitter before 2010.[6]

In the developed world, GHG increases are directly tied to population growth. Therefore, it makes sense to consider operational emissions (including vehicular emissions) from new

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[5] Baumert, K.A., T. Herzog, J. Pershing. 2005. *Navigating the Numbers: Greenhouse Gas Data and International Climate Policy.* Available at: http://www.wri.org/climate/pubs_description.cfm?pid=4093

[6] International Energy Agency. *World Energy Outlook 2006: Fact Sheet- Global Energy Trends The World's Energy Future: Where Are We Headed.* Available at: http://www.iea.org/papers/2006/fs_GlobalEnergyTrends.pdf. Accessed November 18, 2009.

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residences as growth, as residences are rarely removed from the housing supply once constructed. There are exceptions, such as when one housing development replaces another, and, in those cases, the replacement residential development need not be considered growth.

However, it is not clear that non-residential (i.e., office space, retail space, and industrial buildings) development should be considered new growth for vehicular travel purposes. To the extent that non-residential development serves existing residential development, its vehicular travel may not be new. For instance, if the new non-residential area serves an area with a high residential/ non-residential balance, then this new non-residential growth will reduce shopping and work trip lengths and will reduce GHG emissions associated with mobile sources. If, however, the new non-residential area results in longer trips for its workers and shoppers than they would have previously made, then it adds GHGs emissions. Non-residential development that could potentially increase vehicle miles traveled (VMT) would be facilities that draw trips from far away that otherwise would not be made. A theme park, for example, may be viewed as such a development.

In this report, it is assumed that the new non-residential area serves an area with a high residential/ non-residential balance. Therefore, this new non-residential growth is unlikely to increase shopping and work trip lengths from existing residences.

The approach described above is different than that for criteria emissions. For criteria pollutants, if new emissions move into the basin, although there is a reduction in criteria emissions elsewhere, these emissions are new to the basin and therefore counted. For GHGs, if the emissions simply moved from one basin to another, the emissions would not be new on a global scale. To evaluate the sustainability of new non-residential developments, one must ask if the shoppers' and workers' travel distances to the new non-residential development are longer or shorter than the distances those same individuals currently travel to their non-residential areas.

To the extent that new non-residential development serves new residential development, much of the non-residential vehicle travel would already be counted in the evaluation of the new residential development. Although the vehicle trips would be already counted elsewhere, the operational emissions from heating and cooling the non-residential areas would be considered to be new, as there are new non-residential buildings that goes along with growth in residential areas.

Accordingly, GHG emissions from VMT serving non-residential areas will only be counted if the non-residential areas contribute to greater VMT as a result of their locations. If the non-residential development lowers VMT, then it will be considered to have a zero or negative GHG contribution as a result of the fact that it has generated shorter operational vehicle trip lengths than would have otherwise occurred. It should be noted that as the Lewis Property is a mixed use community, this issue does not directly affect the Project's VMT calculations; all VMT from Lewis Property residents are calculated regardless of internal or external destinations or purpose of trip.

2.2 Units of measurement: Tonnes of CO_2 and CO_2e

The term "GHGs" includes gases that contribute to the natural greenhouse effect, such as CO_2, CH_4, N_2O, and water, as well as gases that are only man-made and that are emitted through the use of modern industrial products, such as hydrofluorocarbons (HFCs) and CFCs. The most important greenhouse gas in human-induced global warming is CO_2. While many gases have much higher GWPs than CO_2, CO_2 is emitted in such vastly higher quantities that it accounts for 85% of the GWP of all GHGs emitted by the United States.[7]

The effect each of these gases has on global warming is a combination of the volume of their emissions and their GWP. GWP indicates, on a pound for pound basis, how much a gas will contribute to global warming relative to how much warming would be caused by the same mass of CO_2. CH_4 and N_2O are substantially more potent than CO_2, with GWPs of 21 and 310, respectively. GHG emissions are typically measured in terms of mass of CO_2e. CO_2e are calculated as the product of the mass of a given GHG and its specific GWP.

In many sections of this report, including the final summary sections, emissions are presented in units of CO_2e either because the GWPs of CH_4 and N_2O were accounted for explicitly, or the CH_4 and N_2O are assumed to contribute a negligible amount of GWP when compared to the CO_2 emissions from that particular emissions category.

In this report, "tonnes" will be used to refer to metric tonnes (1,000 kilograms). "Tons" will be used to refer to short tons (2,000 lbs).

Additionally, exact totals presented in all tables and report sections may not equal the sum of components due to independent rounding of numbers.

2.3 Resources

To estimate GHG emissions from the Lewis Property, ENVIRON directly or indirectly relied primarily on four different types of resources: emissions estimation guidance from government-sponsored organizations, government-commissioned studies of energy use patterns, energy surveys by other consulting firms, and emissions estimation software. These sources are described below.

2.3.1 Emissions Estimation Guidance

This inventory was developed using guidance from two government-sponsored organizations to assist in the estimation of GHG emissions. The first is the CCAR, which was established by the California Legislature to assist willing parties in estimating and recording their GHG emissions to use as a baseline for meeting future emissions reduction requirements. Publications by the CCAR include not only recommendations on how to compile a GHG emissions inventory, but also relevant data on energy use and emissions that are utilized in this protocol. The second

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[7] U.S. Environmental Protection Agency. 2006. *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2004*. April. Available at: http://epa.gov/climatechange/emissions/downloads06/06_Complete_Report.pdf

organization is the IPCC, which was established in 1988 by the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO). The IPCC's main role is to assess information on climate change which is synthesized in IPCC reports, including methodology reports. These reports also include relevant emission factors and specific scientific data that can be used to estimate GHG activities from various activities.

2.3.2 Emissions and Energy Use Studies

For estimating emissions based on electrical and natural gas energy use, literature information on patterns of energy use must often be employed. Studies commissioned by the California Energy Commission (CEC) provide data on energy use patterns associated with municipal activities, natural resource distribution, and other activities that will take place in the Lewis Property. These data were used to estimate energy use patterns which were applied to the specific characteristics of the Lewis Property to estimate GHG emissions. In addition to CEC studies, studies performed by individual municipalities or scientific organizations are also used in this report.

2.3.3 Emissions Estimation Software

The ARB, the SCAQMD, and other public and private organizations have developed several software programs to facilitate the calculation of emissions from construction, motor vehicles, and urban developments by streamlining emissions estimation from these sources. This inventory was developed using various models to estimate GHG emissions from the Lewis Property development. These are the OFFROAD2007 model, the EMFAC model, and the URBEMIS model. The features of each of these models are described below.

OFFROAD – OFFROAD2007 is the most recent version of a model developed by the ARB to estimate the activity and emissions of off-road mobile emissions sources, such as construction equipment. OFFROAD contains a database of default values for horsepower, load factor, and hours per day of operation and can calculate emission factors based on the type of equipment and year of use. OFFROAD2007 emission rates are incorporated into URBEMIS2007.

EMFAC – EMFAC, also developed by ARB, compiles real fleet data on the county-level for the state of California, including vehicle model year distributions, vehicle class (e.g., light-duty auto (LDA), medium-duty truck, heavy-heavy-duty truck) distributions, and emission rate information to generate fleet-average emission factors for most criteria pollutants and CO_2. EMFAC2007 is the newest version of the program. Emission factors from EMFAC depend on the vehicle class, vehicle technology, speed, year of operation, average ambient air temperature, and relative humidity.

URBEMIS – The URBEMIS software was created by SCAQMD, although it is used by other air districts as well. It estimates emissions associated with different aspects of urban development. The Operational Data module in URBEMIS calculates emissions from mobile sources operating during the use of a development based on emission factors from EMFAC and traffic use information specific to a development. Mobile

source emissions during the construction phase are calculated separately in the construction module of URBEMIS. URBEMIS provides county, air district / air basin, or state wide averages for number of daily trips per housing unit and per student at an elementary school in the absence of more specific information from traffic engineers. URBEMIS also provides air district-specific default values for vehicle fleet characteristics (vehicle class distribution and technology categories) and travel conditions (average trip length, trip speed, and relative frequency of each type of trip). URBEMIS (Version 9.2.4), uses EMFAC2007 emission factors and calculates CO_2 emissions using District-specific default parameters for various inputs including vehicle fleet characteristics and travel conditions. URBEMIS incorporates OFFROAD2007 emission rates for off-road mobile sources.

In addition to mobile source emissions, URBEMIS can also calculate emissions associated with the construction phase of a development and emissions from area sources, such as fireplaces, once the development is operational. The URBEMIS construction module enables separate emissions calculations from each of the typical stages of any construction project: demolition, site grading, and building construction.[8] Based on the timing of construction and size of the development, URBEMIS defaults can be used to estimate emissions. Alternatively, the user can override these defaults by entering specific information about the construction project, such as what types and numbers of equipment are going to be used. In terms of area sources, URBEMIS is equipped to estimate GHG emissions from three types of GHG-emitting area sources based either on program defaults or more specific project information inputted by the user. These uses are natural gas fuel combustion, hearth fuel combustion, and landscaping equipment.

2.4 Indirect GHG Emissions from Electricity Use

Indirect GHG emissions are created as a result of electricity use. When electricity is used in a building, the electricity generation typically takes place offsite at the power plant; electricity use in a building generally causes emissions in an indirect manner. The Project will be supplied power by Pacific Gas & Electric (PG&E). Accordingly, indirect GHG emissions from electricity usage are calculated using the PG&E carbon-intensity factor most recently reported to the CCAR[9], adjusted to account for the 20% Renewables Portfolio Standard required by 2010.[10] Details of this calculation are shown in Table 2.4-1. This emission factor takes into account the

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[8] Grading can be differentiated as Mass Site or Fine Site Grading. In addition to these typical phases, URBEMIS 9.2.4 includes the ability to calculate emissions from trenching, paving, and architectural coating phases. Software User's Guide: URBEMIS2007 for Windows. Version 9.2. Appendix A. Page A-1.

[9] The PG&E specific emission factor for electricity deliveries is 636 lbs CO_2/MWh (from the California Climate Action Registry Database: Pacific Gas and Electric 2007 PUP Report. 2008; available at: https://www.climateregistry.org/CARROT/public/Reports.aspx). Although this emission factor accounts for only CO_2, the emissions associated with N_2O and CH_4 contribute to less than 1% of the electricity generation CO_2e emissions.

[10] California's RPS program (Senate Bill 1078 and Senate Bill 107) requires retail suppliers of electric services to increase procurement from eligible renewable energy resources by 1% annually until they reach 20% by 2010.

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future mix of energy sources expected to be used to generate electricity for PG&E and the relative carbon intensities of these sources.[11]

2.5 Vegetation Change

This section presents the calculation of the positive and negative GHG emissions associated with vegetation removal and re-vegetation at the Lewis Property. The majority of land at the development is undeveloped. The permanent removal of existing vegetation can contribute to net GHG increases by reducing existing carbon sequestration capacity.[12] Areas that are temporarily disturbed but re-vegetated with the same vegetation type are assumed to have no net impact.[13] Following completion of the property construction, many privately owned areas will become re-vegetated with trees, shrubs and other vegetation. These areas could potentially sequester more CO_2 from the atmosphere than was sequestered pre-development. The overall CO_2 emissions due to vegetation change will result from two processes: 1) the change in the amount of CO_2 sequestered by vegetation, which would lead to a one-time GHG release, and 2) the amount that can be expected to be sequestered by new plantings. Both issues are discussed in this section. The difference between the total before-development sequestered CO_2 and the after-development sequestered CO_2 is the one-time CO_2 released from permanently clearing vegetation less the CO_2 sequestered by new plantings.[14]

In this section of this report, the units CO_2 and CO_2e are used interchangeably. CH_4 and N_2O are assumed to contribute a negligible amount of GWP when compared to the CO_2 emissions from vegetation change.

2.5.1 Quantifying the One-Time Release by Changes in Carbon Sequestration Capacity

The one-time release of GHGs due to permanent changes in carbon sequestration capacity was calculated using the following four steps:[15]

1. *Identify and quantify the permanent change in area of various land types due to the development.* – These area changes include the area of land that will be converted to houses, as well as other disturbed areas, such as utility corridors and associated borrow and grading areas.

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[11] Indirect emissions from using a given amount of electricity will vary with the fuel-mix used to produce electricity. For example, CO_2 emissions per kW-hr from a coal-fired power plant are significantly higher than CO_2 emissions per kW-hr from a natural gas-fired power plant. Therefore, to most accurately estimate GHG emissions from the Project, the carbon intensity of the specific mix of PG&E energy sources was used to calculate emissions.

[12] In this section, it is assumed that all mature land-types (at least 20 years old) are at steady-state. See The World Resource Institute (WRI) "Land Use, Land-Use Change, and Forestry Guidance for GHG Project Accounting" protocol available online at: http://pdf.wri.org/lulucf_guidance.pdf

[13] This assumption facilitates the calculation as a yearly growth rate and CO_2 removal rate does not have to be calculated. As long as the disturbed land will indeed return to its original state, this assumption is valid for time periods over 20 years.

[14] In this section we assume that mature ecosystems do not have a net influx or outflux of carbon.

[15] This section follows the IPCC guidelines, but has been adapted for ease of use for the Project.

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2. *Estimate the biomass associated with each land type.* – ENVIRON has characterized the land types that are present at the Lewis Property using the available general vegetation types found in the IPCC publication Guidelines for National Greenhouse Gas Inventories (IPCC Guidelines).[16] This characterization is shown in Table 2.5-1. The biomass values for each vegetation type are based on these categories which relate the Lewis Property's vegetation to the IPCC vegetation types.

3. *Calculate CO_2 emissions from the net change of vegetation.* – When vegetation is removed, it may undergo biodegradation,[17] or it may be combusted. Either pathway results in the carbon present in the plants being combined with oxygen to form CO_2. To estimate the mass of carbon present in the biomass, biomass weight is multiplied by the mass carbon fraction, 0.47.[18] The mass of carbon is multiplied by 3.67[19] to calculate the final mass of CO_2, assuming all of this carbon is converted into CO_2. The results of this calculation are shown in Table 2.5-2.

4. *Calculate the overall change in sequestered CO_2.* – In cases in which land changes from one non-settlement type of land to another non-settlement type of land,[20] initial and final values of sequestered CO_2 are calculated. No land area meets this description in the Lewis Property.

Table 2.5-1 shows the effective change in CO_2 sequestration due to the change in land use for each land type.[21]

2.5.2 Calculating CO_2 Sequestration by Trees

Planting individual trees on residential property and elsewhere in the Lewis Property will sequester CO_2. Planting trees is considered to result in a one-time carbon-stock change, as with vegetation changes. Table 2.5-3 presents default annual CO_2 sequestration rates on a per tree basis, based on values provided by the IPCC.[22] An average of 0.035 tonnes CO_2 per year per tree was assumed for trees planted, since the exact distribution of tree types is not known.

Urban trees are only net carbon sinks when they are actively growing. The IPCC assumes an active growing period of 20 years. Thereafter, the accumulation of carbon in biomass slows with age, and will be completely offset by losses from clipping, pruning, and occasional death.

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[16] Available online at http://www.ipcc-nggip.iges.or.jp/public/2006gl/vol4.htm

[17] Cleared vegetation may also be deposited in a landfill or compost area, where some anaerobic degradation which will generate CH_4 may take place. However, for the purposes of this section, we are assuming that only aerobic biodegradation will take place which will result in CO_2 emissions only.

[18] The fraction of the biomass weight that is carbon. Here, a carbon fraction of 0.47 is used for all vegetation types from IPCC (2006), default forestland and agricultural land ratio. CCAR assumes a similar value of 0.5 in its Forest Selector Protocol.

[19] The ratio of the molecular mass of CO_2 to the molecular mass of carbon is 44/12 or 3.67.

[20] For example from forestland to grassland.

[21] A total of 394 acres of cropland (of the 703 acre project area) are assumed to be permanently disturbed at the Project.

[22] IPCC. 2006. Guidelines for National Greenhouse Gas Inventories (IPCC Guidelines). Available online at http://www.ipcc-nggip.iges.or.jp/public/2006gl/vol4.htm. Table 8.2.

Actual active growing periods are subject to, among other things, species, climate regime, and planting density. In this report, the IPCC default value of 20 years is assumed. Note that trees may also be replaced at the end of the 20-year cycle, which would result in additional years of carbon sequestration. However, this would be offset by the potential net release of carbon from the removal of the replaced tree. Approximately 11,587 net new trees will be planted on the Lewis Property.[23] Planting these trees in the community will sequester approximately 8,111 tonnes CO_2.

This sequestration brings the net CO_2 emissions from vegetation to: 2,716 tonnes (land use changes) – 8,111 tonnes (11,587 net new trees in the community) = -5,395 tonnes (or a net decrease in the amount of CO_2 released). The net CO_2 emissions from vegetation changes are presented in Table 2.5-4.

2.5.3 Mitigation Measures

The planting of new trees at the development represents a GHG mitigation measure since those trees will add CO_2 sequestration capacity. Without this mitigation measure, the Project would have resulted in a reduction in CO_2 sequestration capacity of approximately 2,716 tonnes, as indicated in Table 2.5-4. This mitigation measure reduces CO_2 emissions from vegetation changes by approximately 299% and will increase the CO_2 sequestration capacity of the existing area by 5,395 tonnes.

2.6 Construction Activities

This section describes the estimation of GHG emissions from construction activities associated with the Project. There are typically three major construction phases for an urban development: demolition, site grading, and building construction.[24] The building construction phase can be broken down into three subphases: building construction, architectural painting, and asphalt paving. GHG emissions from these construction phases are largely attributable to fuel use from construction equipment, worker commuting, and vendor trips.

The units CO_2 and CO_2e are used interchangeably for diesel construction equipment and on-road trucks because CH_4 and N_2O are assumed to contribute a negligible amount of GWP when compared to the CO_2 emissions from construction equipment. The USEPA recommends assuming that CH_4, N_2O, and HFCs account for 5% of GHG emissions from gasoline vehicles, taking into account their GWPs.[25] For worker commute trips, ENVIRON accounted for these additional GHG emissions by dividing the CO_2 emissions by 0.95. The contributions of CH_4 and

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[23] Site-specific planting data obtained from Lewis.
[24] The demolition phase was not included for this Project, as it is a negligible contributor to GHG emissions from construction activities associated with the Lewis Property. Only two structures will be demolished as part of the project: a farm unit and a former residence.
[25] USEPA. 2005. *Emission Facts: Greenhouse Gas Emissions from a Typical Passenger Vehicle.* Office of Transportation and Air Quality. February.

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N_2O to GHG emissions from diesel construction equipment is likely small (< 1% of total CO_2e),[26] and were therefore not included in this calculation.

2.6.1 Estimating GHG Emissions from Construction Activities

This section describes how GHG emissions from construction activity were calculated. Baseline CO_2 emissions were taken directly from construction phase URBEMIS output files provided by PBS&J.[27] Construction activities considered in this analysis include:

- Worker commuting
- Vendor trips
- Off-road construction equipment
- On-road construction equipment

2.6.2 Mitigation Measures

As a GHG emission mitigation measure, Lewis has committed to using a B20[28] biodiesel blend for all off-road and on-road construction equipment. As shown in Table 2.6-1, mitigated CO_2e emissions have been estimated based on a percent reduction achieved from using B20 fuel instead of diesel fuel for all off-road and on-road construction equipment. B20 fuel is a mix of 20% biodiesel and 80% diesel. CO_2 emissions from the biodiesel portion of B20 biodiesel are excluded as they are assumed to be biogenic emissions.[29] CH_4 and N_2O emissions from the biodiesel portion of B20 are not considered biogenic; however, as noted above, they comprise a small percent of total CO_2e emissions from diesel combustion and are not calculated here.

Table 2.6-1 shows total one-time mitigated GHG emissions for construction, including off-road and on-road equipment, worker commuting, and vendor trips to be 17,857 tonnes CO_2e for the property development. The mitigation measure of using B20 reduces GHG emissions by approximately 851 tonnes CO_2e, or 5%.

2.6.3 Uncertainties in Construction GHG Emissions Calculations

The number of construction equipment, worker trips, and vendor trips used in these calculations represent the best estimates at the time of this report. The emission estimates are based on construction phase URBEMIS files provided by PBS&J.[30] Default URBEMIS assumptions and settings do not include consideration for reductions in GHG emissions due to new regulations[31],

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[26] California Climate Action Registry (CCAR). 2009. *General Reporting Protocol.* Version 3.1. ENVIRON estimates these emissions to be less than 1% of total GHG contributions for diesel fueled equipment.

[27] URBEMIS files provided by PBS&J via electronic transmittal on September 17, 2009.

[28] B20 biodiesel is a blend consisting of 20% by volume biodiesel and 80% by volume petroleum diesel fuel.

[29] California Climate Action Registry (CCAR). 2009. *General Reporting Protocol (GRP), Version 3.1.* January. Available at: http://www.climateregistry.org/resources/docs/protocols/grp/GRP_3.1_January2009.pdf, Chapter 8.

[30] Emission estimates were based on URBEMIS files as provided by PBS&J (see City of Lincoln Community Development Department. June 2009. Draft Environmental Impact Report SCH No. 2005062001: Village 7 Specific Plan Project. Prepared by PBS&J Consulting. Appendix D).

[31] While the emissions reductions due to the Pavley standard which were calculated for operational vehicle travel

changes in off-road construction equipment, or changes in vehicles used for worker commuting, vendor trips, or haul trips. As such, these values are somewhat uncertain, and likely to be overestimated.

2.7   GHG Emissions Associated with Residential Buildings

GHGs are emitted as a result of activities in residential buildings when electricity and natural gas are used as energy sources. Combustion of any type of fuel emits CO_2 and other GHGs directly into the atmosphere; when this occurs in a residential building, it is a direct emission source[32] associated with that building. GHGs are also emitted during the generation of electricity from fossil fuels. When electricity is used in a residential building, the electricity generation typically takes place offsite at the power plant; electricity use in a residential building generally causes emissions in an indirect manner.

The amount of energy used—and, therefore, the amount of associated GHGs emitted—per dwelling unit will vary with the type of residential building. Accordingly, information on the type of residential buildings that are planned for the Project is required to estimate GHG emissions. Based on information provided by Lewis, the main residential building types planned for the Project are single-family detached and multi-family attached buildings.

Energy use in residential buildings is divided into (1) energy consumed by the built environment, and (2) energy consumed by uses that are independent of the construction of the building, such as plug-in appliances. In California, Title 24 governs energy consumed by the built environment, including the HVAC system, water heating, and some fixed lighting. Non-building or 'plug-in' energy use can be further subdivided by specific end-uses (refrigeration, cooking, lighting, etc.). Energy use for each was calculated separately, as described in the following sections.

In this section, the units CO_2 and CO_2e are used interchangeably for residential buildings because CH_4 and N_2O are assumed to contribute a negligible amount of GWP when compared to the CO_2 emissions from residential buildings.[33]

2.7.1   Estimate of Residential Energy Use Intensity

ENVIRON developed CO_2 intensity values (CO_2 emissions per dwelling unit per year) for the residential building types planned for the Lewis Property using the California Energy Commission Consultant Report entitled 'California Statewide Residential Appliance Saturation

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[32] California Climate Action Registry (CCAR). 2009. *General Reporting Protocol (GRP), Version 3.1*. January. Available at: http://www.climateregistry.org/resources/docs/protocols/grp/GRP_3.1_January2009.pdf, Chapter 8.

[33] Ibid. Chapter 8, Tables C2 and C3. The methane and nitrous oxide emission factors are negligible compared to the total CO_2 emission factor for electricity generation in California.

were not applied to estimation of emissions from worker commute vehicles, this is a conservative assumption. In addition, Pavley Standards will be phased in during the scheduled construction phase, with the implementation of the Phase 2 Pavley rules not complete until 2020, the year of final build out.

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Study (RASS)'.[34] The methods that were used and the assumptions that were made in estimating energy use are described below.

2.7.2 Energy Use in the Built Environment

New California homes must be designed to meet building energy efficiency standards (Title 24). The regulated energy uses include space heating and cooling, domestic hot water heating, and hard-wired lighting. Title 24 determines compliance by comparing the modeled energy use of a 'proposed home' to that of a minimally Title 24 compliant 'standard home' of equal dimensions. Title 24 focuses on building energy efficiency per square foot; it places no limits upon the size of the house or the actual energy used per dwelling unit.

Data provided in RASS was used to estimate the unit energy consumption (UEC) values for dwelling units at the Lewis Property. Where available, data for single-family residences and multi-family 5+ unit apartments in climate zone 2 was used.[35,36] If single-family, multi-family 5+ unit, or climate zone 2 data was not available, then all household or statewide data was used, respectively. The survey was conducted in 2002 and 2003 on the existing building stock at that time. Consequently, the RASS dataset is comprised of older buildings, which are typically less energy efficient (on a per square foot basis) than newer buildings constructed to meet increasingly stricter efficiency standards. Although the majority of homes used for RASS are likely less energy efficient than 2001 Title 24-compliant buildings, the energy use estimates were used to represent 2001 Title-24 compliant homes. The Title 24 standards have been updated twice (in 2005 and 2008) since RASS was conducted, and CEC has published reports estimating the percentage reductions in energy use resulting from these new standards.[37,38] Because buildings at the Lewis Property would conform to the most updated (and most stringent) standards, ENVIRON accounted for the impact of the Title 24 updates by deducting the estimated percentage savings from the RASS energy use estimates, as shown in Table 2.7-1.

RASS provides the annual electricity and natural gas use per dwelling unit for various heating, cooling, and domestic hot water subcategories. ENVIRON calculated the total electricity and natural gas demand for each category by extracting the UEC values for each end-use subcategory within each category. As indicated by Lewis, homes will be cooled with central air conditioning, and natural gas will be used for all space heating and domestic hot water heating at the Lewis Property. Consequently, the end-use subcategory of central air was used to

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[34] Kema-Xenergy, Itron, RoperASW. 2004. *California Statewide Residential Appliance Saturation Study (RASS) Volume 2, Study Results, Final Report. 300-00-004.* June.

[35] The Project is located in CEC Forecasting Climate Zone 2.

[36] Single-family residences and multi-family 5+ unit buildings are the two housing type categories in the RASS dataset that most closely correspond to homes in the Project.

[37] California Energy Commission. 2003. *Impact Analysis: 2005 Update to the California Energy Efficiency Standards for Residential and Nonresidential Buildings.* Available at: http://www.energy.ca.gov/title24/2005standards/archive/rulemaking/documents/2003-07-11_400-03-014.PDF

[38] California Energy Commission. 2007. *Impact Analysis: 2008 Update to the California Energy Efficiency Standards for Residential and Nonresidential Buildings.* Available at: http://www.energy.ca.gov/title24/2008standards/rulemaking/documents/2007-11-07_IMPACT_ANALYSIS.PDF

calculate electricity used in cooling. The end-use subcategories for primary heat and furnace fans were used to calculate natural gas space heating. For these calculations, ENVIRON used a RASS dataset that is limited to homes which obtain natural gas from a major California utility.

2.7.3 Energy Use for Major Appliances and Plug-Ins

Typical major household appliances provided in new residential units include refrigerator, clothes washer and dryer, dishwasher, and cooking range. For the purposes of this inventory, energy demand from using these major appliances is estimated by multiplying the UEC and saturation values and summing the products for each end-use subcategory within each RASS category. Table 2.7-2 summarizes the estimated major appliance energy use for dwelling units at the Lewis Property.

Lewis has committed to requiring Energy Star appliances for all applicable major appliances (refrigerators, clothes washers, dishwashers) installed in newly built multi-family residences, and Energy Star dishwashers in single family residences. There is no Energy Star rating for dryers at this time since there is no significant difference in energy use between different dryer models. Energy Star ratings also are not available for cooking ranges. The average energy improvement for Energy Star rated appliances over standard appliances, as reported in the 2008 Energy Star Annual Report, was used to determine the percent reduction in energy use from major appliances.[39]

In addition to major appliances, additional loads such as lighting, office equipment, plug-in cooking equipment and electronics, and other plug-in electricity loads, such as lighting in a miscellaneous category, are also part of the anticipated energy use for a residential development. Similar to the major appliances above, energy use values for plug-in appliances are based on the UEC and saturation values for the miscellaneous category in RASS.

Table 2.7-3 summarizes the combined energy use including the Title 24 systems, major appliances, and plug-ins. In addition, Lewis has committed to making all new homes 15% more energy efficient than 2008 Title 24 requirements based on annual energy usage.[40] For each type of home, the 2008 Title 24 compliant energy use was calculated as described above. These energy use numbers were then each multiplied by 0.85 to account for Lewis's commitment to a 15% energy efficiency improvement over 2008 Title 24.

It should be noted that the estimates for residential plug-in energy-use presented here are likely overestimates. The estimates are based upon technologies that were available during the RASS survey, which was conducted in 2002 and 2003. Future equipment models are likely to be more energy-efficient than current models. If future Lewis Property residents use more energy efficient equipment and take advantage of other future energy efficiency advances, the

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[39] Environmental Protection Agency (USEPA). 2008 *Annual Report. Energy Star and Other Climate Protection Partnerships*. Available at: http://www.epa.gov/appdstar/pdf/2008AnnualReportFinal.pdf

[40] 2008 Title 24 Standards will go into effect for buildings for which the building application is submitted after January 1, 2010.

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actual electricity use for plug-ins will be lower than is estimated here. Conversely, future residents may have more small plug-ins (e.g. MP3 player, cell phone, miscellaneous equipment) that could somewhat offset the savings from more energy efficient equipment. However, because refrigerators, lighting, and large appliances contribute to the bulk of the electricity load, and these types of equipment will likely improve in energy efficiency in the future, the estimates presented here are still overestimates.

Table 2.7-3 shows the calculations for the improvement in energy use from Lewis' commitment to a 15% improvement over 2008 Title 24, and their commitment to installing Energy Star refrigerators, clothes washers, and dishwashers in multi-family residences and Energy Star dishwashers in single family residences.

2.7.4 Estimation of Annual Greenhouse Gas Emissions from Residential Buildings

Energy use data from Table 2.7-3 were multiplied by the emission factors presented in Table 2.7-4 to generate CO_2 intensity values (i.e., CO_2 emissions per dwelling unit) for each building type, which are shown in Table 2.7-5.

Table 2.7-6 shows the yearly CO_2 emissions from the Lewis Property by incorporating the aforementioned emission factors and the number of dwelling units for each building type.

2.7.5 Mitigation Measures

In an effort to reduce GHG emissions, Lewis has committed to implementing two mitigation measures for residential buildings:

- Requiring Energy Star refrigerators, clothes washers, and dishwashers in multi-family residences and Energy Star dishwashers in single family residences, and

- Requiring all new homes to be 15% more energy efficient than 2008 Title 24 requirements based on annual energy usage.

As shown in Table 2.7-6, these mitigation measures reduce the Project's annual CO_2 emissions associated with residential building energy usage from 7,722 tonnes to 6,947 tonnes, or approximately 10%.

2.7.6 Uncertainties in Residential Building GHG Calculations

Several factors lead to uncertainties in the above analysis. It is believed that these uncertainties result in conservative estimates of the GHG emissions for the residential buildings at the Lewis Property.

- Although all residential buildings in the development will exceed Title 24 standards, Title 24 does not specify building dimensions (e.g. size, height, or orientation). Title 24 also provides significant flexibility for window types, window amounts, insulation choice, and other parameters. This uncertainty is not expected to either overestimate or underestimate emissions. Title 24 grants enough flexibility that if a designer puts in more windows than is

'allowed' under the prescriptive measures, the energy efficiency losses can be offset by improving the window quality, or installing a more efficient HVAC system. Although the designs of each residence are not yet known, each home will be Title 24 compliant (and will exceed Title 24 standards), and therefore all design features of the home that make it less energy efficient will be offset by design features that make it more energy efficient.

- This analysis did not account for Time Dependent Valuation (TDV) of energy use. TDV energy use is a parameter that reflects the burden that a building imposes on an electricity supply system. In general, there is a larger electricity demand and, hence, higher stress on the supply system during the day (peak times) than at night (off peak). To account for this variation, the calculation of TDV assigns different weights for energy used at different times. Title 24 compliance is based on TDV and not on annual energy use. As a result of this approach, the calculated reductions in GHG emissions may or may not be quantitatively reflective of the reductions if TDV is accounted for.

- Energy use will vary considerably depending upon the design of the home. The residential units to be built in the Lewis Property will vary considerably in size, layout, and overall design. The parameters used here are intended to represent the anticipated energy use of the homes. As such, energy use from the homes that will actually be built in the Lewis Property could be different.

- Built environment energy use will vary considerably depending upon the home owners' habits regarding energy use. For instance, homeowners determine the set point of thermostats, the duration of showers, and the usage of air conditioning. Lewis will have little, if any, influence over these choices made by the homeowner. Current median behavior attributes were assumed for this report. To the extent that individuals are becoming more energy conscious, this will tend to overestimate energy use in the future.

- Plug-in energy use will also vary considerably depending upon the appliances, lights, and other plug-ins installed by the homeowner. Lewis will have little, if any, influence over these choices made by the homeowner. As above, the current median behavior attributes are represented here. To the extent that individuals are becoming more energy conscious, or appliances are becoming more energy efficient, the estimates provided here will tend to overestimate energy use in the future.

2.8 GHG Emissions Associated with Non-Residential Buildings

Non-residential buildings include all structures except residences that may exist in a development. This section describes the methods used to estimate the GHGs associated with activities in non-residential buildings.

The amount of energy used and the associated GHG emissions emitted per square foot of available space vary with the type of non-residential building. The Draft Environmental Impact Report for the Village 7 Specific Plan Project summarizes the general non-residential building categories planned for the Lewis Property and the area of floor space planned for each building type. For new developments, the exact types of buildings are typically unknown. As such, not all building categories that may actually exist in the Lewis Property are represented below.

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However, all of the non-residential building area is accounted for, and the tables provided in this section present the differences in energy intensities from building type to building type. As Table 2.8-1 shows, the types of non-residential buildings as provided to ENVIRON are:

    a. Neighborhood Commercial,

    b. Retail,

    c. School,

    d. Small Office, and

    e. Community Center.

Similar to the case for residential buildings, GHGs are emitted as a result of activities in non-residential buildings for which electricity and natural gas are used as energy sources. Combustion of any type of fuel emits CO_2 and other GHGs directly into the atmosphere; when this occurs in a non-residential building this is a direct emission source[41] associated with that building. GHGs are also emitted during the generation of electricity from fossil fuels. When electricity is used in a non-residential building, the electricity generation typically takes place offsite at the power plant; electricity use in a non-residential building generally causes emissions in an indirect manner.

Similar to energy use in residential buildings, energy use in non-residential buildings is divided into energy consumed by the built environment and energy consumed by uses that are independent of the construction of the building such as plug-in appliances. In California, Title 24 governs energy consumed by the built environment, mechanical systems, and some fixed lighting. Non-building energy use, or "plug-in" energy use can be further subdivided by specific end-use (refrigeration, cooking, office equipment, etc.). The following two steps were performed to quantify the energy use due to non-residential buildings:

    1. Calculate energy use from systems covered by Title 24 (HVAC system, water heating system, and the lighting system).[42]

    2. Calculate energy use from office equipment, plug-in lighting, and other sources not covered by Title 24.

The resulting energy use quantities were then converted to GHG emissions by multiplying by the appropriate emission factors obtained by incorporating information on local electricity production.[43] The total GHG emissions for non-residential buildings in the Lewis Property are

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[41] California Climate Action Registry (CCAR). 2009. *General Reporting Protocol (GRP), Version 3.1.* January. Available at: http://www.climateregistry.org/resources/docs/protocols/grp/GRP_3.1_January2009.pdf, Chapter 8.

[42] Title 24, Part 6, of the California Code of Regulations: California's Energy Efficiency Standards for Residential and Nonresidential Buildings. http://www.energy.ca.gov/title24/

[43] The PG&E specific emission factor for electricity deliveries is 636 lbs CO_2/MWh (from the California Climate Action Registry Database: Pacific Gas and Electric 2007 PUP Report. 2008; available at: https://www.climateregistry.org/CARROT/public/Reports.aspx). Although this emission factor accounts for only CO_2, the emissions associated with N_2O and CH_4 contribute to less than 1% of the electricity generation CO_2e emissions. This emission factor has been adjusted to 574 lbs CO_2/MWh to account for the 20% RPS required by

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summarized in Table 2.8-6. The following sections describe the methodologies employed to estimate GHG emissions.

While fuel combustion generates CH_4 and N_2O, the emissions of these GHGs typically comprise less than 1% of CO_2e emissions from electricity generation and natural gas consumption.[44] As such, these minor emissions are not accounted for here. In this section of this report, the units CO_2 and CO_2e are used interchangeably for non-residential buildings.

2.8.1 Estimate of Non-Residential Energy Use Intensity

ENVIRON developed CO_2 intensity values (CO_2 emissions per sqft per year) for building types found in the Lewis Property using data from the California Commercial End-Use Survey (CEUS).[45] The methods that were used to estimate these emissions for the Lewis Property are described below.

2.8.1.1 CEUS Database

The overall electricity use for the building types was calculated based on data provided by the CEC.[46] The CEUS data is based on a survey conducted in 2002 of existing buildings. Each building type has a characteristic electricity and natural gas use per square foot of building space. Electricity and natural gas use per square foot (electricity intensity) for each building sample was extracted from the CEUS data.

For this analysis, energy use was based upon buildings in California climate zone 2. Table 2.8-2 lists the breakdown of electricity use among several end uses for electricity in various non-residential building types. Table 2.8-3 lists the percentage breakdown of end uses for natural gas in various non-residential building types. The end use data provide an estimate of the percent of the total energy use comprised by Title 24 regulated (built environment) and plug-in electricity in each building type. The Title 24-regulated electricity use and the non-built electricity use are presented in Table 2.8-5. The Title 24-regulated natural gas use and the non-built natural gas use (primarily from cooking) are also presented in Table 2.8-5.

The electricity and natural gas use per square foot for each building type are converted to GHG emissions as shown in the next section.

2010. California's RPS requires retail suppliers of electric services to increase procurement from eligible renewable energy resources until they reach 20% by 2010.

[44] California Climate Action Registry (CCAR). 2009. *General Reporting Protocol (GRP), Version 3.1.* January. Available at: http://www.climateregistry.org/resources/docs/protocols/grp/GRP_3.1_January2009.pdf, Tables C2 and C3. The methane and nitrous oxide emission factors are negligible compared to the total CO_2 emission factor for electricity generation in California.

[45] California Energy Commission (CEC). California Commercial End-Use Survey Results. Data available from Itron Inc. at http://capabilities.itron.com/CeusWeb/Chart.aspx

[46] Workbooks for "SCE – FCZ8" downloaded from http://capabilities.itron.com/CeusWeb/Chart.aspx for all building categories.

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2.8.2 Estimation of Annual Greenhouse Gas Emissions from Non-Residential Buildings

Lewis has committed to making all new non-residential buildings (with the exception of the school) 15% more energy efficient than Title 24 2008 standards based on annual energy usage. These calculations are shown in Table 2.8-5. Non-Title 24 regulated energy use is assumed to still use the same amount of energy as a minimally Title 24 compliant building. There is no credit taken for any Energy Star appliances in the non-residential building category since it is difficult to determine which appliances may be present in the various non-residential building categories. In addition, these are generally not supplied with the building.

Baseline Title 24 usage rates shown in Table 2.8-5 have been adjusted to reflect improvements in Title 24 building codes since their introduction in 2002. CEC discusses average savings for improvements from 2002 to 2005 ("Impact Analysis for 2005 Energy Efficiency Standards") as well as from 2005 to 2008 ("Impact Analysis 2008 Update to the California Energy Efficiency Standards for Residential and Nonresidential Buildings"). ENVIRON used these CEC average savings percentages to account for reductions in energy use due to Title 24. This methodology results in a reduction of energy use for all building types except the school. Because plug-ins are not covered under Title 24, the decrease in energy use is typically less than 15%, yet still substantial.

Energy use data from Table 2.8-5 was multiplied by the emission factors presented in Table 2.8-4 to generate CO_2 intensity values (CO_2 emissions per sqft building area). The results are shown in Table 2.8-6. The CO_2 intensity values presented in Table 2.8-6 represent the non-residential building types in the Lewis Property described earlier.

Table 2.8-6 also shows the yearly CO_2 emissions from the Lewis Property by incorporating the emission factors developed as discussed above and the square footage of each of the main building categories.

2.8.3 Mitigation Measures

In an effort to reduce GHG emissions, Lewis has committed to requiring all new non-residential buildings (except the school) to be 15% more energy efficient than 2008 Title 24 requirements based on annual energy usage.[47]

As shown in Table 2.8-6, this mitigation measure reduces the Project's annual CO_2 emissions associated with non-residential building energy usage from 619 tonnes to 589 tonnes, or approximately 5%.

2.8.4 Uncertainties in Non-residential Building GHG Calculations

Several factors lead to uncertainties in the above analysis. These are described below.

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[47] The school is assumed to be compliant with 2008 Title 24 requirements.

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- For new developments, the exact types of buildings are typically unknown. However, all of the commercial building area is accounted for and the best available assessment of the building type composition of the Lewis Property was used.

- Although it is unknown exactly how the buildings will be designed, each building will be Title 24 compliant. Therefore all design features of the building that make it less energy efficient will be offset by design features that make it more energy efficient.

- This analysis did not account for TDV of energy use. TDV energy use is a parameter that reflects the burden that a building imposes on an electricity supply system. In general, there is a larger electricity demand and, hence, higher stress on the supply system during the day (peak times) than at night (off peak). To account for this variation, the calculation of TDV assigns different weights for energy used at different times. Title 24 compliance is based on TDV and not on annual energy use. As a result of this approach, the calculated reductions in GHG emissions may or may not be quantitatively reflective of the reductions if TDV is accounted for.

2.9   Mobile Sources

ENVIRON estimated GHG emissions based upon all miles traveled by Project residents regardless of internal or external destinations or purpose of trip. Mobile source emissions from new residences are considered to be growth, as residences are rarely removed from the housing supply once constructed. There are exceptions, such as when one housing development replaces another, and, in those cases, the replacement residential development need not be considered growth.

However, it is not clear that commercial development should be considered new growth for vehicular travel purposes. To the extent that commercial development serves existing residential development, its vehicular travel may not be new.

In this report, it is assumed that new non-residential area serves an area with a high residential/ non-residential balance. Therefore, this new non-residential growth will not, independent of the new residential areas, result in new shopping and work trips. Accordingly, new non-residential space in the Lewis Property development area will not contribute to mobile source GHG emissions. However, the emissions from heating and cooling the non-residential areas would be considered to be new, as that would reflect growth in non-residential areas that goes along with growth in residential areas.

Accordingly, GHG emissions from VMT serving non-residential areas will only be counted if the non-residential areas contribute to greater VMT as a result of their locations. It should be noted that as the Project is a mixed use community, this issue does not directly affect VMT calculations; all VMT from Project residents is calculated regardless of internal or external destinations or purpose of trip.

For mobile sources, CH_4 and N_2O are explicitly calculated, multiplied by their respective GWP, and added to the CO_2 emissions, to result in total CO_2e emissions from mobile sources.

2.9.1 Basic Methodology

The methodology and data used to estimate and separate "new" trips and VMT for a development is evolving and difficult to calculate. This section explains the general approaches used to estimate VMT and GHG emissions generated by the residents of the Project. Underlying data for the calculations, including number of trips and trip lengths by trip type made by residents of the Project, were taken from URBEMIS files used in the Project's DEIR air quality section.[48]

ENVIRON typically calculates weekend traffic by applying differences between the weekend and the weekday traffic based upon a report by Sonoma Technologies.[49] Weekend traffic is assumed to be 74-79% of the weekly capacity, depending on travel distances.[50]

Once trip rates and trip lengths are estimated, the VMT is determined by multiplying the trip rates by the trip length

VMT = Number of Trips * Trip Length

The CO_2 emissions from mobile sources were calculated with the trip rates, trip lengths, and emission factors for running and starting emissions from EMFAC2007 as follows:

$$CO_2 \text{ emissions} = VMT * EF_{running}$$

Where:

VMT = vehicle miles traveled
$EF_{running}$ = emission factor for running emissions

The running CO_2 calculation involves the following assumptions:

- The emission factor depends upon the speed of the vehicle. Here, it was assumed that internal trips were 35 miles per hour and external trips were 60 miles per hour. For non-home-based trips, which occur both internally and externally, the emission factor for an external trip speed of 60 miles per hour was used as a conservative estimate.

- EMFAC emission factors from the year 2020 were used for $EF_{running}$ based on Placer County fleet mix.[51]

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[48] PBS&J Consulting. 2009. *Draft Environmental Impact Report SCH No. 2005062001: Village 7 Specific Plan Project.* June.

[49] Sonoma Technology, Inc. 2004. *Collection and Analysis of Weekend/Weekday Emissions Activity Data in the South Coast Air Basin.* May.

[50] A conservative adjustment for weekend travel was assumed for all the trips since information was not available to distinguish between trips on major highways and trips on small streets. The Sonoma Technology report gives a range of values, but does not present a weighted value; thus, a conservative percent reduction in the number of trips was selected.

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Startup emissions are CO_2 emitted from starting a vehicle. Startup emissions were calculated as follows:

$$CO_2 \text{ emissions} = Trips * EF_{startup}$$

Where:

Trips = trips made by vehicles
$EF_{startup}$ = emission factor for startup emissions

Startup emissions were calculated using the following assumptions:

- The number of starts is equal to the number of trips made annually.

- The breakdown in vehicles was EMFAC fleet mix for Placer County in 2020.

- The emission factor for startup was calculated based on a weighted average of emission factors for periods ranging from 5 to 720 minutes between starts. The weight assigned to each starting-period factor is based on the percentage of total trips that are associated with each starting period, as specified by URBEMIS default values for variable starts.

Nitrous oxide, CH_4, and HFCs[52] are also emitted from mobile sources. The USEPA recommends assuming that CH_4, N_2O, and HFCs account for 5% of mobile source GHG emissions, taking into account their GWPs.[53] Therefore, CO_2 emissions were divided by 0.95 to account for non-CO_2 GHGs.

California has passed AB 1493 (Pavley Standards) requiring reductions in GHG from vehicles. The waiver needed from USEPA to implement AB 1493 (Pavley standards) has been granted. It is therefore appropriate to apply this regulation to the calculations for the Project's GHG emission inventory for the mobile sector.[54] The Pavley standard only regulates emissions up to the year 2016. However, ARB has committed to additional GHG emission reductions through 2020. A report by ARB indicates that in 2020 the statewide impact of these vehicle emission standards will be a 20% reduction in GHG emissions from mobile sources.[55] Project emissions were therefore adjusted for the 20% Pavley reduction.

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[51] The operational URBEMIS file provided by PBS&J indicated a full build out year of 2020 for Lewis Property.

[52] HFCs can be emitted from air conditioning systems.

[53] USEPA. 2005. *Emission Facts: Greenhouse Gas Emissions from a Typical Passenger Vehicle.* Office of Transportation and Air Quality. February. Available at: http://www.epa.gov/otaq/climate/420f05004.pdf

[54] Full build out and the beginning of the operational life of the development also coincide with implementation of Phase 2 of the Pavley rules.

[55] California Air Resources Board (ARB). 2008. *Comparison of Greenhouse Gas Reductions for the United States and Canada Under U.S. CAFE Standards and California Air Resources Board Greenhouse Gas Regulations, California Air Resources Board an Enhanced Technical Assessment.* February 25. Available at: http://www.arb.ca.gov/cc/ccms/reports/pavleycafe_reportfeb25_08.pdf

2.9.2 Traffic Modeling

URBEMIS files generated for the air quality section of the DEIR were used to estimate GHG emissions from mobile sources. As discussed above, the trips generated by the residents of the Project represent growth. However, new non-residential areas do not necessarily represent growth since people would already be taking these trips. As a result, only trips generated from the residential land uses were used to determine the GHG emissions from the Project. Tables 2.9-1 and 2.9-2 show the trips and VMT, respectively, made by Project residents, as found by applying this assumption to the trip rate and length information in the URBEMIS file for operational activities at full build-out (2020).[56]

ENVIRON adjusted the trip rates[57] to account for pass-by and diverted trips, using URBEMIS calculation methodology. When the pass-by option in URBEMIS is selected, the model applies the following methodology:

- For home-based trips, URBEMIS uses the primary trip length, which is specific to the county in which the project is located. The trip length for Placer County was used.

- For residential non-home-based trips, URBEMIS uses a reduced trip length of 0.1 miles for pass-by trips (trips located next door to each other) and 25% of the primary trip length for diverted trips (trips that deviate from primary trip).

Furthermore, daily trips were adjusted to account for weekend/weekday travel differences, and total CO_2e emissions were estimated using the same EMFAC files for 2020.

2.9.2.1 Mitigation Measures

In an effort to reduce GHG emissions from mobile sources, Lewis has committed to the mitigation measures listed below. These mitigation measures are expected to reduce the number of vehicle trips associated with the Project, and were modeled using URBEMIS.[58]

1. Housing Density - VMT is in general tied to the density of a development's residences. Studies have shown that compact developments generally have significantly lower VMT than conventional developments. According to an extensive literature review, Ewing[59] concludes that, "doubling urban densities results in a 25-30% reduction in VMT, or a slightly smaller reduction when the effects of other variables are controlled." Holtzclaw[60] makes a similar deduction and concludes that

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[56] The operational URBEMIS file provided by PBS&J indicated a full build out year of 2020 for Lewis Property.

[57] Trip rates from the operational URBEMIS file provided by PBS&J were adjusted as described here. The pass-by option was not selected in the URBEMIS file provided by PBS&J.

[58] South Coast Air Quality Management District. 2007. *Software User's Guide: URBEMIS2007 for Windows.* Prepared by Jones & Stokes Associates. November. Available at: http://www.aqmd.gov/CEQA/urbemis.html. The mix of uses mitigation option was not evaluated due to URBEMIS' limited ability to properly account for nearby areas that might offer employment to Lewis residents.

[59] Ewing, Reid. 1997. Is Los Angeles-Style Sprawl Desirable? *Journal of the American Planning Association,* Vol. 63. No. 1, Winter 1997, pp. 107-126.

[60] Holtzclaw, John. 1994. *Using Residential Patterns and Transit to Decrease Auto Dependence and Costs.* June.

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household density is, "the major explanatory variable for variations in vehicle miles travelled". Note that no urban areas with populations lower than 2.0 million people were included in the Holtzclaw study. In another report[61], Ewing notes that households within developments with twice the density (including the density of uses, accessible destinations, and interconnected streets) drive about 33% less than households in low-density sprawl. That same report notes that in a comprehensive study, the "most walkable" neighborhoods had 26% fewer VMT than the "most sprawling neighborhoods." Finally, Ewing concludes that compact development, which again includes a broader definition than just high density, has the potential to reduce VMT per capita by 20-40% relative to sprawl. The general trend points to lower VMT in areas with higher densities of households. However, it is important to keep in mind that these conclusions are based on data that are imperfect and that VMT depends on other design features whose effects may not be properly controlled. There is additional uncertainty regarding the extent to which the relationship between density and VMT is due to inherent effects of density and the extent to which density serves as a proxy for other factors such as pedestrian friendliness or retail presence.

The relationship between density and VMT modeled in URBEMIS is based on a later Holtzclaw study[62] which determined that households per residential acre is the single best variable to predict VMT per household. In the URBEMIS model the VMT per household predicted by Holtzclaw's formula is reduced by 40% to account for the expectation that a portion of the impact attributed to housing density will be realized through transit service, mix of uses, pedestrian access and bicycle access.[63]

The average housing density for single-family detached dwelling units in the Project is approximately 10.9 dwelling units per acre, compared to the URBEMIS Placer County default of 3.0 dwelling units per acre. The average housing density for multi-family dwelling units in the Project is approximately 22.9 dwelling units per acre, compared to the URBEMIS Placer County default of 16.0 dwelling units per acre.[64]

2. Local Serving Retail - The presence of local serving retail is expected to reduce the number of trips associated with a new development. The Project will include a Neighborhood Commercial area intended to accommodate neighborhood-serving retail, service, and recreation use.[65]

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[61] Ewing et al. 2007. *Growing Cooler: The Evidence on Urban Development and Climate Change.* October.
[62] Holtzclaw, John. 2002, *How Compact Neighborhoods Affect Modal Choice – Two Examples.* Available at: www.sierraclub.org/sprawl/articles/modal.asp
[63] URBEMIS 2007 User Guide. Appendix D. p D-15.
[64] Lewis Property housing density was estimated using lot sizes and number of dwelling units provided by Lewis.
[65] PBS&J Consulting. 2009. *Draft Environmental Impact Report SCH No. 2005062001: Village 7 Specific Plan Project.* June.

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3. Bicycle Network - The presence of dedicated bicycle lanes is expected to reduce the number of vehicle trips. Lewis has committed to providing bike paths on 100% of arterials/collectors.

4. Pedestrian Network - The presence of sidewalks along roads is expected to reduce the number of vehicle trips. Lewis has committed to providing sidewalks on both sides of all streets within the Project.

5. Connectivity - This mitigation measure is based on the intersection density, or number of intersections per square mile within the Project. URBEMIS user guidance indicates that the number of intersections is equivalent to the sum of all intersection "valences" within a half mile radius of the Project's center, or within the entire Project, whichever is larger. URBEMIS assigns a valence of three to "T" intersections (3-way intersections) and a valence of four to 4-way intersections.[66] ENVIRON calculated an intersection density of 474 based on the total number of 3-way and 4-way intersections in the Project (102 and 19, respectively) and the total area of Lewis Property (516 acres, or 0.8 square miles).[67]

The total mobile source GHG emissions are summarized in Table 2.9-3. These mitigation measures reduce the Project's mobile source annual CO_2e emissions from 16,864 tonnes to 12,050 tonnes, or approximately 29%.

2.9.2.2 Uncertainty Analysis

In an effort to evaluate the assumptions described in the section, it should be noted that changes in estimated fleet distribution and emission factors will likely improve future emissions based on anticipated regulations, over and above those currently enacted in law.

2.10 Municipal Sources

This section explains estimates for emissions stemming from municipal sources such as drinking water and wastewater supply and treatment, lighting in public areas, and municipal vehicles.

2.10.1 Water and Wastewater Supply and Treatment Systems

In general, the majority of municipal sector GHG emissions are related to the energy used to convey, treat, and distribute water and wastewater. Thus, these emissions are generally indirect emissions from the production of electricity to power these systems. Additional emissions from wastewater treatment include CH_4 and N_2O, which are emitted directly from the wastewater.

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[66] South Coast Air Quality Management District. 2007. *Software User's Guide: URBEMIS2007 for Windows.* Prepared by Jones & Stokes Associates. November. Available at: http://www.aqmd.gov/CEQA/urbemis.html. See Page 40.

[67] Total number of 3-way and 4-way intersections provided by Lewis. Total area of Lewis Property (516 acres) obtained from page 1-1 of the DEIR.

The amount of electricity required to treat and supply water depends on the volume of water involved. Based on data provided by Lewis, the Project would generate a total water demand of 1,596 acre-feet (AF) per year.[68] This value can be divided into potable water demand and non-potable water demand, which comprise 72% and 28% of the total water demand, respectively.[69] Three processes are necessary to supply potable water to residential and commercial users: (1) supply and conveyance of the water from the source; (2) treatment of the water to potable standards; and (3) distribution of the water to individual users. After use, the wastewater is treated and can be reused as reclaimed water. Any reclaimed water produced is generally redistributed to users via pumping.

Indirect emissions resulting from electricity use were determined by multiplying electricity use by the CO_2 emission factor provided by the local electricity supplier, PG&E, adjusted to account for the 20% Renewable Portfolio Standard required by 2010.[70] Energy use for different aspects of water treatment (e.g., source water pumping and conveyance, water treatment, distribution to users) was determined using the stated volumes of water and energy intensities values (i.e., energy use per unit volume of water) provided by reports from the California Energy Commission (CEC). The emission factors and GHG emissions for all these processes are shown in Table 2.10-1. As discussed below, Lewis has committed to using recycled or reclaimed water to supply all of the Project's non-potable water demand, and the results of these mitigated GHG emissions are presented in Table 2.10-2. Details on the emissions generated by specific aspects of water treatment and supply systems are provided in the following sections.

2.10.2 Water Source Supply and Conveyance

Water in Placer County is typically supplied from groundwater pumped from the North American Subbasin and surface water from sources such as the American River, supplied by the Placer County Water Agency. At the Lewis Property, non-potable water is supplied from recycled and reclaimed water.

To estimate unmitigated GHG emissions associated with water supply and conveyance, ENVIRON assumed that the Project's total water demand (including both potable and non-potable water demand) is supplied from groundwater and surface water sources. The energy

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[68] PBS&J Consulting. 2009. *Draft Environmental Impact Report SCH No. 2005062001: Village 7 Specific Plan Project.* June. See Section 4.9 and Appendix H.

[69] Total, potable, and non-potable water demands were calculated based on the number of dwelling units and land use acreage provided in Table 2-1 of the DEIR, the total water demand per land use type provided in Table 4.9-21 of the DEIR, and the breakdown of potable and non-potable water demand per land use type provided in Table 2-5 of Appendix H of the DEIR.

[70] The PG&E specific emission factor for electricity deliveries is 636 lbs CO_2/MWh (from the California Climate Action Registry Database: Pacific Gas and Electric 2007 PUP Report. 2008; available at: https://www.climateregistry.org/CARROT/public/Reports.aspx). Although this emission factor accounts for only CO_2, the emissions associated with N_2O and CH_4 contribute to less than 1% of the electricity generation CO_2e emissions. This emission factor has been adjusted to 574 lbs CO_2/MWh to account for the 20% RPS required by 2010. California's RPS requires retail suppliers of electric services to increase procurement from eligible renewable energy resources until they reach 20% by 2010.

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needed to supply and convey the Project's water will be used to pump this water from the sources and distribute it throughout the development.

As discussed above, Lewis has committed to using recycled or reclaimed water to supply all of the Project's non-potable water demand. In general, less energy is needed to supply and convey recycled water because it will be redistributed on-site and will not need to be pumped from underground, as is the case with groundwater.

2.10.3 Wastewater Treatment

Emissions associated with wastewater treatment include indirect emissions necessary to power the treatment process and direct emissions from degradation of organic material in the wastewater. Indirect GHG emissions are from the electricity required to operate a wastewater treatment plant, and are based on the expected amount of wastewater requiring treatment (802 AF/yr[71]) and the PG&E electricity generation emission factor. Direct emissions from wastewater treatment include emissions of CH_4 and N_2O. A per capita emission factor for these GHG emissions was developed based on a 2005 US GHG inventory for domestic and industrial wastewater treatment (25 teragrams CO_2e/year or 25 million tonnes CO_2e/year)[72] and the 2005 US population (approximately 296,410,404).[73] Direct emissions from wastewater treatment were calculated using the emission factor developed from this data (0.084 tonnes CO_2e per capita per year) and the projected population at the Lewis Property (4,959 residents[74]).

2.10.4 Public Lighting

Lighting sources contribute to GHG emissions indirectly, via the production of the electricity that powers these lights. Lighting sources considered in this source category include streetlights, traffic signals, area lighting for parks and lots, and lighting in public buildings. Data from a report by the City of Duluth shows that the electricity demand for all types of public lighting is 149 kW-hr per capita per year.[75] Thus, the Project-specific emission factor for public lighting would be 0.039 tonnes CO_2e per capita per year. The calculation of GHG emissions from public lighting is shown in Tables 2.10-1 and 2.10-2. This calculation is likely a conservative estimate since the Project is a compact community and may require a lower number of lights than the City of Duluth.

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[71] PBS&J Consulting. 2009. *Draft Environmental Impact Report SCH No. 2005062001: Village 7 Specific Plan Project.* June. See Table 4.9-1.

[72] USEPA. 2007. *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2005. #430-R-07-002.* April. http://epa.gov/climatechange/emissions/downloads06/07Waste.pdf

[73] This per capita emission factor distributes both domestic (municipal sewage) and industrial waste treatment emissions over the population.

[74] PBS&J Consulting. 2009. *Draft Environmental Impact Report SCH No. 2005062001: Village 7 Specific Plan Project.* June. See page 2-23. The number of residents for the Lewis Property was estimated using housing density (people/household) and the number of dwelling units, as specified by Lewis and in the DEIR.

[75] Skoog., C. 2001. *Greenhouse Gas Inventory and Forecast Report. City of Duluth Facilities Management and The International Council for Local Environmental Initiatives.* October. http://www.ci.duluth.mn.us/city/information/ccp/GHGEmissions.pdf. This factor was calculated by summing the total electricity needs for municipal uses and dividing by the Duluth population. The Duluth population was calculated by dividing the city's reported GHG emissions by its reported per capita emissions.

2.10.5 Municipal Vehicles

GHG emissions from municipal vehicles, including police cars, fire trucks, and garbage trucks are due to direct emissions from the burning of fossil fuels. Municipal vehicle emissions associated with the Project are shown in Tables 2.10-1 and 2.10-2.

2.10.6 Mitigation Measures

As a mitigation measure to reduce GHG emissions, Lewis has committed to using recycled or reclaimed water to supply all of the Project's non-potable water demand. In general, less energy is needed to supply and convey recycled water because it will be redistributed on-site and will not need to be pumped from underground, as is the case for groundwater from the North American Subbasin. As shown in Tables 2.10-1 and 2.10-2, the impact of this mitigation measure is to reduce annual CO_2e emissions from municipal sources from 1,317 tonnes to 1,301 tonnes, or approximately 1%.

2.11 Area Sources

Area source emissions stem from hearths (including gas fireplaces, wood-burning fireplaces, and wood-burning stoves) and small mobile fuel combustion sources such as lawnmowers. Fuel combustion associated with these sources produces direct GHG emissions. Since emissions from natural gas-fired stoves and natural gas heating are already included in the residential sources (see Section 2.7), calculations based on the URBEMIS method for the remaining types of area sources, natural gas fireplaces and lawn maintenance, were performed.

For residential areas, landscape-based GHG emissions are directly related to the number of residential units, the annual equipment usage rate, and landscape equipment CO_2 emission factors. URBEMIS default values were employed for the annual usage rate. Table 2.11-1 shows the annual CO_2 emissions generated from landscape equipment.

At the Lewis Property, there will be a strict ban on wood-burning stoves and fireplaces; however, Lewis will allow natural gas fireplaces in certain residential units. Direct GHG emissions from these natural gas fireplaces were estimated by multiplying the energy use per year by the CO_2 emission factor for natural gas combustion. Annual energy use was determined by the number of fireplaces, the average energy use of each fireplace, and the URBEMIS default fireplace usage rate value of 270 hours/year. In the absence of site-specific energy use values for fireplaces at the Lewis Property, the URBEMIS default values of 20,000 BTU/hour/fireplace for multi-family residences, and 30,000 BTU/hour/fireplace for single-family houses were used. Table 2.11-2 shows the annual CO_2 emissions generated from natural gas fireplaces.

2.11.1 Mitigation Measures

As a mitigation measure to reduce GHG emissions, Lewis has committed to not install natural gas fireplaces in multi-family dwelling units. URBEMIS area source methodology was used to estimate the emissions from natural gas hearths in single family and multi-family dwelling units. The GHG emissions from natural gas fireplaces at the Project as a result of this mitigation

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measure are summarized in Table 2.11-2. The impact of this mitigation measure is to reduce annual CO_2 emissions from natural gas fireplaces by 163 tonnes, or approximately 18%

2.12 Emissions Sources Not Quantified in Inventory

Several emissions sources were not quantified in this inventory, due to their estimated relatively small[76] contribution to GHG emissions. These sources include emissions from recreational sources and refrigeration leaks which are described in more detail below.[77]

2.12.1 Pools and Recreation Centers

The Project includes neighborhood community areas and parks which may also include pools and recreation centers. At the entitlement stage of development, the degree of uncertainty in the potential end-uses of these recreational areas makes a meaningful quantification of GHG emissions difficult. As a result of this uncertainty, ENVIRON did not quantify these emissions at this time.

2.12.2 Refrigeration Leaks

Emissions associated with leaks of high global warming potential gases such as from refrigeration leaks were not quantified. At the entitlement stage of development, the degree of uncertainty in the potential facilities with sources that may have refrigeration leaks make a meaningful quantification of GHG emissions difficult. In addition, since refrigeration systems will be new, they are likely efficient and should be designed to reduce the amount of leaks of high global warming potential gases. As a result of this uncertainty and likely small level of emissions, ENVIRON did not quantify these emissions at this time.

3   Mitigation Measures that Reduce GHG Emissions

The Lewis Property development incorporates many mitigation measures to reduce GHG emissions. This section summarizes the mitigation measures that were incorporated into this analysis. This section also lists project design features that were not quantified in this analysis, but would likely yield further GHG emissions reductions.

3.1.1   Project Design Features Whose Emissions Reductions Were Incorporated into the Analysis

3.1.1.1 Vegetation
- Planting of new trees at the development will add CO_2 sequestration capacity.

3.1.1.2 Construction
- All off-road and on-road construction equipment will use a B20 biodiesel blend.

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[76] Typically less than 1% of the overall inventory based upon previous studies.
[77] Black carbon was also not considered. Major sources of black carbon emissions are not present at the Lewis Property.

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3.1.1.3 Mobile Sources

- High housing density

- Pedestrian and bicycle networks

- Street connectivity

- Neighborhood serving retail

3.1.1.4 Water Conservation

- Recycled or reclaimed water will supply all of the Project's non-potable water demand.

3.1.1.5 Energy Efficiency

- New residential buildings will be 15% more efficient than 2008 Title-24 Building Standards based on annual energy usage.

- Energy Star refrigerators, clothes washers, and dishwashers will be installed in multi-family residences and Energy Star dishwashers will be installed in single family residences.

- New commercial buildings (with the exception of the school) will be 15% more efficient than 2008 Title-24 Building Standards based on annual energy usage.

3.1.1.6 Area Sources

- No fireplaces will be installed in multi-family dwelling units.

3.1.2 Project Design Features whose Emissions Reductions Were Not Incorporated into the Analysis but Would Yield Further GHG Emissions Savings

While these project design features have not been quantified as part of this GHG emissions inventory, they are anticipated to be part of the Project and will likely result in further GHG emission reductions.

3.1.2.1 Vegetation

- Development of a tree planting packet for distribution in the Village 7 Specific Plan to help future residents understand their options for planting trees that can absorb CO_2. Pursuant to the City of Lincoln's new 2050 General Plan, and specifically under the Energy Resources section, Goal OSC-3, to encourage energy conservation in new and existing developments through the City, to address Policy OSC-3.9 Shade Tree Planting, Lewis will be responsible for having prepared, by an experienced and qualified firm or organization such as the Sacramento Tree Foundation, a tree information planting and care guide. The information will be delivered to each original homeowner as a part of the move-in package. The planting and care guide will be reviewed by, and be subject to the reasonable approval of, City of Lincoln staff.

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3.1.2.2 Reductions in Emissions from Mobile Sources

- Village 7's roadway system has been designed to allow the safe and convenient use of neighborhood electric vehicles (NEVs). These vehicles are efficient, particularly for local trips, and reduce the consumption of fossil fuels, have zero emissions at the point of use, and are less noisy than gas vehicles.

- Bus service will be expanded to the area based upon demand and funding. Bus turnouts and transit shelters on roadways that are to be served by bus transit in the future will be identified and constructed in accordance with City improvement standards and as otherwise required by the Public Works Director. Such facilities are anticipated along Ferrari Ranch Road and the north-south collector. Dial-A-Ride transit services will be available to Village 7's residents as demand for this service occurs.

3.1.2.3 Water Conservation

- The Project will be located in close proximity to the City of Lincoln's Wastewater Treatment and Reclamation Facility and therefore will require less energy use for the pumping of wastewater.

- Water used during construction will be reclaimed.

3.1.2.4 Energy Efficiency

- Lewis will be responsible for having prepared, by an experienced and qualified firm, an Energy Resource Conservation Guide, which will provide educational information on how home owners can increase energy efficiency and conservation in their new homes. The information will be delivered to each original homeowner as a part of the move-in package. The information packet will be reviewed by, and be subject to the reasonable approval of, City of Lincoln staff.

- Installation of Light Emitting Diode (LED) traffic lights shall be required in the Village 7 Specific Plan Area and be constructed in accordance with City Improvement standards or as otherwise approved by the Public Works Director.

- Pursuant to the City's new 2050 General Plan, and specifically under the Energy Resources section, Goal OSC-3, to encourage energy conservation in new and existing developments through the City, the City shall be responsible pursuant to Policy OSC-3.14, Early Planning for Energy Efficiency, for developing a program whereby energy planners and energy efficiency specialists will be included in pre-application discussions with a developer or builder to help identify the potential for inclusion of solar orientation and other energy efficient systems into the land plan and building practices.

3.1.2.5 Area Sources

- Wood-burning stoves and fireplaces are prohibited.

3.2   Summary of Emissions from Lewis Property

Unmitigated and mitigated GHG emissions from the various aspects of the Project are presented in Table 3.2-1. Also noted in Table 3.2-1 is whether the emissions are attributable to a one-time action or are anticipated to occur on an annual basis, during each year after the full build-out of the development. The only one-time emissions are associated with construction and land use change emissions. If these one-time emissions are annualized assuming a 40-year development life (which is likely low), then the total annual emissions for the Project are 27,959 (unmitigated) or 21,937 (mitigated) tonnes per year. The mitigation measures reduce the Project's GHG emissions by approximately 22%.

It is important to note that these emissions are estimated assuming that the carbon intensity of the electricity supply system and transportation system do not in the future change beyond that which is required by enacted legislation. This assumption is clearly conservative, as AB 32 and other legislative and regulatory mandates will result in GHG emission reductions in both areas.

AB 32 requires that GHG emissions from California be reduced to 1990 levels by 2020. This represents a reduction of approximately 28.3% from projected 2020 growth. The goals of AB 32 are likely to be reached by increasing renewable or non-carbon producing electricity production, and changing the transportation system to rely on a set of increasingly lower carbon fuels. As most of the carbon footprint of the Project results from either transportation or electricity use, these carbon emissions are likely overestimated as a result of the implementation measures of AB 32.

Furthermore, Governor Schwarzenegger's Executive Order S-3-05 set a target to reduce GHG emissions by 2050 to levels 80% less than the 1990 levels. It is likely that future measures will be implemented to reach this goal that similarly may result in reductions of GHG emissions for sources in the Project beyond those stated in this report.

Given the mandates of AB 32, Executive Order S-3-05, and future regulations which are likely to further reduce carbon intensity, total emissions reductions after the Project's mitigation measures are implemented are expected to be greater than the 22% reduction which is calculated and described in this report.

3.3   Life Cycle Emissions of Building Materials

An estimate of "life-cycle" GHG emissions (i.e., GHG emissions from the processes used to manufacture and transport materials used in the buildings and infrastructure) is presented in this section and attached as Appendix B. This estimate is to be used for comparison purposes only and is not included in the final inventory as these emissions would be attributable to other industry sectors under AB 32. For instance, the concrete industry is required by law to report emissions and undergo certain early action emission reduction measures under AB 32. Furthermore, for a life-cycle analysis for building materials, somewhat arbitrary boundaries must

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be drawn to define the processes considered in the life-cycle analysis.[78] Recognizing the uncertainties associated with a life-cycle analysis, the California Air Pollution Control Officers Association (CAPCOA) released a white paper which states: "The full life-cycle of GHG emissions from construction activities is not accounted for in the modeling tools available, and the information needed to characterize GHG emissions from manufacture, transport, and end-of-life of construction materials would be speculative at the CEQA analysis level."[79]

The calculations and results discussed here and presented more fully in Appendix B are estimates and should be used only for a general comparison to the overall GHG emissions estimated in the Climate Change Technical Report. Life Cycle Assessment (LCA) emissions vary based on input assumptions and assessment boundaries (e.g., how far back to trace the origin of a material). Assumptions made in this report are generally conservative. However, due to the open-ended nature of LCAs, the analysis is highly uncertain.

Appendix B is an ENVIRON report that evaluates the life cycle GHG emissions associated with the building materials for the Project. The life cycle GHG emissions include the embodied energy from the materials manufacture and the energy used to transport those materials to the site. The report then compares the life cycle GHG emissions to the overall annual operational emissions. The materials analyzed in the report include materials for 1) residential and non-residential buildings, and 2) site infrastructure. This report calculates the overall annualized life cycle emissions from construction materials to be approximately 367 – 2,866 tonnes CO_2 / year. This represents 2% – 13% of the annualized mitigated GHG emissions[80] from the Project, assuming a 40 year lifespan of the Project as described below.

The report estimated the life cycle GHG emissions for buildings by conducting an analysis of available literature on LCAs for buildings. According to these studies, approximately 75 - 97% of GHG emissions from buildings are associated with energy usage during the operational phase; the other 3 - 25% of the GHG emissions are due to material manufacture and transport. Using the GHG emissions from the operation of buildings, 3% to 25% of building emissions corresponds to approximately 1 – 13% of the Project's mitigated emissions.

The report calculated the life cycle GHG emissions for certain components of infrastructure (roads, storm drains, utilities, gas, electricity, and cable). This analysis considered the manufacture and transport of concrete and asphalt only, as ENVIRON assumed that other construction materials such as steel would be present in much smaller quantities. If a 40 year

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[78] For instance, in the case of building materials, the boundary could include the energy to make the materials, the energy used to make the machine that made the materials, and the energy used to make the machine that made the machine that made the materials.
[79] CAPCOA. 2008. *CEQA & Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act.* Available online at: http://www.capcoa.org/CEQA/CAPCOA%20White%20Paper.pdf
[80] The LCA emissions occur one time throughout the life of the project, and consequently are annualized over a 40 year project life for comparison to the annual project emission total.

lifespan of the infrastructure is assumed, the total annualized emissions from embodied energy in infrastructure materials are approximately 0.5% of the Project's mitigated emissions.

The overall life cycle emissions, annualized by 40 years, are 367 – 2,866 tonnes CO_2 / year, or 2 – 13% of the annualized mitigated GHG emissions from the Project.

Again, note that the calculations and results presented in this life cycle report are estimates and should be used only for a general comparison to the overall GHG emissions estimated in the Climate Change Technical Report. LCA emissions vary based on input assumptions and assessment boundaries (e.g., how far back to trace the origin of a material). Assumptions made in this report are generally conservative. However, due to the open-ended nature of LCAs, and the fact that literature evaluation, not site specific studies were used to analyze the embodied energy, the analysis should be considered to yield highly uncertain results. Additionally, these estimates likely double count emissions from other industry sectors.

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4   Conclusion

ENVIRON prepared an emissions inventory for the Lewis Property at Village 7. This emissions inventory was prepared consistent with the methodologies established by the CCAR where possible. The emissions inventory considers seven categories of GHG emissions: emissions due to vegetation changes, emissions from construction activities, residential emissions, commercial building emissions, mobile source emissions, municipal emissions, and area source emissions. The emissions from construction and land use change would be one-time emissions events, while the other emissions would occur annually, throughout the life of the Project.

A variety of methods were employed to develop the GHG emissions inventory. In addition to well established emission factors for certain activities and emission estimates based on similar activities in other representative communities, several different estimation software programs were used, including EMFAC and URBEMIS.

Unmitigated and mitigated emissions from the various components of the Project are presented in Table 3.2-1. This table identifies the one-time emissions that would be attributable to the Project's entitlement, and the annual emissions expected to occur each year after the full build out of the development. If the one-time emissions are annualized assuming a 40-year development life (which is likely low), the total annual emissions for the Project are 27,959 (unmitigated) or 21,937 (mitigated) tonnes per year. The mitigation measures reduce the Project's GHG emissions by approximately 22%.

The GHG emission inventory for the Project was based on several conservative assumptions. In addition, anticipated state and federal regulatory developments are expected to result in lower GHG emissions from the Project than are represented in this analysis. For example, the increased CAFE standards under the Energy Independence and Security Act of 2007 (EISA) will result in a moderate decrease in the Project's GHG inventory as tailpipe emissions would be roughly 26 - 40% lower. Consequently, the total annual estimated CO_2e emissions from the Project of 21,937 tons per year after the Project's mitigation measures are implemented would actually be significantly lower due to improved vehicle efficiency under the revised CAFE standards.

Tables

Table 2.4-1
GHG Emissions from Renewable Power Standards
Lewis Property at Village 7
Lincoln, California

Renewable Energy Source[1]	Energy Delivered[1] [million kWh]	Percentage of Renewable Energy Delivered [%]
Wind	1,357	15%
Small hydro	1,900	21%
Biogas	0	0%
Solar	0	<1
Biomass	3,076	34%
Geothermal	2,714	30%
Total[2]	9,047	100%
% of Total Energy From Renewables[1]	11%	
% of Total Energy From Non-Renewables	89%	
Total Energy Delivery[2]	79,450,904	MWh
from renewables	9,047,125	MWh
from non-renewables	70,403,779	MWh
CO_2 Emissions per Total Energy Delivered	635.67	lbs CO_2/MWh delivered
Total CO_2 Emissions[3]	22,908,502	metric tonnes CO_2
CO_2 Emissions per Total Non-Renewable Energy[4]	717.36	lbs CO_2/MWh delivered
Estimated Emission Factors for Total Energy Delivered[5]		
2010 RPS (20%)	573.9	lbs CO_2/MWh delivered

Notes:

1. The renewable energy portfolio for Pacific Gas and Electric, the power utility that is most likely to provide power to the Lewis Property at Village 7. The renewable energy distribution is based on 2007 data available at: http://www.pgecorp.com/corp_responsibility/reports/2007/environment/energy-future.html

2. Total energy value reported for 2007 by Pacific Gas and Electric in its 2008 Annual Entity Emissions: Electric Power Generation/Electric Utility Sector report. Available at: http://www.pge.com/mybusiness/edusafety/systemworks/electric/energymix/index.shtml

3. The amount of CO2 emissions is provided in Pacific Gas and Electric's 2008 Annual Entity Emissions: Electric Power Generation/Electric Utility Sector for 2007 report. Available at: http://www.pge.com/mybusiness/edusafety/systemworks/electric/energymix/index.shtml

4. The emissions metric presented here is calculated based on the total CO_2 emissions divided by the energy delivered from non-renewable sources.

5. The emission factors for total energy delivered are estimated by multiplying the percentage of energy delivered from non-renewable energy by the CO_2 emissions per total non-renewable energy metric calculated above. The emission factor presented here is for the current 20% RPS goal for 2010. The estimate provided here and the 2007 PUP report issued by Pacific Gas and Electric assume that renewable energy sources do not result in any CO_2 emissions. This is not necessarily true for biogas- and biomass-sourced energy but some consider these sources to be "carbon neutral."

Abbreviations:
CO_2 = carbon dioxide
kWh = kilowatt-hour
lbs = pounds
MWh = Megawatt-hour
PUP = Power/Utility Protocol
RPS = Renewables Portfolio Standard

Table 2.5-1
CO$_2$ Sequestration Change due to Land Use Change
Lewis Property at Village 7
Lincoln, California

Vegetation Type[1]	IPCC Designation[2]	Tons Dry Matter Carbon/Acre[3]	Sequestered CO$_2$ / Acre[4]	Total Impacted Area[5]	CO$_2$ Sequestration Capacity Removed
		[tonne/acre]	[tonne/acre]	[acres]	[tonne]
Cropland (dry farmed Oat hay)	Cropland	1.9	6.9	394	2,716
GRAND TOTAL				394	2,716

Notes:

1. Land types shown here represent vegetation that will be potentially removed upon development.

2. Land types are mapped to generalized IPCC Land Designations (IPCC 2006).

3. Dry matter carbon per acre was determined from information contained in Table 2.5-2.

4. It is conservatively assumed that all carbon is eventually converted into CO$_2$. Multiply the mass of carbon by 3.67 to calculate the final mass of CO$_2$ (the molecular mass of CO$_2$ / the molecular mass of carbon is 44/12 or 3.67).

5. Data provided by Lewis Planned Communities. A positive number indicates the amount of land removed and a negative number indicates that this land type is added.

Abbreviations:

CO$_2$ - Carbon dioxide

Sources:

IPCC. 2006. Guidelines for National Greenhouse Gas Inventories (IPCC Guidelines). Available online at http://www.ipcc-nggip.iges.or.jp/public/2006gl/vol4.htm

City of Lincoln Community Development Department. June 2009. Draft Environmental Impact Report SCH No. 2005062001: Village 7 Specific Plan Project. Prepared by PBS&J Consulting.

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Table 2.5-2
Carbon per Acre for IPCC Land Types
Lewis Property at Village 7
Lincoln, California

IPCC Designation	Total Biomass[1]	Tonnes Dry Matter Carbon/Acre[2]
	[tonne d.m./acre]	[tonne/acre]
Cropland	4.0	1.9

Notes:

1. Total biomass for cropland corresponds to IPCC value for agricultural land (Table 8.4 of IPCC 2006).
2. Total biomass multiplied by carbon fraction in plant material (0.47) to calculate carbon content. From IPCC 2006, Table 8.4.

Abbreviations:
d.m. - dry mass

Sources:

IPCC. 2006. Guidelines for National Greenhouse Gas Inventories (IPCC Guidelines).
Available online at http://www.ipcc-nggip.iges.or.jp/public/2006gl/vol4.htm

Gray and Schlesinger. 1981. Biomass, production, and litterfall in the coastal sage scrub of Southern California. American Journal of Botany. 68:24-33.

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Table 2.5-3
CO_2 Sequestration Capacity of New Vegetation Plantings
Lewis Property at Village 7
Lincoln, California

Tree Species[1]	Sequestered CO_2 / Tree[1]	Total Number of Planted Trees[1]	CO_2 Sequestration Capacity of New Trees[2]
	[tonne/tree/year]		[tonne]
Miscellaneous	0.035	11,587	8,111
GRAND TOTAL	-	**11,587**	**8,111**

Notes:

1. The total number of trees to be planted at Lewis Property was provided by Lewis Planned Communities. The tree palette will include Oak, Elm, Maple, Birch, Gymnosperms, Cedar, Rose, Magnolia, Flowering, Sycamore, Sumac, Conifer, Linden, Laurel, Legume, and Cypress. Since an exact accounting of each tree species is still to be determined, ENVIRON classified all trees as "miscellaneous" species and used an average of all sequestration values proved in Table 8.2 of IPCC (2006).

2. An active growing period of 20 years was assumed for the new trees planted.

Abbreviations:

CO_2 - Carbon dioxide

Sources:

HLA Group Landscape Architects & Planners, Inc. 2010. Urban Forest Analysis for Lewis Property. January 7.

IPCC. 2006. Guidelines for National Greenhouse Gas Inventories (IPCC Guidelines). Available online at http://www.ipcc-nggip.iges.or.jp/public/2006gl/vol4.htm

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Table 2.5-4
Change in CO_2 Sequestration Due to Land Use Changes and New Vegetation Plantings
Lewis Property at Village 7
Lincoln, California

CO_2 Sequestration Capacity of Disturbed Vegetation	CO_2 Sequestration Capacity of Converted and New Vegetation	Net Change in CO_2 Sequestration Capacity[1]
[tonne]	[tonne]	[tonne]
-2,716	8,111	5,395

Notes:

1. A negative value represents a decrease in sequestration capacity and thus a net increase in CO_2.
A positive value indicates an increase in CO_2 sequestration capacity.

Abbreviations:

CO_2 - Carbon dioxide

E N V I R O N

<div align="center">

Table 2.6-1
Greenhouse Gas Emissions from Construction
Lewis Property at Village 7
Lincoln, California

</div>

Fuel Type[1,2]	Construction Activity[1]	Unmitigated[1]		Mitigated[2]	
		Total CO_2 Emissions	Total CO_2e Emissions[3]	Total CO_2 Emissions	Anthropogenic Total CO_2e Emissions[3]
		(tonnes)	(tonnes)	(tonnes)	(tonnes)
Gasoline	Worker Commute	11,108	11,693	11,108	11,693
Diesel	Vendor Trip	2,760	2,760	2,760	2,760
Diesel	Off-Road Construction Equipment	4,142	4,142	3,314	3,314
Diesel	On-Road Construction Equipment	113	113	90	90
Biodiesel	Off-Road Construction Equipment	0	0	772	0
Biodiesel	On-Road Construction Equipment	0	0	21	0
TOTAL		**18,123**	**18,708**	**18,065**	**17,857**
Percent Reduction Achieved					**4.5%**

Notes:

1. Construction activity and total unmitigated CO_2 emissions were taken directly from construction phase URBEMIS output files provided by PBS&J.

2. Mitigated total CO_2e emissions are based on the percent reduction achieved from using B20 fuel instead of diesel fuel for all off-road and on-road construction equipment. B20 fuel is a mix of 20% biodiesel and 80% diesel. CO_2 emissions from the biodiesel portion of B20 biodiesel are excluded as they are assumed to be biogenic emissions (see California Climate Action Registry General Reporting Protocol). CH_4 and N_2O emissions from the biodiesel portion of B20 are not considered biogenic, but they are negligible and are not included. The mitigation measure was not applied to Vendor Trips since the developer does not have control over vendor vehicles.

3. $CO_2e = CO_2 / 0.95$: The United States Environmental Protection Agency (USEPA) recommends assuming that CH_4, N_2O, and HFCs account for 5% of GHG emissions from gasoline vehicles, taking into account their global warming potentials. The CCAR General Reporting Protocol indicates that the contributions of CH_4 and N_2O to GHG emissions from diesel vehicles is likely small (< 1% of total CO_2e). Therefore ENVIRON assumed that $CO_2 = CO_2e$ for diesel vehicles.

Abbrevations:

CCAR - California Climate Action Registry
CH_4 - methane
CO_2 - carbon dioxide
CO_2e - carbon dioxide equivalent
HFC - hydro fluorocarbons
N_2O: nitrous oxide
URBEMIS - Urban Emissions model
USEPA - United States Environmental Protection Agency

Sources:

URBEMIS files provided by PBS&J via electronic transmittal on September 17, 2009.
California Climate Action Registry General Reporting Protocol, Version 3.1 (January 2009).
Available at: http://www.climateregistry.org/resources/docs/protocols/grp/GRP_3.1_January2009.pdf

Table 2.7-1
Energy Use per Residential Dwelling Unit: Title-24 Regulated Systems
Lewis Property at Village 7
Lincoln, California

Dwelling Type[1]	Electricity Delivered (kW-hr/DU/year)[2]								Natural Gas Delivered (MBTU/DU/year)[2]						
	Heating[3]	Cooling	Hard-Wired Lighting[4]	RASS Total	% Reduction due to 2005 Standards Relative to 2001[5,6]	2005 Estimated Total	% Reduction due to 2008 vs. 2005 Standards[7]	2008 Estimated Total	Heating[3]	Domestic Hot Water[8]	RASS total	% Reduction due to 2005 Standards Relative to 2001[5,6]	2005 Estimated Total	% Reduction due to 2008 vs. 2005 Standards[7]	2008 Estimated Total
Single Family Detached	170	1,213	834	2,217	19.8%	1,778	22.7%	1,375	25.2	18.2	43.4	6.7%	40.5	10%	36.4
Multi-family (5+ Unit Apartments)	170	551	429	1,150	24.3%	870	19.7%	699	25.2	18.2	43.4	15.7%	36.6	7%	34.0

Notes:

1. Based on information provided by Lewis Planned Communities.

2. Based on the Unit Energy Consumption data from the California Residential Appliance Saturation Survey (RASS), which collected data from over 21,100 households statewide. Only RASS data tabulated for the single-family homes and multi-family (5+ unit apartments) in the climate zone in which the Lewis Property would be located (Climate Zone 2) were considered in this analysis.

3. Homes are typically heated using electricity and/or natural gas. Lewis Planned Communities indicated that all homes on Lewis Property would be heated by natural gas. The values shown are based on RASS results collected from homes with gas billing data. In addition, RASS was used to estimate the electricity required to power the furnace fan.

4. According to RASS, approximately 60% of energy use reported as "miscellaneous" can be attributed to lighting. RASS does not differentiate between hard-wired and plug-in lighting. The values shown here represent 50% of lighting energy use. All outdoor lighting was assumed to be hard-wired.

5. Reductions are taken with the assumption that the RASS estimate reflects heating/cooling/hot water electricity use for homes that are minimally compliant with 2001 Title 24 Standards (this version was the most current at the time of the RASS study). More than 90% of the homes that participated in the survey were constructed before 1997. Because older homes tend to use more energy, the numbers shown here may overestimate actual energy use at a new development such as the Lewis Property.

6. Based on report by California Energy Commission on estimated first-year electricity savings due to 2005 standards for single-family and multi-family homes, relative to 2001 standards.

7. Based on California Energy Commission report on estimated first-year electricity savings due to 2008 standards for single-family and multi-family homes, relative to 2005 standards.

8. Lewis Planned Communities indicated that all homes on Lewis Property will have domestic water heated by natural gas. The values shown are based on RASS results collected from homes with gas billing data.

Abbreviations:
DU - Dwelling Unit
kW-hr - kilowatt-hour
MBTU - million british thermal units
RASS - Residential Appliance Saturation Survey

Source:

California Energy Commission. 2003. *Impact Analysis: 2005 Update to the California Energy Efficiency Standards for Residential and Nonresidential Buildings.* Available at: http://www.energy.ca.gov/title24/2005standards/archive/rulemaking/documents/2003-07-11_400-03-014.PDF

California Energy Commission. 2007. *Impact Analysis: 2008 Update to the California Energy Efficiency Standards for Residential and Nonresidential Buildings.* Available at: http://www.energy.ca.gov/title24/2008standards/rulemaking/documents/2007-11-07_IMPACT_ANALYSIS.PDF

Kema-Xenergy, Itron, RoperASW. 2004. *California Statewide Residential Appliance Saturation Study (RASS) Volume 2, Study Results, Final Report (300-00-004).* June.

Type	Dwelling Type[1]	Electricity Delivered (kW-hr/DU/year)[2]									Natural Gas Delivered (MBTU/DU/year)[2]		
		Refrigerator	Clothes Washer	Clothes Dryer (Electric)[3]	Dishwasher	Cooking Range (Electric)[4]	Total Major Appliances	Plug-in Lighting[5]	MELs[6]	Total	Clothes Dryer (Gas)[3]	Cooking Range (Gas)[4]	Total
Standard Appliances	Single Family Detached	1,135	121	242	59	123	1,681	644	2,181	4,505	0.5	1.8	2.3
	Multi-family (5+ Unit Apartments)	744	4	93	28	101	971	377	1,405	2,753	0.6	2.3	2.9
Energy Star Appliances[7]	Single Family Detached	965	84	242	50	123	1,465	644	2,181	4,290	0.5	1.8	2.3
	Multi-family (5+ Unit Apartments)	633	3	93	24	101	854	377	1,405	2,636	0.6	2.3	2.9

Notes:

1. Based on information provided by Lewis Planned Communities.

2. Energy use per residential dwelling unit is based on information in RASS report.

3. Dryers may be either electric or natural-gas fueled. The mix of types is based on the RASS report saturation percentage.

4. Cooking ranges can be either gas or electric. The mix of types is based on the RASS report saturation percentage.

5. RASS does not differentiate between hard-wired and plug-in lighting. The values shown here represent 50% of lighting energy use.

6. Miscellaneous electric loads (MELs) include such end uses as TVs, personal computers, home office equipment, freezers, and fans. To estimate energy use for these loads, the unit energy consumption values for each end-use was multiplied by the saturation factor, which indicates the percentage of homes that report the end use.

7. Average energy savings above standard products are applied to refrigeration (15%), clothes washer (30%), and dishwasher (15%) as reported in Energy Star and Other Climate Protection Partnerships 2008 Annual Report, Table 6.

Abbreviations:
DU - Dwelling Unit
kW-hr - kilowatt-hour
MBTU - million british thermal units
MEL - Miscellaneous electric load

Source:
Environmental Protection Agency (USEPA). 2008. *Annual Report. Energy Star and Other Climate Protection Partnerships.* Available at: http://www.epa.gov/appdstar/pdf/2008AnnualReportFinal.pdf
Kema-Xenergy, Itron, RoperASW. 2004. *California Statewide Residential Appliance Saturation Study (RASS) Volume 2, Study Results, Final Report (300-00-004).* June.

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Table 2.7-3
Energy Use per Residential Dwelling Unit
Lewis Property at Village 7
Lincoln, California

Title 24 Compliance	Dwelling Type	Electricity Delivered				Natural Gas Delivered		
		Title 24 Systems[1,2]	Major Appliances[3,5]	Plug-ins[4]	Total	Heating and Domestic Hot Water[2]	Gas Dryers and Oven Ranges[5]	Total
		[kW-hr / DU / year]				(MBTU natural gas / DU / year)		
Minimally Title 24 Compliant (2008)	Single Family Detached	1,375	1,681	2,825	5,880	36	2	39
	Multi-family (5+ Unit Apartments)	699	971	1,783	3,452	34	3	37
15% Better than Minimally Title 24 Compliant (2008)	Single Family Detached	1,168	1,681	2,825	5,674	31	2	33
	Multi-family (5+ Unit Apartments)	594	971	1,783	3,347	29	3	32
15% Better than Minimally Title 24 Compliant (2008) and Energy Star Commitments[6]	Single Family Detached	1,168	1,672	2,825	5,665	31	2	33
	Multi-family (5+ Unit Apartments)	594	854	1,783	3,230	29	3	32
Percentage Improvement over 2008 Title 24	Single Family Detached	15%	1%	0%	4%	15%	--	14%
	Multi-family (5+ Unit Apartments)	15%	12%	0%	6%	15%	--	14%

Notes:
1. Title 24 systems include heating, cooling, domestic hot water, and hard-wired lighting.

2. Homes are typically heated using electricity and/or natural gas. Lewis Planned Communities indicated that all homes on Lewis Property would be heated by natural gas. The values shown are based on RASS results collected from homes with gas billing data. In addition, RASS was used to estimate the electricity required to power the furnace fan.
3. "Major appliances" includes refrigerators, clothes washers and dryers, dishwashers, and cooking ranges.
4. "Plug-ins" refers to electricity use associated with plug-in lighting, plug-in appliances, and miscellaneous electric loads.

5. Dryers and cooking ranges can be either gas or electric. The mix of types is based on the RASS report saturation percentage.
6. Lewis Planned Communities has committed to including Energy Star refrigerators, clothes washers, and dishwashers in all multi-family homes, and Energy Star dishwashers in all single family homes.

Abbreviations:
DU - Dwelling Unit
kW-hr - kilowatt-hour
MBTU - million british thermal units

E N V I R O N

Table 2.7-4
Emission Factors for Different Energy Sources for Buildings
Lewis Property at Village 7
Lincoln, California

Energy Source	Source Units	Emission Factor [lb CO_2/source unit]
Electricity[1]	(kW-hr)	0.574
Natural Gas[2]	(MBTU)	117.0

Notes:

1. Emission factor for electricity provided by Pacific Gas and Electric (PG&E), obtained from the California Climate Action Registry Database. California's Renewable Portfolio Standard (RPS) requires retail suppliers of electric services to increase procurement from eligible renewable energy resources until they reach 20% by 2010; thus, this emission factor has been adjusted to account for the 2010 RPS.

2. Emission factor for natural gas obtained from California Climate Action Registry Reporting Protocol, Table C6.

Abbreviations:

kW-hr - kilowatt-hour
lb - pound
MBTU - million british thermal units
RPS - Renewable Portfolio Standard

Sources:

California Climate Action Registry. 2009. *General Reporting Protocol, Version 3.1.* January. Available at: http://www.climateregistry.org/resources/docs/protocols/grp/GRP_3.1_January2009.pdf

California Climate Action Registry Database. 2008. *Pacific Gas and Electric 2007 PUP Report.* Available at: https://www.climateregistry.org/CARROT/public/Reports.aspx

E N V I R O N

Table 2.7-5
CO$_2$e Emissions per Dwelling Unit
Lewis Property at Village 7
Lincoln, California

Title 24[1] Compliance	Dwelling Type	Title-24 Systems[1]		Title-24 Systems and Major Appliances		Title-24 Systems and All MELs		Title-24 Systems	Title-24 Systems and Major Appliances	Title-24 Systems and All MELs
		CO$_2$ Electricity[2]	CO$_2$ Natural Gas[3]	CO$_2$ Electricity[2]	CO$_2$ Natural Gas[3]	CO$_2$ Electricity[2]	CO$_2$ Natural Gas[3]	CO$_2$ Total	CO$_2$ Total	CO$_2$ Total
		(lbs / DU / year)						(tonnes / DU / year)		
Minimally Title 24 Compliant (2008)	Single Family Detached	789	4,264	1,754	4,534	3,375	4,534	2.3	2.9	3.6
	Multi-family (5+ Unit Apartments)	401	3,981	958	4,321	1,982	4,321	2.0	2.4	2.9
15% Better than Minimally Title 24 Compliant (2008)	Single Family Detached	671	3,624	1,635	3,895	3,257	3,895	1.9	2.5	3.2
	Multi-family (5+ Unit Apartments)	341	3,384	898	3,724	1,921	3,724	1.7	2.1	2.6
15% Better than Minimally Title 24 Compliant (2008) and Energy Star Commitments[4]	Single Family Detached	671	3,624	1,630	3,895	3,252	3,895	1.9	2.5	3.2
	Multi-family (5+ Unit Apartments)	341	3,384	831	3,724	1,854	3,724	1.7	2.1	2.5
Percentage Improvement over 2008 Title 24	Single Family Detached	15%	15%	7%	14%	4%	14%	15%	12%	10%
	Multi-family (5+ Unit Apartments)	15%	15%	13%	14%	6%	14%	15%	14%	11%

Notes:

1. Title 24 - California Code of Regulations (CCR), Title 24, also known as the California Building Standards Code.

2. Converted from kW-hr to lb CO$_2$ using emission factor from the California Climate Action Registry Database Pacific Gas and Electric 2007 PUP Report. The emission factor was adjusted to account for the 20% Renewable Portfolio Standard required of electricity providers by 2010.

3. Converted from MBTU to lb CO$_2$ using emission factor from California Climate Action Registry General Reporting Protocol (CCAR GRP).

4. Lewis Planned Communities has committed to including Energy Star refrigerators, clothes washers, and dishwashers in all multi-family homes, and Energy Star dishwashers in all single family homes.

Abbreviations:
DU - Dwelling Unit
kW-hr - kilowatt-hour
lb - pound
MEL - Miscellaneous electric load

Sources:

California Climate Action Registry. 2009. *General Reporting Protocol, Version 3.1.* January. Available at: http://www.climateregistry.org/resources/docs/protocols/grp/GRP_3.1_January2009.pdf

California Climate Action Registry Database. 2008. *Pacific Gas and Electric 2007 PUP Report.* Available at: https://www.climateregistry.org/CARROT/public/Reports.aspx

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Table 2.7-6
CO_2 Emissions from Electricity and Natural Gas Usage in Residential Dwelling Units
Lewis Property at Village 7
Lincoln, California

Title 24[1] Compliance	Dwelling Type	# Dwelling Units[2]	Title-24 Systems		Title-24 Systems and Major Appliances		Title-24 Systems and All MELs	
			CO$_2$ Emission Factor	Total CO$_2$ Emissions	CO$_2$ Emission Factor	Total CO$_2$ Emissions	CO$_2$ Emission Factor	Total CO$_2$ Emissions
			(tonne CO$_2$ / DU / year)	(tonne CO$_2$ / year)	(tonne CO$_2$ / DU / year)	(tonne CO$_2$ / year)	(tonne CO$_2$ / DU / year)	(tonne CO$_2$ / year)
Minimally Title 24 Compliant (2008)	Single Family Detached	1,698	2.3	3,892 — 5,025	2.9	4,843 — 6,208	3.6	6,092 — 7,722
	Multi-family (5+ Unit Apartments)	570	2.0	1,133	2.4	1,365	2.9	1,630
15% Better than Minimally Title 24 Compliant (2008)	Single Family Detached	1,698	1.9	3,308 — 4,271	2.5	4,259 — 5,454	3.2	5,508 — 6,968
	Multi-family (5+ Unit Apartments)	570	1.7	963	2.1	1,195	2.6	1,460
15% Better than Minimally Title 24 Compliant (2008) and Energy Star Commitments[3]	Single Family Detached	1,698	1.9	3,308 — 4,271	2.5	4,255 — 5,433	3.2	5,504 — 6,947
	Multi-family (5+ Unit Apartments)	570	1.7	963	2.1	1,178	2.5	1,442
Percentage Improvement over 2008 Title 24	Single Family Detached	1,698	15%	15% — 15%	12%	12% — 12%	10%	10% — 10%
	Multi-family (5+ Unit Apartments)	570	15%	15%	14%	14%	11%	11%

Notes:

1. Title 24 - California Code of Regulations (CCR), Title 24, also known as the California Building Standards Code.

2. Information provided by Lewis Planned Communities.

3. Lewis Planned Communities has committed to including Energy Star refrigerators, clothes washers, and dishwashers in all multi-family homes, and Energy Star dishwashers in all single family homes.

Abbreviations:

CO_2 - carbon dioxide
DU - Dwelling Units
MEL - Miscellaneous electric loads

Sources:

California Climate Action Registry. 2009. *General Reporting Protocol, Version 3.1* January. Available at: http://www.climateregistry.org/resources/docs/protocols/grp/GRP_3.1_January2009.pdf

E N V I R O N

Table 2.8-1
Non-Residential Building Classifications
Lewis Property at Village 7
Lincoln, California

Building Type[1]	CEUS Building Type[2]	Total Area[1] [SF]
School	School	64,800
Neighborhood Commercial	All Commercial	105,000
Retail	Retail	2,500
Small Office	Small Office	2,500
Community Center	Miscellaneous	15,000
Grand Total Area		189,800

Notes:

1. Building types and areas for Neighborhood Commercial, Retail, Small Office, and Community Center were obtained from Table 2-1 of the Draft Environmental Impact Report (PBS&J 2009) and discussions with Lewis Planned Communities. Building type and area for the School was provided by Lewis Planned Communities.

2. ENVIRON selected building types from the California Commerical End-Use Survey (CEUS) that most closely matched the building types specified by the Draft Environmental Impact Report (PBS&J 2009).

Abbreviations:

CEUS - California Commercial End-Use Survey
SF - square feet

Sources:

California Energy Commission. 2006. *California Commercial End-Use Survey.* Prepared by Itron Inc. Available at: http://www.energy.ca.gov/ceus/

PBS&J Consulting. 2009. *Draft Environmental Impact Report SCH No. 2005062001: Village 7 Specific Plan Project.* June.

Table 2.8-2
Electricity End-Use Distribution for Non-Residential Building Types
Lewis Property at Village 7
Lincoln, California

End Use	Title 24 System[1]	CEUS Building Type				
		All Commercial	Miscellaneous	Retail	School	Small Office
Air Compressor	No	1%	2%	1%	0%	0%
Cooking	No	5%	7%	2%	5%	0%
Cooling	Yes	12%	12%	15%	17%	24%
Exterior Lighting	No	8%	12%	13%	7%	6%
Heating	Yes	1%	1%	0%	1%	1%
Interior Lighting	No	30%	23%	39%	37%	28%
Miscellaneous	No	7%	9%	6%	9%	8%
Motors	No	3%	7%	2%	0%	0%
Office Equipment	No	4%	4%	1%	2%	11%
Process	No	0%	0%	0%	0%	0%
Refrigeration	No	18%	13%	2%	4%	7%
Ventilation	Yes	11%	9%	20%	16%	11%
Water Heating	Yes	1%	1%	1%	3%	3%

Notes:

1. Only end uses regulated by Title 24 are included in the Title 24 building envelope energy budget. Hard-wired lighting (exterior lighting and some interior lighting) are part of Title 24, but are not considered part of the building envelope energy budget.

Abbreviations:

CEUS - California Commerical End-Use Survey

Source:

California Energy Commission. 2006. *California Commercial End-Use Survey.* Prepared by Itron Inc. Available at: http://www.energy.ca.gov/ceus/

Table 2.8-3
Natural Gas End-Use Distribution for Non-Residential Building Types
Lewis Property at Village 7
Lincoln, California

End Use	Title 24 System[1]	CEUS Building Type				
		All Commercial	Miscellaneous	Retail	School	Small Office
Gas Cooking	No	11%	0.2%	2%	4%	0%
Gas Cooling	Yes	4%	18%	0%	0%	0%
Gas Heating	Yes	61%	55%	96%	87%	89%
Gas Water Heating	Yes	23%	27%	2%	9%	8%
Gas Miscellaneous	No	0.2%	0.1%	0%	0%	0%
Gas Process	No	2%	0%	0%	0%	3%

Notes:

1. Only end uses regulated by Title 24 are included in the Title 24 building envelope energy budget.

Abbreviations:

CEUS - California Commerical End-Use Survey

Source:

California Energy Commission. 2006. California Commercial End-Use Survey. Prepared by Itron Inc. Available at: http://www.energy.ca.gov/ceus/

Table 2.8-4
Emission Factors by Energy Source
Lewis Property at Village 7
Lincoln, California

Energy Source	Unit	Emission Factor [lb CO$_2$e/Unit]
Electricity[1]	kWh	0.574
Natural Gas[2]	kBTU	0.117

Notes:

1. Emission factor for electricity provided by Pacific Gas and Electric (PG&E), obtained from the California Climate Action Registry Database. California's Renewable Portfolio Standard (RPS) requires retail suppliers of electric services to increase procurement from eligible renewable energy resources until they reach 20% by 2010; thus, this emission factor has been adjusted to account for the 2010 RPS.
2. Emission factor for natural gas obtained from California Climate Action Registry Reporting Protocol, Table C6.

Abbreviations:
CO$_2$e - carbon dioxide equivalent
kBTU - 1,000 British thermal units
kWh - kilowatt-hour
lb - pound

Sources:

California Climate Action Registry. 2009. *General Reporting Protocol, Version 3.1* . January. Available at: http://www.climateregistry.org/resources/docs/protocols/grp/GRP_3.1_January2009.pdf

California Climate Action Registry Database. 2008. *Pacific Gas and Electric 2007 PUP Report.* Available at: https://www.climateregistry.org/CARROT/public/Reports.aspx

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Table 2.8-5
Energy Usage for Non-Residential Building Types
Lewis Property at Village 7
Lincoln, California

Building Type	CEUS Building Type	Energy Type	Units	2008 T24 Energy Use[1,2]	15% Better than 2008 T24 Energy Use[2,3]	Non-Title 24 Energy Use[4]	Total Energy Use[5]
				[Unit/SF/yr]			
Community Center	Miscellaneous	Electricity	kWhr	5.04	4.73	4.21	8.94
		Gas	kBTU	19.55	16.62	0.07	16.69
Neighborhood Commercial	All Commercial	Electricity	kWhr	6.37	5.98	4.29	10.27
		Gas	kBTU	17.28	14.69	2.89	17.58
Retail	Retail	Electricity	kWhr	11.42	10.70	1.98	12.69
		Gas	kBTU	11.93	10.14	0.37	10.51
School	School	Electricity	kWhr	5.02	--	1.42	6.44
		Gas	kBTU	9.52	--	0.42	9.95
Small Office	Small Office	Electricity	kWhr	7.72	7.10	3.17	10.27
		Gas	kBTU	20.18	17.15	0.77	17.93

Notes:

1. Includes Title 24-regulated building envelope uses of electricity (heating, cooling, ventilation, water heating), and gas (heating, water heating).

2. Title 24 usage rates shown in this table have been adjusted to reflect improvements in Title 24 building codes since 2002. ENVIRON used the 2002 CEUS data to represent energy use for buildings that are minimally compliant with the 2001 Title 24 standards. CEUS did not collect information on the ages of the buildings surveyed. Because older buildings tend to be less energy efficient, and the majority of the buildings in the survey were likely constructed before 2001, the 2002 CEUS data likely overestimates energy use for a 2001 Title 24-compliant building. CEC discusses average savings for improvements from 2002 to 2005 ("Impact Analysis for 2005 Energy Efficiency Standards") as well as from 2005 to 2008 ("Impact Analysis 2008 Update to the California Energy Efficiency Standards for Residential and Nonresidential Buildings").

3. Lewis Planned Communities has committed to exceeding the 2008 Title 24 building code by 15% for building envelope uses for all building types except the school. This includes heating, cooling, ventilation, and water heating. It does not include lighting.

4. Includes all other uses of electricity (cooking, refrigeration office equipment, miscellaneous, process, motors, air compressors) and gas (cooling, cooking, miscellaneous, process) not included in the Title 24-regulated building envelope or lighting.

5. For the community center, neighborhood commercial, retail, and small office building types, Total Energy Use is the sum of 15% Better than 2008 T24 Energy Use and Non-Title 24 Energy Use. For the school, Total Energy Use is the sum of 2008 T24 Energy Use and Non-Title 24 Energy Use.

Abbreviations:
CEC - California Energy Commission
CEUS - California Commerical End-Use Survey
kBTU - kilo (1,000) British thermal units
kWhr- kilowatt hour
PG&E - Pacific Gas and Electric
SF - square feet
T24 - Title 24
yr - year

Sources:

California Energy Commission. 2006. *California Commercial End-Use Survey.* Prepared by Itron Inc. Available at: Available at: http://www.energy.ca.gov/ceus/

California Energy Commission. 2003. *Impact Analysis: 2005 Update to the California Energy Efficiency Standards for Residential and Nonresidential Buildings.* Available at: http://www.energy.ca.gov/title24/2005standards/archive/rulemaking/documents/2003-07-11_400-03-014.PDF

California Energy Commission. 2007. *Impact Analysis: 2008 Update to the California Energy Efficiency Standards for Residential and Nonresidential Buildings.* Available at: http://www.energy.ca.gov/title24/2008standards/rulemaking/documents/2007-11-07_IMPACT_ANALYSIS.PDF

E N V I R O N

Building Type	CEUS Building Type	Size	Energy Type	Unit	Unmitigated GHG Emissions		Mitigated GHG Emissions	
					Total CO$_2$ Emissions per SF[1]	Total CO$_2$ Emissions[2]	Total CO$_2$ Emissions per SF[1,3]	Total CO$_2$ Emissions[2]
		[SF]			[tonnes CO$_2$/SF/yr]	[tonnes CO$_2$/yr]	[tonnes CO$_2$/SF/yr]	[tonnes CO$_2$/yr]
Community Center	Miscellaneous	15,000	Electricity	kWhr	2.41E-03	36	2.33E-03	35
			Gas	kBTU	1.04E-03	16	8.86E-04	13
Neighborhood Commercial	All Commercial	105,000	Electricity	kWhr	2.78E-03	292	2.68E-03	281
			Gas	kBTU	1.07E-03	112	9.33E-04	98
Retail	Retail	2,500	Electricity	kWhr	3.49E-03	9	3.30E-03	8
			Gas	kBTU	6.53E-04	2	5.58E-04	1
School	School	64,800	Electricity	kWhr	1.68E-03	109	1.68E-03	109
			Gas	kBTU	5.28E-04	34	5.28E-04	34
Small Office	Small Office	2,500	Electricity	kWhr	2.83E-03	7	2.67E-03	7
			Gas	kBTU	1.11E-03	3	9.51E-04	2
Total						**619**		**589**

Notes:

1. Total CO$_2$ emissions per SF are calculated by multiplying the total energy use (sum of T24 Energy Use 2008 and Non-Title 24 Energy Use, calculated in the previous table) by the CO$_2$ emission factors (0.574 lb CO$_2$/kWh and 0.117 lb CO$_2$/kBTU).

2. Total CO$_2$ emissions per SF emissions are calculated by multiplying the Total CO$_2$ Emissions per SF and the total square footage of the buildings.

3. Lewis Planned Communities has committed to exceeding the 2008 Title 24 building code by 15% for building envelope uses for all building types except the school.

Abbreviations:
CEC - California Energy Commission
CEUS - California Commerical End-Use Survey
CO$_2$ - carbon dioxide
GHG - greenhouse gas
kBTU - kilo (1,000) British thermal units
kWhr- kilowatt hour
PG&E - Pacific Gas and Electric
SF - square feet
T24 - Title 24
tonnes - metric tonnes
yr - year

Sources:

California Energy Commission. 2006. California Commercial End-Use Survey. Prepared by Itron Inc. Available at: http://www.energy.ca.gov/ceus/

California Energy Commission. 2003. Impact Analysis: 2005 Update to the California Energy Efficiency Standards for Residential and Nonresidential Buildings. Available at: http://www.energy.ca.gov/title24/2005standards/archive/rulemaking/documents/2003

California Energy Commission. 2007. Impact Analysis: 2008 Update to the California Energy Efficiency Standards for Residential and Nonresidential Buildings. Available at: http://www.energy.ca.gov/title24/2008standards/rulemaking/documents/2007-11-07_I

E N V I R O N

Table 2.9-1
Unmitigated Trip Generation Rates Based on URBEMIS
Lewis Property at Village 7
Lincoln, California

Residential Housing Type	Number of Units[1]	URBEMIS Unadjusted Trip Rate[2]	Unadjusted Trips per Day
Single Family House	1,698	9.57	16,250
Apartment	570	6.90	3,933
Total Trips			**20,183**

Notes:
1. Number of units and housing type for each phase are based on the Village 7 Specific Plan Draft Environmental Impact Report (PBS&J 2009).
2. Trip rates are calculated from the number of single family and apartment homes and URBEMIS trip rate defaults for each dwelling type.

Abbreviations:
URBEMIS - Urban Emissions Model

Sources:
PBS&J Consulting. 2009. *Draft Environmental Impact Report SCH No. 2005062001: Village 7 Specific Plan Project.* June.

E N V I R O N

Table 2.9-2
Unmitigated Greenhouse Gas Emissions from Vehicles
Lewis Property at Village 7
Lincoln, California

Trip Type[1]	Daily One-Way Trips[2]		Trip Distance[4] (miles)	Daily Adjusted VMT[5] (miles)	Annual Adjusted VMT (miles)	Emission Factor Running[6] (g/mile)	Emission Factor Starts[7] (g/start)	Annual CO_2 Emissions Running (tonne)	Annual CO_2 Emissions Starts (tonne)	Total Annual CO_2 Emissions (tonne)	Total Annual CO_2e Emissions[8] (tonne)
	Unadjusted	Weekend/Weekday Adjustment[3]									
Home-Based Work	6,640	6,261	10.8	59,195	21,606,225			8,019	240	8,258	8,693
Home-Based Shop	3,633	3,425	7.3	21,896	7,992,170	371	105	2,966	131	3,097	3,260
Home-Based Other	9,910	9,344	7.5	61,364	22,397,680			8,312	358	8,670	9,126
Total	**20,183**	**19,030**		**142,455**	**51,996,075**			**19,297**	**729**	**20,026**	**21,080**

Pavley standard emissions reduction percentage[9]	**20%**
Total Annual CO_2e emissions incorporating Pavley reduction	**16,864**

Notes:

1. The trip type distribution is based on URBEMIS:

Trip Type	Trip Type Distribution
Home-Based Work	33%
Home-Based Shop	18%
Home-Based Other	49%

2. The daily trips are based on trip rates calculated from the number of single family and apartment homes and URBEMIS trip rate defaults for each dwelling type.

3. Daily trips were adjusted to account for differences between the weekend and the weekday traffic based on a report by Sonoma Technologies. The weekend traffic was assumed to be 80% of weekly capacity.

4. Trip distances were provided by URBEMIS.

5. Daily VMT was adjusted to account for non-home based trips using the following assumptions:

	Percentage of Trips	Trip Length
Home based (primary) trips	85%	Trip Distance
Diverted	10%	25% of Trip Distance
Pass-by	5%	0.1 miles

6. Emission factors for vehicles based on EMFAC files for 2020, based on weighted average emission factors for LDA, LDT1, LDT2, and motorcycle for Placer County at 30 mph (URBEMIS default).

7. Starting emission factors are based on the weighted average distribution of time between trip starts based on URBEMIS defaults.

8. CO_2e=CO_2/0.95: The United States Environmental Protection Agency (USEPA) recommends assuming that CH_4, N_2O, and HFCs are 5% of emissions on a CO_2e basis.

9. Estimated 2020 emissions reduction resulting from California fuel efficiency regulation adopted by the California Air Resources Board (CARB) in their final form on August 4, 2005 pursuant to AB1493 (Pavley) signed into law in 2002. The percentage reduction was calculated by dividing 100.5 tons/day of reduction by 496.2 tons/day of baseline emissions, presented in Table 11 of the CARB report (2008).

Abbreviations:

CARB - California Air Resources Board
CH_4 - Methane
CO_2 - Carbon Dioxide
CO_2e - Carbon Dioxide Equivalent
g - grams
HFC - Hydro fluorocarbon
LDA - Light duty automobiles
LDT1 - Light duty trucks (weight class is 0-3,750 lbs)
LDT2 - Light duty trucks (weight class is 3,751-5,750 lbs)
mph - miles per hour
N_2O - Nitrous oxide
URBEMIS - Urban Emissions Model
USEPA - United States Environmental Protection Agency
VMT - Vehicle Miles Traveled

Sources:

PBS&J Consulting. 2009. *Draft Environmental Impact Report SCH No. 2005062001: Village 7 Specific Plan Project.* June.

Sonoma Technologies, Inc. 2004. *Collection and Analysis of Weekend/Weekday Emissions Activity Data in the South Coast Air Basin.* May.

California Air Resources Board. 2008. *Comparison of Greenhouse Gas Reductions for the United States and Canada under U.S. CAFÉ Standards and California Air Resources Board Greenhouse Gas Regulations.* February 25. Available at: http://www.climatechange.ca.gov/publications/arb/ARB-1000-2008-012/ARB-1000-2008-012.PDF

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Table 2.9-3
Mitigated Greenhouse Gas Emissions from Vehicles
Lewis Property at Village 7
Lincoln, California

Traffic Mitigation Measure[1]	Unmitigated # Trips	Mitigated # Trips[7]	% Reduction in # Trips	Unmitigated GHG Emissions	Mitigated GHG Emissions[8]	% Reduction in GHG Emissions
	(daily one-way trips)			(tonnes CO_2e/year)		
Local Serving Retail[2]		18,623	2.1%		16,504	2.1%
Bicycle Network[3]		18,409	3.3%		16,314	3.3%
Pedestrian Network[4]	19,030	18,409	3.3%	16,864	16,314	3.3%
Connectivity[5]		18,816	1.1%		16,674	1.1%
Housing Density[6]		15,457	18.8%		13,698	18.8%
ALL MITIGATION MEASURES	**19,030**	**13,597**	**28.5%**	**16,864**	**12,050**	**28.5%**

Notes:

1. Traffic mitigation measures were specified by Lewis Planned Communities.

2. Retail land uses are found within 1/2 mile radius of the center of Lewis Property.

3. 100% of the arterials/connectors in Lewis Property will have bike lanes.

4. 100% of the streets in Lewis Property will have sidewalks on both sides.

5. ENVIRON calculated 474 intersections per square mile within the Lewis Property based on a methodology described in the URBEMIS User Guide. Intersection and project area data were provided by Lewis Planned Communities.

6. ENVIRON calculated residential acreage (156.2 total acres for all single-family dwelling units and 24.9 total acres for all apartments) based on the distribution of lot sizes provided by Lewis Planned Communities.

7. Mitigated daily number of trips are based on trip rates calculated in URBEMIS for each of the mitigation measures.

8. Mitigated GHG emissions are calculated from the daily number of trips using ENVIRON methodology previously described in the climate change technical report.

Abbreviations:

CO_2e - Carbon Dioxide Equivalent

URBEMIS - Urban Emissions model

CBECS - Commercial Buildings Energy Consumption Survey

Sources:

Energy Information Administration. 2003 Commercial Buildings Energy Consumption Survey: Building Characteristics Table B1. June 2006. Available at: http://www.eia.doe.gov/emeu/cbecs/cbecs2003/detailed_tables_2003/2003set1/2003pdf/b1.pdf

South Coast Air Quality Management District. 2009. *Software User's Guide: URBEMIS2007 for Windows.* Prepared by Jones & Stokes Associates. November. Available at: http://www.aqmd.gov/CEQA/urbemis.html

E N V I R O N

Table 2.10-1
Unmitigated Greenhouse Gas Emissions for Lewis Property Municipal Sources
Lewis Property at Village 7
Lincoln, California

Source[1]	Energy Requirements	Units	Emission Factor	Units	Source Quantity	Units	Total CO₂e Emissions [Tonne CO₂e per year]
Lighting							
Public Lighting[2]	149	kW-hr/capita/yr	0.039	tonne CO₂e/capita/year	4,959	residents (capita)	192
						Public Lighting Total:	**192**
Municipal Vehicles							
Municipal Vehicles[3]	--	--	0.05	tonne CO₂e/capita/year	4,959	residents (capita)	248
						Municipal Vehicles Total:	**248**
Water and Wastewater[10]							
Water Supply and Conveyance[4,5] - groundwater	2,577	kW-hr/acre-foot	0.67	tonne CO₂e/acre-foot	201	acre-feet/yr	135
Water Supply and Conveyance[4,5] - surface water	39	kW-hr/acre-foot	0.01	tonne CO₂e/acre-foot	1,337	acre-feet/yr	14
Water Treatment (Potable)[6]	36	kW-hr/acre-foot	0.01	tonne CO₂e/acre-foot	1,538	acre-feet/yr	14
Water Distribution (Potable)[7]	414	kW-hr/acre-foot	0.11	tonne CO₂e/acre-foot	1,538	acre-feet/yr	166
Wastewater Treatment (Indirect Emissions)[8]	623	kW-hr/acre-foot	0.16	tonne CO₂e/acre-foot	802	acre-feet/yr	130
Wastewater Treament Plant (Direct Emissions)[9]	--	--	0.084	tonne CO2e/capita/year	4,959	residents (capita)	418
						Water and Wastewater Total:	**877**
						Municipal Sources Total:	**1,317**

Notes:

1. Public Lighting includes streetlights, traffic signals, area lighting, and lighting municipal buildings. Emissions from the Water and Wastewater category are primarily due to the energy required for supply, treatment, and distribution. GHG emissions attributed to electricity use are calculated using the PG&E carbon-intensity factor that has been adjusted to account for the 20% RPS in 2010.

2. Emission factor for public lighting is based on a study of energy usage and GHG emissions from Duluth, MN (Skoog, 2001) and the electricity generation emission factor from PG&E.

3. Emission factors for municipal vehicles are based on the most conservative number from studies of GHG emissions for four cities of different sizes: Medford, MA; Duluth, MN; Northampton, MA; and Santa Rosa, CA. Population data provided by the US Census (2000).

4. The unmitigated scenario assumes that the total water demand is supplied from groundwater and surface water. The distribution of groundwater and surface water supplies is based on information in Table 3-4 of the Village 7 Water Supply Assessment (Appendix H of DEIR).

5. Emission factor for groundwater supply and conveyance is based on the electricity generation emission factor from PG&E and information provided in the 2006 Navigant Consulting refinement of a 2005 CEC study. The study estimates a groundwater supply energy intensity factor of 4.45 kWh/MG/foot of depth from the groundwater basin. As stated in the Village 7 Water Supply Assessment (Appendix H of DEIR), groundwater for Lewis Lincoln will be pumped from the North American Subbasin; ENVIRON conservatively assumed a well depth of 1,750 feet based on information provided by the California Department of Water Resources. Emission factor for surface water supply and conveyance is based on information provided in the 2005 CEC report and the electricity generation emission factor from PG&E.

6. Emission factor for water treatment is based on information provided in the 2006 Navigant Consulting refinement of a CEC study and the electricity generation emission factor from PG&E. This factor is applied to the total water demand.

7. Emission factor for water distribution is based on a 2006 Navigant Consulting refinement of a CEC study on the energy necessary to distribute 1 million gallons of treated water and the electricity generation emission factor from PG&E. This factor is applied to total water demand.

8. Emission factor for wastewater treatment is based on information provided in the 2006 Navigant Consulting refinement of a CEC study and the electricity generation emission factor from PG&E.

9. Emission factor for the wastewater treatment plant accounts for direct methane and nitrous oxide emissions from wastewater. The value used here is based on the 2005 US inventory of GHG emissions for domestic wastewater treatment plants (USEPA) divided by the 2005 US population (25 Tg CO2e/year/296,410,404 people = 0.084 tonne CO2e/capita/year).

10. Source quantities for water and wastewater are based on Table 4.9-21 and Appendix H of the Village 7 DEIR.

Abbreviations:

CEC - California Energy Commission
CO₂e - carbon dioxide equivalent
DEIR - Draft Environmental Impact Report
GHG - greenhouse gas
kW-hr - kilowatt hour
MG - million gallons
MW-hr - megawatt hour
PG&E - Pacific Gas and Electric
RPS - Renewable Portfolio Standard
USEPA - United States Environmental Protection Agency

Sources:

California Climate Action Registry (CCAR) Database. PG&E Annual Emissions Report. 2008.
California Energy Commission. 2006. *Refining Estimates of Water-Related Energy Use in California. PIER Final Project Report.* Prepared by Navigant Consulting, Inc. CEC-500-2006-118. December.
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City of Santa Rosa. *Cities for Climate Protection: Santa Rosa.* http://www.slocleanair.org/programs/pdf/Santa%20Rosa%20CA.pdf
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Skoog., C. 2001. *Greenhouse Gas Inventory and Forecast Report.* City of Duluth Facilities Management and The International Council for Local Environmental Initiatives. October. http://www.ci.duluth.mn.us/city/information/ccp/GHGEmissions.pdf

USEPA. 2007. *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2005. #430-R-07-002.* April. http://www.epa.gov/climatechange/emissions/downloads06/07CR.pdf
Wilkinson, Robert. 2000. *Methodology for Analysis of the Energy Intensity of California's Water Systems, and An Assessment of Multiple Potential Benefits through Integrated Water-Energy Efficiency Measures.*

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Table 2.10-2
Mitigated Greenhouse Gas Emissions for Lewis Property Municipal Sources
Lewis Property at Village 7
Lincoln, California

Source[1]	Energy Requirements	Units	Emission Factor	Units	Source Quantity	Units	Total CO_2e Emissions [Tonne CO_2e per year]
Lighting							
Public Lighting[2]	149	kW-hr/capita/yr	0.039	tonne CO_2e/capita/year	4,959	residents (capita)	192
						Public Lighting Total:	**192**
Municipal Vehicles							
Municipal Vehicles[3]	--	--	0.05	tonne CO_2e/capita/year	4,959	residents (capita)	248
						Municipal Vehicles Total:	**248**
Water and Wastewater[11]							
Water Supply and Conveyance[4,5] - groundwater	2,577	kW-hr/acre-foot	0.67	tonne CO_2e/acre-foot	143	acre-feet/yr	96
Water Supply and Conveyance[4,5] - surface water	39	kW-hr/acre-foot	0.01	tonne CO_2e/acre-foot	954	acre-feet/yr	10
Water Treatment (Potable)[6]	36	kW-hr/acre-foot	0.01	tonne CO_2e/acre-foot	1,097	acre-feet/yr	10
Water Distribution (Potable)[7]	414	kW-hr/acre-foot	0.11	tonne CO_2e/acre-foot	1,097	acre-feet/yr	118
Wastewater Treatment (Indirect Emissions)[8]	623	kW-hr/acre-foot	0.16	tonne CO_2e/acre-foot	802	acre-feet/yr	130
Wastewater Treament Plant (Direct Emissions)[9]	--	--	0.084	tonne CO2e/capita/year	4,959	residents (capita)	418
Recycled Water Distribution (Non-Potable)[10]	684	kW-hr/acre-foot	0.178	tonne CO_2e/acre-foot	440	acre-feet/yr	78
						Water and Wastewater Total:	**861**
						Municipal Sources Total:	**1,301**

Notes:

1. Public Lighting includes streetlights, traffic signals, area lighting, and lighting municipal buildings. Emissions from the Water and Wastewater category are primarily due to the energy required for supply, treatment, and distribution. GHG emissions attributed to electricity use are calculated using the PG&E carbon-intensity factor that has been adjusted to account for the 20% RPS in 2010.

2. Emission factor for public lighting is based on a study of energy usage and GHG emissions from Duluth, MN (Skoog, 2001) and the electricity generation emission factor from PG&E.

3. Emission factors for municipal vehicles are based on the most conservative number from studies of GHG emissions for four cities of different sizes: Medford, MA; Duluth, MN; Northampton, MA; and Santa Rosa, CA. Population data provided by the US Census (2000).

4. The mitigated scenario assumes that only the potable water demand is supplied from groundwater and surface water. Non-potable water demand is supplied by recycled water. The distribution of groundwater and surface water supplies is based on information in Table 3-4 of the Village 7 Water Supply Assessment (Appendix H of DEIR).

5. Emission factor for groundwater supply and conveyance is based on the electricity generation emission factof from PG&E and information provided in the 2006 Navigant Consulting refinement of a 2005 CEC study. The study estimates a groundwater supply energy intensity factor of 4.45 kWh/MG/foot of depth from the groundwater basin. As stated in the Village 7 Water Supply Assessment (Appendix H of DEIR), groundwater for Lewis Lincoln will be pumped from the North American Subbasin; ENVIRON conservatively assumed a well depth of 1,750 feet based on information provided by the California Department of Water Resources. Emission factor for surface water supply and conveyance is based on information provided in the 2005 CEC report and the electricity generation emis factor from PG&E.

6. Emission factor for water treatment is based on information provided in the 2006 Navigant Consulting refinement of the 2005 CEC study and the electricity generation emission factor from PG&E. This factor is applied to the potable water demand.

7. Emission factor for water distribution is based on a 2006 Navigant Consulting refinement of the 2005 CEC study on the energy necessary to distribute 1 million gallons of treated water and the electricity generation emission factor from PG&E. This factor is applied to the potable water demand.

8. Emission factor for wastewater treatment is based on information provided in the 2006 Navigant Consulting refinement of the 2005 CEC study and the electricity generation emission factor from PG&E.

9. Emission factor for the wastewater treatment plant accounts for direct methane and nitrous oxide emissions from wastewater. The value used here is based on the 2005 US inventory of GHG emissions for domestic wastewater treatment plants (USEPA) divided by the 2005 US population (25 Tg CO2e/year/296,410,404 people = 0.084 tonne CO2e/capita/year).

10. The mitigated scenario assumes that the non-potable water demand is supplied by recycled water. Emission factor for recycled water distribution is based on information provided in the 2006 Navigant Consulting refinement of the 2005 CEC study and the electricity generation emission factor from PG&E.

11. Source quantities for water and wastewater are based on Table 4.9-21 and Appendix H of the Village 7 DEIR.

Abbreviations:

CEC - California Energy Commission
CO_2e - carbon dioxide equivalent
DEIR - Draft Environmental Impact Report
GHG - greenhouse gas
kW-hr - kilowatt hour
MG - million gallons
MW-hr - megawatt hour
PG&E - Pacific Gas and Electric
RPS - Renewable Portfolio Standard
USEPA - United States Environmental Protection Agency

Sources:

California Climate Action Registry (CCAR) Database. PG&E Annual Emissions Report. 2008.
California Energy Commission. 2006. *Refining Estimates of Water-Related Energy Use in California.* PIER Final Project Report. Prepared by Navigant Consulting, Inc. CEC-500-2006-118. December.
California Energy Commission. 2005. *California's Water-Energy Relationship. Final Staff Report.* CEC-700-2005-011-SF. November.
California Department of Water Resources. 2006. *California's Groundwater Bulletin 118: Sacramento Valley Groundwater Basin - North American Subbasin.* January. Available at: http://www.water.ca.gov/pubs/groundwater/bulletin_118/basindescriptions/5-21.64.pdf
City of Medford. 2001. *Climate Action Plan.* October. http://www.medford.org/Pages/MedfordMA_Energy/FINAL_LAP.pdf
City of Northampton. 2006. *Greenhouse Gas Emissions Inventory. Cities for Climate Protection Campaign.* June. http://www.northamptonma.gov/uploads/listWidget/3208/NorthamptonInventoryClimateProtection.pdf
City of Santa Rosa. *Cities for Climate Protection: Santa Rosa.* http://www.slocleanair.org/programs/pdf/Santa%20Rosa%20CA.pdf
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Skoog, C. 2001. *Greenhouse Gas Inventory and Forecast Report. City of Duluth Facilities Management and The International Council for Local Environmental Initiatives.* October. http://www.ci.duluth.mn.us/city/information/ccp/GHGEmissions.pdf
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Wilkinson, Robert. 2000. *Methodology for Analysis of the Energy Intensity of California's Water Systems, and An Assessment of Multiple Potential Benefits through Integrated Water-Energy Efficiency Measures.*

Table 2.11-1
GHG Emissions from Area Sources: Landscape Equipment Fuel Combustion
Lewis Property at Village 7
Lincoln, California

Land Use Type	Quantity[1]	CO_2 emission factor[2]	Equipment Use Period[3]	Annual CO_2 emission
	(units)	(lbs/unit/day)	(days/year)	(tonne/year)
Single-family residential (DU)[4]	1,698	0.07	180	10
			Landscape Equipment Fuel Combustion Total:	10

Notes:

1. Land use information provided by Lewis Planned Communities.

2. Emission factors provided by URBEMIS, based on estimates using CARB's OFFROAD2007 model.

3. Use period is assumed to be equal to the summer period of 180 days (URBEMIS default for Placer County).

4. Based on estimates using the URBEMIS model, emissions from landscaping are mainly attributed to single-family residential land uses; the total acreage of non-residential land uses did not significantly impact the total landscaping CO_2 emissions. Thus, only landscaping emissions associated with single-family residences are calculated here.

Abbreviations:

CO_2 - carbon dioxide

DU - dwelling unit

URBEMIS - Urban Emissions Model

Sources:

PBS&J Consulting. 2009. *Draft Environmental Impact Report SCH No. 2005062001: Village 7 Specific Plan Project.* June.

South Coast Air Quality Management District. 2007. *Software User's Guide: URBEMIS2007 for Windows.* Prepared by Jones & Stokes Associates. November. Available at: http://www.aqmd.gov/CEQA/urbemis.html

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Table 2.11-2
GHG Emissions from Area Sources: Hearth Fuel Combustion Mitigation
Lewis Property at Village 7
Lincoln, California

Scenario	Natural Gas Fireplace[1] Dwelling Unit Type	Quantity[2]	Average Energy Use[3] (Btu/hour/unit)	Usage Rate[4] (hours/year)	Energy Use per Year (Mbtu/year)	CO_2 Emission Factor[5] (lb CO_2/Mbtu)	Annual CO_2 Emission (tonne/year)
Unmitigated	Single-family	1,698	30,000	270	13,754	117	729
	Multi-family	570	20,000	270	3,078	117	163
	TOTAL						892
Mitigated	Single-family	1,698	30,000	270	13,754	117	729
	Multi-family	0	--	--	--	--	0
	TOTAL						729
						% Reduction:	18%

Notes:
1. There will be no wood-burning stoves or fireplaces at the Lewis Property.
2. In the unmitigated scenario, all single-family and multi-family residences were assumed to each have a natural gas fireplace. In the mitigated scenario, multi-family residences will not have natural gas fireplaces, as indicated by Lewis Planned Communities.
3. Average energy use values are URBEMIS default values for Placer County.
4. Usage rate of 270 hours/year is the URBEMIS default value for Placer County
5. Emission factor for natural gas obtained from California Climate Action Registry Reporting Protocol, Table C.7.

Abbreviations:

Btu - British thermal units

CO_2 - carbon dioxide

Mbtu - million British thermal units

URBEMIS - Urban Emissions Model

Sources:

PBS&J Consulting. 2009. *Draft Environmental Impact Report SCH No. 2005062001: Village 7 Specific Plan Project.* June.

California Climate Action Registry. 2009. General Reporting Protocol, Version 3.1. January. Available at: http://www.climateregistry.org/resources/docs/protocols/grp/GRP_3.1_January2009.pdf

South Coast Air Quality Management District. 2007. *Software User's Guide: URBEMIS2007 for Windows.* Prepared by Jones & Stokes Associates. November. Available at: http://www.aqmd.gov/CEQA/urbemis.html

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Table 3.2-1
Summary of Greenhouse Gas Emissions for Lewis Property
Lewis Property at Village 7
Lincoln, California

Source	Unmitigated			Mitigated			Percent Improvement from Unmitigated to Mitigated
	GHG Emissions	Unit	Percent of Annual CO_2e Emissions[7]	GHG Emissions	Unit	Percent of Annual CO_2e Emissions[8]	
Vegetation[1]	2,716	tonnes CO_2e total	NA	-5,395	tonnes CO_2e total	NA	299%
Construction[2]	18,708		NA	17,857		NA	5%
Total (one time emissions)	**21,424**		NA	**12,462**		NA	**42%**
Residential[3]	7,722	tonnes CO_2e / year	28%	6,947	tonnes CO_2e / year	32%	10%
Non-Residential[4]	619		2%	589		3%	5%
Mobile[5]	16,864		61%	12,050		56%	29%
Municipal[6]	1,317		5%	1,301		6%	1%
Area[7]	902		3%	739		3%	18%
Total (annual emissions)	**27,423**		NA	**21,625**		NA	21%
Annualized Total[9]	**27,959**	tonnes CO_2e / year	NA	**21,937**	tonnes CO_2e / year	NA	**22%**

Notes:

1. Vegetation emissions are one-time emissions resulting from the removal of existing vegetation and planting of new vegetation in the Lewis Property at Village 7. The emissions are estimated assuming that all carbon currently sequestered in the biomass of the vegetation is released to the atmosphere upon removal of the vegetation. Data for emissions calculations are primarily from the Intergovernmental Panel on Climate Change (IPCC) Guildelines for National Greenhouse Gas Inventories.

2. Construction emissions are one-time emissions reported in total metric tonnes during the construction period. Emissions are calculated using URBEMIS, but the mitigated emissions have been adjusted to account for the incorporation of B20 biodiesel in on-road and off-road construction equipment. Sources of emissions include construction equipment (building-related emissions) and vehicles associated with worker commuting and vendor trips (non-building emissions).

3. Residential emissions for dwelling units include emissions associated with electricity and natural gas use. Emission estimates were developed from report California Residential Appliance Saturation Survey (RASS). As specified in the DEIR (PBS&J 2009) and based on discussions with Lewis, a total of 2,268 dwelling units are considered.

4. Non-Residential emissions account for electricity and natural gas use. Emissions estimates for non-residential buildings were developed from the 2006 Commercial End Use Survey (CEUS), published by the California Energy Commission.

5. Mobile source emissions were calculated using EMFAC emission factors with trip rates and VMT prepared by PBS&J. Mobile source emissions account for residential trips. CQ emissions were scaled to reflect CO2e emissions based on data from the US Environmental Protection Agency (USEPA).

6. Municipal emissions account for emissions due to energy production associated with water supply, public/street lighting, and municipal vehicles. Energy use estimates for water supply are based primarily on CEC's 2005 "California's Water-Energy Relationship" report. Emissions from street lighting and municipal vehicles were based upon studies of other cities.

7. Area source emissions include emissions associated with natural gas fireplaces and landscape equipment.

8. Percentages only apply to annual CO_2e emissions; annual and one-time CO_2e emissions cannot be directly compared.

9. One-time emissions (vegetation and construction) are "annualized" in this Total row. This is done by dividing by an annualization factor, 40 years, effectively converting the one-time emission into an annual emission rate. One-time emissions are not annualized in their respective rows above.

Abbreviations:
CH_4 - methane
CO_2 - carbon dioxide
CO_2e - carbon dioxide equivalent
EIA - Energy Information Administration
EIR - Environmental Impact Report
EMFAC - Emission Factors Database
GHG - Greenhouse Gas
N_2O - nitrous oxide
RASS - Residential Appliance Saturation Survey
TBD - to be determined
VMT - Vehicle Miles Traveled

Sources:
California Energy Commission. 2006. California Commercial End-Use Survey. Prepared by Itron Inc. Available at: Available at: http://www.energy.ca.gov/ceus/
PBS&J Consulting. 2009. *Draft Environmental Impact Report SCH No. 2005062001: Village 7 Specific Plan Project.* June.

ENVIRON

**Appendix A:
EMFAC and URBEMIS File Output**

EMFAC Output

```
Title    : Lewis Lincoln
Version  : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/09/18 18:07:23
Scen Year: 2020 -- All model years in the range 1976 to 2020 selected
Season   : Annual
Area     : Placer
****************************************************************************
***********
Year:,2020,, -- Model Years,,1976, to ,2020, Inclusive --,,,Annual
     Emfac2007 Emission Factors: V2.3 Nov 1 2006

County Average,,,,,          Placer,,,,,,County Average

,,,,Table  1:  Running Exhaust Emissions (grams/mile)

Pollutant Name: Total Organic Gases,,,,Temperature: 60F,,Relative Humidity:
54%

Speed,LDA,LDA,LDA,LDA,LDT1,LDT1,LDT1,LDT1,LDT2,LDT2,LDT2,LDT2,MDV,MDV,MDV,MDV,
LHD1,LHD1,LHD1,LHD1,LHD2,LHD2,LHD2,LHD2,MHD,MHD,MHD,MHD,HHD,HHD,HHD,HHD,OBUS,O
BUS,OBUS,OBUS,UBUS,UBUS,UBUS,UBUS,MCY,MCY,MCY,MCY,SBUS,SBUS,SBUS,SBUS,MH,MH,MH
,MH,ALL,ALL,ALL,ALL,

 MPH,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,
 CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,A
 LL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,C
 AT,DSL,ALL,

   30,   2.977,   0.022,   0.116,   0.022,   2.462,   0.036,   0.080,   0.037,
   2.616,   0.039,   0.098,   0.039,   0.000,   0.000,   0.000,   0.000,
   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
   3.170,   1.630,   0.000,   2.185,   0.000,   0.000,   0.000,   0.000,
   0.000,   0.000,   0.000,   0.000,   3.164,   0.046,   0.083,   0.065,


Pollutant Name: Carbon Monoxide,,,,Temperature: 60F,,Relative Humidity: 54%

Speed,LDA,LDA,LDA,LDA,LDT1,LDT1,LDT1,LDT1,LDT2,LDT2,LDT2,LDT2,MDV,MDV,MDV,MDV,
LHD1,LHD1,LHD1,LHD1,LHD2,LHD2,LHD2,LHD2,MHD,MHD,MHD,MHD,HHD,HHD,HHD,HHD,OBUS,O
BUS,OBUS,OBUS,UBUS,UBUS,UBUS,UBUS,MCY,MCY,MCY,MCY,SBUS,SBUS,SBUS,SBUS,MH,MH,MH
,MH,ALL,ALL,ALL,ALL,

 MPH,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,
 CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,A
 LL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,C
 AT,DSL,ALL,

   30,  26.464,   0.811,   0.584,   0.811,  41.913,   1.270,   0.519,   1.261,
   43.529,   1.376,   0.557,   1.377,   0.000,   0.000,   0.000,   0.000,
   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
   28.088,   8.924,   0.000,  15.838,   0.000,   0.000,   0.000,   0.000,
   0.000,   0.000,   0.000,   0.000,  28.199,   1.139,   0.524,   1.297,


Pollutant Name: Oxides of Nitrogen,,,,Temperature: 60F,,Relative Humidity: 54%

Speed,LDA,LDA,LDA,LDA,LDT1,LDT1,LDT1,LDT1,LDT2,LDT2,LDT2,LDT2,MDV,MDV,MDV,MDV,
LHD1,LHD1,LHD1,LHD1,LHD2,LHD2,LHD2,LHD2,MHD,MHD,MHD,MHD,HHD,HHD,HHD,HHD,OBUS,O
BUS,OBUS,OBUS,UBUS,UBUS,UBUS,UBUS,MCY,MCY,MCY,MCY,SBUS,SBUS,SBUS,SBUS,MH,MH,MH
,MH,ALL,ALL,ALL,ALL,

 MPH,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,
 CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,A
 LL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,C
```

```
LL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,C
AT,DSL,ALL,

  30,   2.626,   0.065,   1.184,   0.066,   2.393,   0.109,   1.201,   0.134,
      2.681,   0.144,   1.187,   0.145,   0.000,   0.000,   0.000,   0.000,
      0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
      0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
      0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
      1.357,   1.011,   0.000,   1.135,   0.000,   0.000,   0.000,   0.000,
      0.000,   0.000,   0.000,   0.000,   1.369,   0.105,   1.199,   0.118,
```

Pollutant Name: Carbon Dioxide,,,,Temperature: 60F,,Relative Humidity: 54%

```
Speed,LDA,LDA,LDA,LDA,LDT1,LDT1,LDT1,LDT1,LDT2,LDT2,LDT2,LDT2,MDV,MDV,MDV,MDV,
LHD1,LHD1,LHD1,LHD1,LHD2,LHD2,LHD2,LHD2,MHD,MHD,MHD,MHD,HHD,HHD,HHD,HHD,OBUS,O
BUS,OBUS,OBUS,UBUS,UBUS,UBUS,UBUS,MCY,MCY,MCY,MCY,SBUS,SBUS,SBUS,SBUS,MH,MH,MH
,MH,ALL,ALL,ALL,ALL,

 MPH,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,
 CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,A
 LL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,C
 AT,DSL,ALL,

  30, 469.639, 332.876, 350.231, 332.890, 483.183, 419.169, 346.172, 417.603,
     483.394, 425.324, 347.222, 425.279,   0.000,   0.000,   0.000,   0.000,
       0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
       0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
       0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
     124.006, 153.757,   0.000, 143.024,   0.000,   0.000,   0.000,   0.000,
       0.000,   0.000,   0.000,   0.000, 127.833, 372.695, 346.463, 371.123,
```

Pollutant Name: Sulfur Dioxide,,,,Temperature: 60F,,Relative Humidity: 54%

```
Speed,LDA,LDA,LDA,LDA,LDT1,LDT1,LDT1,LDT1,LDT2,LDT2,LDT2,LDT2,MDV,MDV,MDV,MDV,
LHD1,LHD1,LHD1,LHD1,LHD2,LHD2,LHD2,LHD2,MHD,MHD,MHD,MHD,HHD,HHD,HHD,HHD,OBUS,O
BUS,OBUS,OBUS,UBUS,UBUS,UBUS,UBUS,MCY,MCY,MCY,MCY,SBUS,SBUS,SBUS,SBUS,MH,MH,MH
,MH,ALL,ALL,ALL,ALL,

 MPH,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,
 CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,A
 LL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,C
 AT,DSL,ALL,

  30,   0.005,   0.003,   0.003,   0.003,   0.005,   0.004,   0.003,   0.004,
      0.005,   0.004,   0.003,   0.004,   0.000,   0.000,   0.000,   0.000,
      0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
      0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
      0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
      0.002,   0.002,   0.000,   0.002,   0.000,   0.000,   0.000,   0.000,
      0.000,   0.000,   0.000,   0.000,   0.002,   0.004,   0.003,   0.004,
```

Pollutant Name: PM10,,,,Temperature: 60F,,Relative Humidity: 54%

```
Speed,LDA,LDA,LDA,LDA,LDT1,LDT1,LDT1,LDT1,LDT2,LDT2,LDT2,LDT2,MDV,MDV,MDV,MDV,
LHD1,LHD1,LHD1,LHD1,LHD2,LHD2,LHD2,LHD2,MHD,MHD,MHD,MHD,HHD,HHD,HHD,HHD,OBUS,O
BUS,OBUS,OBUS,UBUS,UBUS,UBUS,UBUS,MCY,MCY,MCY,MCY,SBUS,SBUS,SBUS,SBUS,MH,MH,MH
,MH,ALL,ALL,ALL,ALL,

 MPH,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,
 CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,A
 LL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,C
 AT,DSL,ALL,

  30,   0.030,   0.010,   0.071,   0.010,   0.022,   0.011,   0.045,   0.012,
```

```
  0.034,    0.024,    0.056,    0.024,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.039,    0.002,    0.000,    0.015,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.039,    0.014,    0.047,    0.014,
```

Pollutant Name: PM10 - Tire Wear,,,,Temperature: 60F,,Relative Humidity: 54%

Speed,LDA,LDA,LDA,LDA,LDT1,LDT1,LDT1,LDT1,LDT2,LDT2,LDT2,LDT2,MDV,MDV,MDV,MDV,
LHD1,LHD1,LHD1,LHD1,LHD2,LHD2,LHD2,LHD2,MHD,MHD,MHD,MHD,HHD,HHD,HHD,HHD,OBUS,O
BUS,OBUS,OBUS,UBUS,UBUS,UBUS,UBUS,MCY,MCY,MCY,MCY,SBUS,SBUS,SBUS,SBUS,MH,MH,MH
,MH,ALL,ALL,ALL,ALL,

 MPH,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,
 CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,A
 LL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,C
 AT,DSL,ALL,

```
  30,    0.008,    0.008,    0.008,    0.008,    0.008,    0.008,    0.008,    0.008,
  0.008,    0.008,    0.008,    0.008,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.004,    0.004,    0.000,    0.004,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.004,    0.008,    0.008,    0.008,
```

Pollutant Name: PM10 - Brake Wear,,,,Temperature: 60F,,Relative Humidity: 54%

Speed,LDA,LDA,LDA,LDA,LDT1,LDT1,LDT1,LDT1,LDT2,LDT2,LDT2,LDT2,MDV,MDV,MDV,MDV,
LHD1,LHD1,LHD1,LHD1,LHD2,LHD2,LHD2,LHD2,MHD,MHD,MHD,MHD,HHD,HHD,HHD,HHD,OBUS,O
BUS,OBUS,OBUS,UBUS,UBUS,UBUS,UBUS,MCY,MCY,MCY,MCY,SBUS,SBUS,SBUS,SBUS,MH,MH,MH
,MH,ALL,ALL,ALL,ALL,

 MPH,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,
 CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,A
 LL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,C
 AT,DSL,ALL,

```
  30,    0.013,    0.013,    0.013,    0.013,    0.013,    0.013,    0.013,    0.013,
  0.013,    0.013,    0.013,    0.013,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.006,    0.006,    0.000,    0.006,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.006,    0.012,    0.013,    0.012,
```

Pollutant Name: Gasoline - mi/gal,,,,Temperature: 60F,,Relative Humidity: 54%

Speed,LDA,LDA,LDA,LDA,LDT1,LDT1,LDT1,LDT1,LDT2,LDT2,LDT2,LDT2,MDV,MDV,MDV,MDV,
LHD1,LHD1,LHD1,LHD1,LHD2,LHD2,LHD2,LHD2,MHD,MHD,MHD,MHD,HHD,HHD,HHD,HHD,OBUS,O
BUS,OBUS,OBUS,UBUS,UBUS,UBUS,UBUS,MCY,MCY,MCY,MCY,SBUS,SBUS,SBUS,SBUS,MH,MH,MH
,MH,ALL,ALL,ALL,ALL,

 MPH,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,
 CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,A
 LL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,C
 AT,DSL,ALL,

```
  30,   17.037,   26.514,    0.000,   26.514,   15.927,   21.035,    0.000,   21.034,
  15.835,   20.724,    0.000,   20.723,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
```

```
   49.893,  51.331,   0.000,  50.812,   0.000,   0.000,   0.000,   0.000,
    0.000,   0.000,   0.000,   0.000,  49.531,  24.150,   0.000,  24.301,
```

Pollutant Name: Diesel - mi/gal,,,,Temperature: 60F,,Relative Humidity: 54%

Speed,LDA,LDA,LDA,LDA,LDT1,LDT1,LDT1,LDT1,LDT2,LDT2,LDT2,LDT2,MDV,MDV,MDV,MDV,
LHD1,LHD1,LHD1,LHD1,LHD2,LHD2,LHD2,LHD2,MHD,MHD,MHD,MHD,HHD,HHD,HHD,HHD,OBUS,O
BUS,OBUS,OBUS,UBUS,UBUS,UBUS,UBUS,MCY,MCY,MCY,MCY,SBUS,SBUS,SBUS,SBUS,MH,MH,MH
,MH,ALL,ALL,ALL,ALL,

 MPH,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,
 CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,A
 LL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,C
 AT,DSL,ALL,

```
   30,   0.000,   0.000,  28.780,  28.780,   0.000,   0.000,  29.118,  29.118,
    0.000,   0.000,  29.030,  29.030,   0.000,   0.000,   0.000,   0.000,
    0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
    0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
    0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
    0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
    0.000,   0.000,   0.000,   0.000,   0.000,   0.000,  29.094,  29.094,
```

Title   : Lewis Lincoln
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/09/18 18:07:23
Scen Year: 2020 -- All model years in the range 1976 to 2020 selected
Season   : Annual
Area   : Placer
****
****
Year:,2020,, -- Model Years,,1976, to ,2020, Inclusive --,,,Annual
      Emfac2007 Emission Factors: V2.3 Nov 1 2006

County Average,,,,,   Placer,,,,,,County Average

,,,,Table 2: Starting Emissions (grams/trip)

Pollutant Name: Total Organic Gases,,,,Temperature: 60F,,Relative Humidity:
ALL

Time,LDA,LDA,LDA,LDA,LDT1,LDT1,LDT1,LDT1,LDT2,LDT2,LDT2,LDT2,MDV,MDV,MDV,MDV,L
HD1,LHD1,LHD1,LHD1,LHD2,LHD2,LHD2,LHD2,MHD,MHD,MHD,MHD,HHD,HHD,HHD,HHD,OBUS,OB
US,OBUS,OBUS,UBUS,UBUS,UBUS,UBUS,MCY,MCY,MCY,MCY,SBUS,SBUS,SBUS,SBUS,MH,MH,MH,
MH,ALL,ALL,ALL,ALL,

 min,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,
 CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,A
 LL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,C
 AT,DSL,ALL,

```
    5,   1.888,   0.016,   0.000,   0.016,   1.519,   0.028,   0.000,   0.027,
    1.626,   0.027,   0.000,   0.027,   0.000,   0.000,   0.000,   0.000,
    0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
    0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
    0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
    2.136,   0.334,   0.000,   1.044,   0.000,   0.000,   0.000,   0.000,
    0.000,   0.000,   0.000,   0.000,   2.130,   0.025,   0.000,   0.043,
   10,   1.871,   0.031,   0.000,   0.031,   1.506,   0.054,   0.000,   0.053,
    1.612,   0.052,   0.000,   0.052,   0.000,   0.000,   0.000,   0.000,
    0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
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  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  2.117,    0.651,    0.000,    1.228,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    2.112,    0.049,    0.000,    0.066,
 20,    1.889,    0.059,    0.000,    0.059,    1.520,    0.103,    0.000,    0.101,
  1.627,    0.101,    0.000,    0.101,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  2.138,    1.233,    0.000,    1.590,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    2.132,    0.094,    0.000,    0.111,
 30,    1.974,    0.085,    0.000,    0.085,    1.589,    0.148,    0.000,    0.144,
  1.700,    0.145,    0.000,    0.145,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  2.234,    1.748,    0.000,    1.940,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    2.228,    0.135,    0.000,    0.152,
 40,    2.126,    0.109,    0.000,    0.109,    1.711,    0.189,    0.000,    0.184,
  1.831,    0.187,    0.000,    0.187,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  2.406,    2.196,    0.000,    2.278,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    2.400,    0.172,    0.000,    0.190,
 50,    2.345,    0.131,    0.000,    0.131,    1.887,    0.225,    0.000,    0.219,
  2.020,    0.224,    0.000,    0.224,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  2.653,    2.575,    0.000,    2.606,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    2.647,    0.205,    0.000,    0.225,
 60,    2.438,    0.150,    0.000,    0.150,    1.962,    0.256,    0.000,    0.249,
  2.100,    0.258,    0.000,    0.258,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  2.758,    2.887,    0.000,    2.836,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    2.752,    0.235,    0.000,    0.255,
120,    1.959,    0.214,    0.000,    0.214,    1.576,    0.328,    0.000,    0.318,
  1.687,    0.373,    0.000,    0.373,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  2.216,    3.207,    0.000,    2.817,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    2.211,    0.317,    0.000,    0.332,
180,    2.132,    0.167,    0.000,    0.167,    1.716,    0.267,    0.000,    0.259,
  1.837,    0.293,    0.000,    0.293,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  2.413,    2.722,    0.000,    2.600,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    2.407,    0.253,    0.000,    0.270,
240,    2.306,    0.177,    0.000,    0.177,    1.856,    0.282,    0.000,    0.274,
  1.986,    0.311,    0.000,    0.311,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  2.609,    2.874,    0.000,    2.770,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    2.602,    0.268,    0.000,    0.286,
300,    2.479,    0.187,    0.000,    0.187,    1.995,    0.298,    0.000,    0.290,
  2.135,    0.329,    0.000,    0.329,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  2.805,    3.021,    0.000,    2.936,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    2.798,    0.283,    0.000,    0.303,
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360,   2.653,   0.197,   0.000,   0.197,   2.135,   0.313,   0.000,   0.304,
      2.285,   0.346,   0.000,   0.346,   0.000,   0.000,   0.000,   0.000,
      0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
      0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
      0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
      3.001,   3.162,   0.000,   3.099,   0.000,   0.000,   0.000,   0.000,
      0.000,   0.000,   0.000,   0.000,   2.994,   0.297,   0.000,   0.319,
360,   2.826,   0.206,   0.000,   0.206,   2.274,   0.328,   0.000,   0.319,
      2.434,   0.364,   0.000,   0.364,   0.000,   0.000,   0.000,   0.000,
      0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
      0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
      0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
      3.198,   3.299,   0.000,   3.259,   0.000,   0.000,   0.000,   0.000,
      0.000,   0.000,   0.000,   0.000,   3.190,   0.312,   0.000,   0.335,
480,   3.000,   0.216,   0.000,   0.216,   2.414,   0.343,   0.000,   0.333,
      2.584,   0.381,   0.000,   0.381,   0.000,   0.000,   0.000,   0.000,
      0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
      0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
      0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
      3.394,   3.431,   0.000,   3.416,   0.000,   0.000,   0.000,   0.000,
      0.000,   0.000,   0.000,   0.000,   3.386,   0.326,   0.000,   0.350,
540,   3.173,   0.225,   0.000,   0.225,   2.554,   0.357,   0.000,   0.347,
      2.733,   0.398,   0.000,   0.397,   0.000,   0.000,   0.000,   0.000,
      0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
      0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
      0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
      3.590,   3.558,   0.000,   3.571,   0.000,   0.000,   0.000,   0.000,
      0.000,   0.000,   0.000,   0.000,   3.581,   0.340,   0.000,   0.365,
600,   3.347,   0.234,   0.000,   0.234,   2.693,   0.371,   0.000,   0.361,
      2.883,   0.414,   0.000,   0.414,   0.000,   0.000,   0.000,   0.000,
      0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
      0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
      0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
      3.786,   3.680,   0.000,   3.722,   0.000,   0.000,   0.000,   0.000,
      0.000,   0.000,   0.000,   0.000,   3.777,   0.353,   0.000,   0.381,
660,   3.520,   0.244,   0.000,   0.244,   2.833,   0.385,   0.000,   0.374,
      3.032,   0.431,   0.000,   0.430,   0.000,   0.000,   0.000,   0.000,
      0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
      0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
      0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
      3.983,   3.797,   0.000,   3.870,   0.000,   0.000,   0.000,   0.000,
      0.000,   0.000,   0.000,   0.000,   3.973,   0.367,   0.000,   0.395,
720,   3.694,   0.253,   0.000,   0.252,   2.973,   0.398,   0.000,   0.387,
      3.181,   0.447,   0.000,   0.446,   0.000,   0.000,   0.000,   0.000,
      0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
      0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
      0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
      4.179,   3.909,   0.000,   4.015,   0.000,   0.000,   0.000,   0.000,
      0.000,   0.000,   0.000,   0.000,   4.169,   0.380,   0.000,   0.410,
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Pollutant Name: Carbon Monoxide,,,,Temperature: 60F,,Relative Humidity: ALL

Time,LDA,LDA,LDA,LDA,LDT1,LDT1,LDT1,LDT1,LDT2,LDT2,LDT2,LDT2,MDV,MDV,MDV,MDV,L
HD1,LHD1,LHD1,LHD1,LHD2,LHD2,LHD2,LHD2,MHD,MHD,MHD,MHD,HHD,HHD,HHD,HHD,OBUS,OB
US,OBUS,OBUS,UBUS,UBUS,UBUS,UBUS,MCY,MCY,MCY,MCY,SBUS,SBUS,SBUS,SBUS,MH,MH,MH,
MH,ALL,ALL,ALL,ALL,

 min,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,
 CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,A
 LL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,C
 AT,DSL,ALL,

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  5,  11.043,   0.208,   0.000,   0.208,  17.425,   0.379,   0.000,   0.372,
      18.026,   0.363,   0.000,   0.364,   0.000,   0.000,   0.000,   0.000,
      0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
      0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
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   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   6.262,    1.921,    0.000,    3.631,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    6.362,    0.303,    0.000,    0.353,
   10,   9.779,    0.410,    0.000,    0.410,   15.431,    0.745,    0.000,    0.727,
  15.962,    0.717,    0.000,    0.717,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   5.545,    3.765,    0.000,    4.466,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    5.634,    0.597,    0.000,    0.637,
   20,   7.549,    0.797,    0.000,    0.796,   11.912,    1.442,    0.000,    1.402,
  12.322,    1.393,    0.000,    1.393,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   4.281,    7.217,    0.000,    6.060,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    4.349,    1.159,    0.000,    1.179,
   30,   5.716,    1.160,    0.000,    1.159,    9.020,    2.089,    0.000,    2.029,
   9.331,    2.029,    0.000,    2.028,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   3.241,   10.357,    0.000,    7.554,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    3.293,    1.683,    0.000,    1.687,
   40,   4.281,    1.500,    0.000,    1.499,    6.756,    2.688,    0.000,    2.609,
   6.988,    2.625,    0.000,    2.623,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   2.428,   13.185,    0.000,    8.947,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    2.467,    2.172,    0.000,    2.161,
   50,   3.244,    1.817,    0.000,    1.815,    5.119,    3.237,    0.000,    3.141,
   5.295,    3.180,    0.000,    3.177,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   1.840,   15.701,    0.000,   10.240,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    1.869,    2.624,    0.000,    2.602,
   60,   2.604,    2.110,    0.000,    2.109,    4.109,    3.738,    0.000,    3.626,
   4.251,    3.694,    0.000,    3.691,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   1.477,   17.904,    0.000,   11.433,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    1.500,    3.039,    0.000,    3.008,
  120,   8.326,    3.143,    0.000,    3.141,   13.139,    4.991,    0.000,    4.845,
  13.591,    5.455,    0.000,    5.451,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   4.722,   21.936,    0.000,   15.154,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    4.797,    4.351,    0.000,    4.329,
  180,  13.156,    2.242,    0.000,    2.241,   20.760,    3.738,    0.000,    3.631,
  21.475,    3.934,    0.000,    3.932,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   7.460,   14.690,    0.000,   11.842,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    7.580,    3.134,    0.000,    3.153,
  240,  17.474,    2.409,    0.000,    2.408,   27.574,    3.970,    0.000,    3.858,
  28.524,    4.230,    0.000,    4.228,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   9.909,   15.121,    0.000,   13.067,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,   10.068,    3.352,    0.000,    3.389,
  300,  21.280,    2.559,    0.000,    2.558,   33.580,    4.182,    0.000,    4.065,
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34.737,    4.495,    0.000,    4.493,    0.000,    0.000,    0.000,    0.000,
 0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
 0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
 0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
12.067,   15.565,    0.000,   14.187,    0.000,    0.000,    0.000,    0.000,
 0.000,    0.000,    0.000,    0.000,   12.261,    3.548,    0.000,    3.601,
 360,   24.574,    2.691,    0.000,    2.690,   38.778,    4.373,    0.000,    4.252,
40.114,    4.728,    0.000,    4.726,    0.000,    0.000,    0.000,    0.000,
 0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
 0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
 0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
13.936,   16.024,    0.000,   15.201,    0.000,    0.000,    0.000,    0.000,
 0.000,    0.000,    0.000,    0.000,   14.159,    3.722,    0.000,    3.789,
 420,   27.357,    2.805,    0.000,    2.804,   43.168,    4.544,    0.000,    4.419,
44.655,    4.929,    0.000,    4.928,    0.000,    0.000,    0.000,    0.000,
 0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
 0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
 0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
15.513,   16.496,    0.000,   16.109,    0.000,    0.000,    0.000,    0.000,
 0.000,    0.000,    0.000,    0.000,   15.762,    3.875,    0.000,    3.953,
 480,   29.627,    2.901,    0.000,    2.900,   46.751,    4.694,    0.000,    4.565,
48.362,    5.098,    0.000,    5.097,    0.000,    0.000,    0.000,    0.000,
 0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
 0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
 0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
16.801,   16.982,    0.000,   16.911,    0.000,    0.000,    0.000,    0.000,
 0.000,    0.000,    0.000,    0.000,   17.070,    4.006,    0.000,    4.094,
 540,   31.386,    2.980,    0.000,    2.979,   49.526,    4.824,    0.000,    4.692,
51.232,    5.236,    0.000,    5.235,    0.000,    0.000,    0.000,    0.000,
 0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
 0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
 0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
17.798,   17.482,    0.000,   17.606,    0.000,    0.000,    0.000,    0.000,
 0.000,    0.000,    0.000,    0.000,   18.083,    4.115,    0.000,    4.210,
 600,   32.633,    3.040,    0.000,    3.039,   51.493,    4.933,    0.000,    4.799,
53.267,    5.342,    0.000,    5.341,    0.000,    0.000,    0.000,    0.000,
 0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
 0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
 0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
18.505,   17.995,    0.000,   18.196,    0.000,    0.000,    0.000,    0.000,
 0.000,    0.000,    0.000,    0.000,   18.801,    4.203,    0.000,    4.302,
 660,   33.367,    3.083,    0.000,    3.082,   52.653,    5.022,    0.000,    4.885,
54.467,    5.416,    0.000,    5.415,    0.000,    0.000,    0.000,    0.000,
 0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
 0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
 0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
18.922,   18.522,    0.000,   18.680,    0.000,    0.000,    0.000,    0.000,
 0.000,    0.000,    0.000,    0.000,   19.225,    4.268,    0.000,    4.371,
 720,   33.590,    3.108,    0.000,    3.107,   53.004,    5.090,    0.000,    4.951,
54.831,    5.458,    0.000,    5.457,    0.000,    0.000,    0.000,    0.000,
 0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
 0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
 0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
19.048,   19.063,    0.000,   19.057,    0.000,    0.000,    0.000,    0.000,
 0.000,    0.000,    0.000,    0.000,   19.353,    4.313,    0.000,    4.416,
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Pollutant Name: Oxides of Nitrogen,,,,Temperature: 60F,,Relative Humidity: ALL

Time,LDA,LDA,LDA,LDA,LDT1,LDT1,LDT1,LDT1,LDT2,LDT2,LDT2,LDT2,MDV,MDV,MDV,MDV,L
HD1,LHD1,LHD1,LHD1,LHD2,LHD2,LHD2,LHD2,MHD,MHD,MHD,MHD,HHD,HHD,HHD,HHD,OBUS,OB
US,OBUS,OBUS,UBUS,UBUS,UBUS,UBUS,MCY,MCY,MCY,MCY,SBUS,SBUS,SBUS,SBUS,MH,MH,MH,
MH,ALL,ALL,ALL,ALL,

 min,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,
 CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,A
 LL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,C

AT,DSL,ALL,

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    5,    0.737,    0.074,    0.000,    0.074,    0.671,    0.105,    0.000,    0.102,
    0.750,    0.187,    0.000,    0.187,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
    0.294,    0.096,    0.000,    0.174,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.298,    0.111,    0.000,    0.112,
   10,    0.801,    0.081,    0.000,    0.081,    0.730,    0.118,    0.000,    0.115,
    0.815,    0.203,    0.000,    0.203,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
    0.320,    0.145,    0.000,    0.214,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.324,    0.122,    0.000,    0.123,
   20,    0.918,    0.093,    0.000,    0.093,    0.836,    0.141,    0.000,    0.137,
    0.933,    0.230,    0.000,    0.230,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
    0.366,    0.231,    0.000,    0.284,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.372,    0.141,    0.000,    0.142,
   30,    1.019,    0.103,    0.000,    0.103,    0.928,    0.161,    0.000,    0.156,
    1.036,    0.253,    0.000,    0.253,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
    0.407,    0.301,    0.000,    0.343,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.413,    0.157,    0.000,    0.159,
   40,    1.104,    0.112,    0.000,    0.112,    1.006,    0.176,    0.000,    0.171,
    1.123,    0.272,    0.000,    0.272,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
    0.441,    0.355,    0.000,    0.389,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.447,    0.170,    0.000,    0.172,
   50,    1.174,    0.118,    0.000,    0.118,    1.069,    0.188,    0.000,    0.182,
    1.194,    0.287,    0.000,    0.287,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
    0.469,    0.393,    0.000,    0.423,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.475,    0.180,    0.000,    0.182,
   60,    1.228,    0.122,    0.000,    0.122,    1.119,    0.195,    0.000,    0.190,
    1.249,    0.297,    0.000,    0.297,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
    0.490,    0.415,    0.000,    0.445,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.497,    0.187,    0.000,    0.189,
  120,    1.257,    0.131,    0.000,    0.131,    1.145,    0.208,    0.000,    0.202,
    1.279,    0.320,    0.000,    0.320,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
    0.502,    0.417,    0.000,    0.451,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.509,    0.200,    0.000,    0.202,
  180,    1.227,    0.136,    0.000,    0.136,    1.118,    0.214,    0.000,    0.208,
    1.248,    0.332,    0.000,    0.331,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
    0.490,    0.420,    0.000,    0.448,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.497,    0.207,    0.000,    0.209,
  240,    1.187,    0.135,    0.000,    0.135,    1.082,    0.213,    0.000,    0.207,
    1.208,    0.329,    0.000,    0.329,    0.000,    0.000,    0.000,    0.000,
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   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.474,    0.418,    0.000,    0.440,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.481,    0.206,    0.000,    0.207,
   300,    1.138,    0.133,    0.000,    0.133,    1.036,    0.211,    0.000,    0.205,
   1.157,    0.325,    0.000,    0.325,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.454,    0.415,    0.000,    0.430,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.461,    0.203,    0.000,    0.204,
   360,    1.079,    0.131,    0.000,    0.131,    0.983,    0.207,    0.000,    0.201,
   1.097,    0.320,    0.000,    0.320,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.431,    0.411,    0.000,    0.418,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.437,    0.200,    0.000,    0.201,
   420,    1.010,    0.129,    0.000,    0.128,    0.920,    0.203,    0.000,    0.198,
   1.027,    0.313,    0.000,    0.313,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.403,    0.406,    0.000,    0.405,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.409,    0.196,    0.000,    0.197,
   480,    0.931,    0.125,    0.000,    0.125,    0.848,    0.199,    0.000,    0.193,
   0.947,    0.305,    0.000,    0.305,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.372,    0.400,    0.000,    0.389,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.377,    0.191,    0.000,    0.192,
   540,    0.843,    0.121,    0.000,    0.121,    0.768,    0.193,    0.000,    0.187,
   0.857,    0.295,    0.000,    0.295,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.336,    0.394,    0.000,    0.371,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.341,    0.185,    0.000,    0.186,
   600,    0.745,    0.117,    0.000,    0.117,    0.678,    0.187,    0.000,    0.181,
   0.757,    0.284,    0.000,    0.284,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.297,    0.386,    0.000,    0.351,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.302,    0.179,    0.000,    0.179,
   660,    0.637,    0.112,    0.000,    0.112,    0.580,    0.179,    0.000,    0.174,
   0.648,    0.271,    0.000,    0.271,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.254,    0.378,    0.000,    0.329,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.258,    0.171,    0.000,    0.171,
   720,    0.519,    0.106,    0.000,    0.106,    0.473,    0.171,    0.000,    0.166,
   0.528,    0.257,    0.000,    0.257,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.207,    0.369,    0.000,    0.306,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.210,    0.163,    0.000,    0.162,
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Pollutant Name: Carbon Dioxide,,,,Temperature: 60F,,Relative Humidity: ALL

Time,LDA,LDA,LDA,LDA,LDT1,LDT1,LDT1,LDT1,LDT2,LDT2,LDT2,LDT2,MDV,MDV,MDV,MDV,L
HD1,LHD1,LHD1,LHD1,LHD2,LHD2,LHD2,LHD2,MHD,MHD,MHD,MHD,HHD,HHD,HHD,HHD,OBUS,OB
US,OBUS,OBUS,UBUS,UBUS,UBUS,UBUS,MCY,MCY,MCY,MCY,SBUS,SBUS,SBUS,SBUS,MH,MH,MH,

US,OBUS,OBUS,UBUS,UBUS,UBUS,UBUS,MCY,MCY,MCY,MCY,SBUS,SBUS,SBUS,SBUS,MH,MH,MH,
MH,ALL,ALL,ALL,ALL,

min,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,
CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,A
LL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,C
AT,DSL,ALL,

```
    5, 111.902,  11.872,   0.000,  11.868, 115.129,  14.552,   0.000,  14.145,
   115.179,  15.035,   0.000,  15.029,   0.000,   0.000,   0.000,   0.000,
     0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
     0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
     0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
    35.692,   1.771,   0.000,  15.134,   0.000,   0.000,   0.000,   0.000,
     0.000,   0.000,   0.000,   0.000,  36.507,  13.078,   0.000,  13.201,
   10, 121.432,  13.433,   0.000,  13.428, 124.933,  16.668,   0.000,  16.200,
   124.988,  17.060,   0.000,  17.054,   0.000,   0.000,   0.000,   0.000,
     0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
     0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
     0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
    38.731,   3.533,   0.000,  17.399,   0.000,   0.000,   0.000,   0.000,
     0.000,   0.000,   0.000,   0.000,  39.616,  14.867,   0.000,  14.991,
   20, 139.927,  17.033,   0.000,  17.027, 143.962,  21.474,   0.000,  20.867,
   144.025,  21.715,   0.000,  21.706,   0.000,   0.000,   0.000,   0.000,
     0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
     0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
     0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
    44.631,   7.026,   0.000,  21.840,   0.000,   0.000,   0.000,   0.000,
     0.000,   0.000,   0.000,   0.000,  45.650,  18.968,   0.000,  19.084,
   30, 157.671,  21.273,   0.000,  21.264, 162.217,  27.046,   0.000,  26.276,
   162.289,  27.175,   0.000,  27.162,   0.000,   0.000,   0.000,   0.000,
     0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
     0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
     0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
    50.290,  10.481,   0.000,  26.163,   0.000,   0.000,   0.000,   0.000,
     0.000,   0.000,   0.000,   0.000,  51.439,  23.766,   0.000,  23.862,
   40, 174.663,  26.153,   0.000,  26.140, 179.699,  33.384,   0.000,  32.428,
   179.778,  33.440,   0.000,  33.423,   0.000,   0.000,   0.000,   0.000,
     0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
     0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
     0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
    55.710,  13.896,   0.000,  30.368,   0.000,   0.000,   0.000,   0.000,
     0.000,   0.000,   0.000,   0.000,  56.982,  29.263,   0.000,  29.327,
   50, 190.904,  31.671,   0.000,  31.655, 196.408,  40.487,   0.000,  39.322,
   196.495,  40.511,   0.000,  40.488,   0.000,   0.000,   0.000,   0.000,
     0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
     0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
     0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
    60.890,  17.272,   0.000,  34.455,   0.000,   0.000,   0.000,   0.000,
     0.000,   0.000,   0.000,   0.000,  62.281,  35.458,   0.000,  35.477,
   60, 206.393,  37.828,   0.000,  37.808, 212.344,  48.356,   0.000,  46.959,
   212.437,  48.386,   0.000,  48.357,   0.000,   0.000,   0.000,   0.000,
     0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
     0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
     0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
    65.830,  20.608,   0.000,  38.423,   0.000,   0.000,   0.000,   0.000,
     0.000,   0.000,   0.000,   0.000,  67.334,  42.350,   0.000,  42.314,
  120, 279.289,  87.269,   0.000,  87.215, 287.343, 109.895,   0.000, 106.668,
   287.469, 111.225,   0.000, 111.144,   0.000,   0.000,   0.000,   0.000,
     0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
     0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
     0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
    89.081,  35.051,   0.000,  56.336,   0.000,   0.000,   0.000,   0.000,
     0.000,   0.000,   0.000,   0.000,  91.116,  97.135,   0.000,  96.510,
  180, 279.509,  99.169,   0.000,  99.105, 287.568, 125.090,   0.000, 121.406,
   287.695, 126.442,   0.000, 126.347,   0.000,   0.000,   0.000,   0.000,
     0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
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  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
 89.151,   41.411,    0.000,   60.218,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,   91.187,  110.452,    0.000,  109.635,
    240,  279.728,  111.024,    0.000,  110.952,  287.794,  140.182,    0.000,  136.045,
287.921,  141.591,    0.000,  141.482,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
 89.221,   47.394,    0.000,   63.872,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,   91.259,  123.703,    0.000,  122.695,
    300,  279.948,  122.836,    0.000,  122.755,  288.020,  155.171,    0.000,  150.584,
288.147,  156.673,    0.000,  156.551,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
 89.291,   53.003,    0.000,   67.299,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,   91.331,  136.889,    0.000,  135.692,
    360,  280.167,  134.605,    0.000,  134.514,  288.246,  170.058,    0.000,  165.023,
288.373,  171.688,    0.000,  171.552,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
 89.361,   58.236,    0.000,   70.498,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,   91.402,  150.011,    0.000,  148.624,
    420,  280.387,  146.329,    0.000,  146.230,  288.472,  184.842,    0.000,  179.363,
288.598,  186.636,    0.000,  186.486,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
 89.431,   63.094,    0.000,   73.469,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,   91.474,  163.068,    0.000,  161.493,
    480,  280.606,  158.010,    0.000,  157.902,  288.697,  199.523,    0.000,  193.603,
288.824,  201.516,    0.000,  201.353,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
 89.501,   67.576,    0.000,   76.214,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,   91.545,  176.060,    0.000,  174.298,
    540,  280.826,  169.647,    0.000,  169.530,  288.923,  214.102,    0.000,  207.744,
289.050,  216.330,    0.000,  216.153,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
 89.571,   71.684,    0.000,   78.730,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,   91.617,  188.987,    0.000,  187.039,
    600,  281.045,  181.240,    0.000,  181.114,  289.149,  228.578,    0.000,  221.785,
289.276,  231.076,    0.000,  230.886,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
 89.641,   75.416,    0.000,   81.020,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,   91.689,  201.849,    0.000,  199.715,
    660,  281.265,  192.790,    0.000,  192.655,  289.375,  242.951,    0.000,  235.727,
289.502,  245.755,    0.000,  245.551,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
 89.711,   78.772,    0.000,   83.081,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,   91.760,  214.646,    0.000,  212.328,
    720,  281.484,  204.295,    0.000,  204.152,  289.601,  257.222,    0.000,  249.569,
289.728,  260.366,    0.000,  260.150,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
 89.781,   81.753,    0.000,   84.916,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,   91.832,  227.378,    0.000,  224.877,
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Pollutant Name: Sulfur Dioxide,,,,Temperature: 60F,,Relative Humidity: ALL

Time,LDA,LDA,LDA,LDA,LDT1,LDT1,LDT1,LDT1,LDT2,LDT2,LDT2,LDT2,MDV,MDV,MDV,MDV,L
HD1,LHD1,LHD1,LHD1,LHD2,LHD2,LHD2,LHD2,MHD,MHD,MHD,MHD,HHD,HHD,HHD,HHD,OBUS,OB
US,OBUS,OBUS,UBUS,UBUS,UBUS,UBUS,MCY,MCY,MCY,MCY,SBUS,SBUS,SBUS,SBUS,MH,MH,MH,
MH,ALL,ALL,ALL,ALL,

 min,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,
 CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,A
 LL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,C
 AT,DSL,ALL,

    5,   0.001,   0.000,   0.000,   0.000,   0.001,   0.000,   0.000,   0.000,
    0.001,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
    0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
    0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
    0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
    0.000,   0.000,   0.050,   0.000,   0.000,   0.000,   0.000,   0.000,
    0.000,   0.000,   0.000,   0.000,   0.001,   0.000,   0.000,   0.000,
   10,   0.001,   0.000,   0.000,   0.000,   0.001,   0.000,   0.000,   0.000,
    0.001,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
    0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
    0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
    0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
    0.001,   0.000,   0.050,   0.000,   0.000,   0.000,   0.000,   0.000,
    0.000,   0.000,   0.000,   0.000,   0.001,   0.000,   0.000,   0.000,
   20,   0.002,   0.000,   0.000,   0.000,   0.002,   0.000,   0.000,   0.000,
    0.002,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
    0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
    0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
    0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
    0.001,   0.000,   0.050,   0.000,   0.000,   0.000,   0.000,   0.000,
    0.000,   0.000,   0.000,   0.000,   0.001,   0.000,   0.000,   0.000,
   30,   0.002,   0.000,   0.000,   0.000,   0.002,   0.000,   0.000,   0.000,
    0.002,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
    0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
    0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
    0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
    0.001,   0.000,   0.050,   0.000,   0.000,   0.000,   0.000,   0.000,
    0.000,   0.000,   0.000,   0.000,   0.001,   0.000,   0.000,   0.000,
   40,   0.002,   0.000,   0.000,   0.000,   0.002,   0.000,   0.000,   0.000,
    0.002,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
    0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
    0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
    0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
    0.001,   0.000,   0.050,   0.000,   0.000,   0.000,   0.000,   0.000,
    0.000,   0.000,   0.000,   0.000,   0.001,   0.000,   0.000,   0.000,
   50,   0.002,   0.000,   0.000,   0.000,   0.002,   0.000,   0.000,   0.000,
    0.002,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
    0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
    0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
    0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
    0.001,   0.000,   0.050,   0.001,   0.000,   0.000,   0.000,   0.000,
    0.000,   0.000,   0.000,   0.000,   0.001,   0.000,   0.000,   0.000,
   60,   0.002,   0.000,   0.000,   0.000,   0.002,   0.001,   0.000,   0.001,
    0.002,   0.001,   0.000,   0.001,   0.000,   0.000,   0.000,   0.000,
    0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
    0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
    0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
    0.001,   0.001,   0.050,   0.001,   0.000,   0.000,   0.000,   0.000,
    0.000,   0.000,   0.000,   0.000,   0.001,   0.000,   0.000,   0.000,
  120,   0.003,   0.001,   0.000,   0.001,   0.003,   0.001,   0.000,   0.001,
    0.003,   0.001,   0.000,   0.001,   0.000,   0.000,   0.000,   0.000,
    0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
    0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,

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   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.001,    0.001,    0.050,    0.001,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.001,    0.001,    0.000,    0.001,
   180,   0.003,    0.001,    0.000,    0.001,    0.003,    0.001,    0.000,    0.001,
   0.003,    0.001,    0.000,    0.001,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.001,    0.001,    0.050,    0.001,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.001,    0.001,    0.000,    0.001,
   240,   0.003,    0.001,    0.000,    0.001,    0.003,    0.001,    0.000,    0.001,
   0.003,    0.001,    0.000,    0.001,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.001,    0.001,    0.050,    0.001,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.001,    0.001,    0.000,    0.001,
   300,   0.003,    0.001,    0.000,    0.001,    0.003,    0.002,    0.000,    0.002,
   0.003,    0.002,    0.000,    0.002,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.001,    0.001,    0.050,    0.001,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.001,    0.001,    0.000,    0.001,
   360,   0.003,    0.001,    0.000,    0.001,    0.003,    0.002,    0.000,    0.002,
   0.003,    0.002,    0.000,    0.002,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.001,    0.001,    0.050,    0.001,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.001,    0.002,    0.000,    0.001,
   420,   0.003,    0.001,    0.000,    0.001,    0.003,    0.002,    0.000,    0.002,
   0.004,    0.002,    0.000,    0.002,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.001,    0.001,    0.050,    0.001,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.001,    0.002,    0.000,    0.002,
   480,   0.003,    0.002,    0.000,    0.002,    0.004,    0.002,    0.000,    0.002,
   0.004,    0.002,    0.000,    0.002,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.001,    0.001,    0.050,    0.001,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.001,    0.002,    0.000,    0.002,
   540,   0.003,    0.002,    0.000,    0.002,    0.004,    0.002,    0.000,    0.002,
   0.004,    0.002,    0.000,    0.002,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.001,    0.001,    0.050,    0.001,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.001,    0.002,    0.000,    0.002,
   600,   0.003,    0.002,    0.000,    0.002,    0.004,    0.002,    0.000,    0.002,
   0.004,    0.002,    0.000,    0.002,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.001,    0.001,    0.050,    0.001,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.001,    0.002,    0.000,    0.002,
   660,   0.003,    0.002,    0.000,    0.002,    0.004,    0.002,    0.000,    0.002,
   0.004,    0.002,    0.000,    0.002,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.001,    0.001,    0.050,    0.001,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.001,    0.002,    0.000,    0.002,
   720,   0.003,    0.002,    0.000,    0.002,    0.004,    0.003,    0.000,    0.002,
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   0.004,    0.003,    0.000,    0.003,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.001,    0.001,    0.050,    0.001,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.001,    0.002,    0.000,    0.002,
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Pollutant Name: PM10,,,,Temperature: 60F,,Relative Humidity: ALL

Time,LDA,LDA,LDA,LDA,LDT1,LDT1,LDT1,LDT1,LDT2,LDT2,LDT2,LDT2,MDV,MDV,MDV,MDV,L
HD1,LHD1,LHD1,LHD1,LHD2,LHD2,LHD2,LHD2,MHD,MHD,MHD,MHD,HHD,HHD,HHD,HHD,OBUS,OB
US,OBUS,OBUS,UBUS,UBUS,UBUS,UBUS,MCY,MCY,MCY,MCY,SBUS,SBUS,SBUS,SBUS,MH,MH,MH,
MH,ALL,ALL,ALL,ALL,

 min,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,
 CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,A
 LL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,C
 AT,DSL,ALL,

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   5,    0.011,    0.000,    0.000,    0.000,    0.008,    0.001,    0.000,    0.001,
       0.013,    0.001,    0.000,    0.001,    0.000,    0.000,    0.000,    0.000,
       0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
       0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
       0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
       0.020,    0.000,    0.000,    0.008,    0.000,    0.000,    0.000,    0.000,
       0.000,    0.000,    0.000,    0.000,    0.020,    0.001,    0.000,    0.001,
  10,    0.010,    0.001,    0.000,    0.001,    0.007,    0.001,    0.000,    0.001,
       0.011,    0.003,    0.000,    0.003,    0.000,    0.000,    0.000,    0.000,
       0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
       0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
       0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
       0.017,    0.000,    0.000,    0.007,    0.000,    0.000,    0.000,    0.000,
       0.000,    0.000,    0.000,    0.000,    0.017,    0.001,    0.000,    0.002,
  20,    0.008,    0.002,    0.000,    0.002,    0.006,    0.002,    0.000,    0.002,
       0.009,    0.005,    0.000,    0.005,    0.000,    0.000,    0.000,    0.000,
       0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
       0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
       0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
       0.013,    0.001,    0.000,    0.006,    0.000,    0.000,    0.000,    0.000,
       0.000,    0.000,    0.000,    0.000,    0.013,    0.003,    0.000,    0.003,
  30,    0.006,    0.003,    0.000,    0.003,    0.004,    0.003,    0.000,    0.003,
       0.007,    0.007,    0.000,    0.007,    0.000,    0.000,    0.000,    0.000,
       0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
       0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
       0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
       0.010,    0.001,    0.000,    0.005,    0.000,    0.000,    0.000,    0.000,
       0.000,    0.000,    0.000,    0.000,    0.010,    0.004,    0.000,    0.004,
  40,    0.004,    0.004,    0.000,    0.004,    0.003,    0.004,    0.000,    0.004,
       0.005,    0.010,    0.000,    0.010,    0.000,    0.000,    0.000,    0.000,
       0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
       0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
       0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
       0.008,    0.001,    0.000,    0.004,    0.000,    0.000,    0.000,    0.000,
       0.000,    0.000,    0.000,    0.000,    0.008,    0.005,    0.000,    0.005,
  50,    0.003,    0.004,    0.000,    0.004,    0.002,    0.005,    0.000,    0.005,
       0.004,    0.012,    0.000,    0.012,    0.000,    0.000,    0.000,    0.000,
       0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
       0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
       0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
       0.006,    0.002,    0.000,    0.003,    0.000,    0.000,    0.000,    0.000,
       0.000,    0.000,    0.000,    0.000,    0.006,    0.007,    0.000,    0.006,
  60,    0.003,    0.005,    0.000,    0.005,    0.002,    0.006,    0.000,    0.006,
       0.003,    0.014,    0.000,    0.014,    0.000,    0.000,    0.000,    0.000,
       0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
       0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
       0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
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  0.005,    0.002,    0.000,    0.003,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.005,    0.008,    0.000,    0.008,
120,   0.007,   0.008,    0.000,   0.008,   0.005,   0.010,    0.000,   0.010,
  0.008,    0.022,    0.000,    0.022,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.013,    0.002,    0.000,    0.006,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.012,    0.012,    0.000,    0.012,
180,   0.011,   0.009,    0.000,   0.009,   0.008,   0.011,    0.000,   0.011,
  0.013,    0.024,    0.000,    0.024,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.020,    0.002,    0.000,    0.009,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.020,    0.014,    0.000,    0.014,
240,   0.015,   0.010,    0.000,   0.010,   0.011,   0.012,    0.000,   0.012,
  0.017,    0.027,    0.000,    0.027,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.026,    0.002,    0.000,    0.012,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.026,    0.015,    0.000,    0.015,
300,   0.018,   0.011,    0.000,   0.011,   0.014,   0.013,    0.000,   0.012,
  0.021,    0.029,    0.000,    0.028,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.032,    0.003,    0.000,    0.014,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.032,    0.016,    0.000,    0.016,
360,   0.021,   0.011,    0.000,   0.011,   0.016,   0.014,    0.000,   0.013,
  0.024,    0.030,    0.000,    0.030,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.037,    0.003,    0.000,    0.016,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.037,    0.017,    0.000,    0.017,
420,   0.023,   0.012,    0.000,   0.012,   0.018,   0.014,    0.000,   0.014,
  0.027,    0.032,    0.000,    0.031,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.041,    0.003,    0.000,    0.018,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.041,    0.018,    0.000,    0.018,
480,   0.025,   0.012,    0.000,   0.012,   0.019,   0.015,    0.000,   0.014,
  0.029,    0.033,    0.000,    0.033,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.045,    0.003,    0.000,    0.019,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.044,    0.018,    0.000,    0.018,
540,   0.027,   0.013,    0.000,   0.013,   0.020,   0.015,    0.000,   0.015,
  0.031,    0.034,    0.000,    0.033,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.047,    0.003,    0.000,    0.020,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.047,    0.019,    0.000,    0.019,
600,   0.028,   0.013,    0.000,   0.013,   0.021,   0.015,    0.000,   0.015,
  0.032,    0.034,    0.000,    0.034,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
  0.049,    0.003,    0.000,    0.021,    0.000,    0.000,    0.000,    0.000,
  0.000,    0.000,    0.000,    0.000,    0.049,    0.019,    0.000,    0.019,
660,   0.029,   0.013,    0.000,   0.013,   0.021,   0.015,    0.000,   0.015,
  0.033,    0.034,    0.000,    0.034,    0.000,    0.000,    0.000,    0.000,
```

```
    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
    0.050,    0.003,    0.000,    0.022,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.050,    0.019,    0.000,    0.019,
    720,     0.029,    0.013,    0.000,    0.013,    0.022,    0.016,    0.000,    0.015,
    0.033,    0.035,    0.000,    0.035,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
    0.051,    0.003,    0.000,    0.022,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.050,    0.019,    0.000,    0.019,
```

Title   : Lewis Lincoln
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/09/18 18:07:23
Scen Year: 2020 -- All model years in the range 1976 to 2020 selected
Season   : Annual
Area   : Placer
****
****
Year:,2020,, -- Model Years,,1976, to ,2020, Inclusive --,,,Annual
      Emfac2007 Emission Factors: V2.3 Nov 1 2006

County Average,,,,,   Placer,,,,,,County Average

,,,,Table 4: Hot Soak Emissions (grams/trip)

Pollutant Name: Total Organic Gases,,,,Temperature: 60F,,Relative Humidity:
ALL

Time,LDA,LDA,LDA,LDA,LDT1,LDT1,LDT1,LDT1,LDT2,LDT2,LDT2,LDT2,MDV,MDV,MDV,MDV,L
HD1,LHD1,LHD1,LHD1,LHD2,LHD2,LHD2,LHD2,MHD,MHD,MHD,MHD,HHD,HHD,HHD,HHD,OBUS,OB
US,OBUS,OBUS,UBUS,UBUS,UBUS,UBUS,MCY,MCY,MCY,MCY,SBUS,SBUS,SBUS,SBUS,MH,MH,MH,
MH,ALL,ALL,ALL,ALL,

 min,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,
 CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,A
 LL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,C
 AT,DSL,ALL,

```
    5,    0.381,    0.032,    0.000,    0.032,    0.753,    0.046,    0.000,    0.045,
    0.782,    0.043,    0.000,    0.043,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
    0.007,    0.127,    0.000,    0.080,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.014,    0.039,    0.000,    0.038,
    10,    0.707,    0.059,    0.000,    0.059,    1.386,    0.084,    0.000,    0.082,
    1.441,    0.080,    0.000,    0.080,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
    0.014,    0.235,    0.000,    0.148,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.026,    0.071,    0.000,    0.070,
    20,    1.216,    0.100,    0.000,    0.100,    2.353,    0.144,    0.000,    0.140,
    2.445,    0.136,    0.000,    0.136,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
    0.023,    0.405,    0.000,    0.255,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.045,    0.121,    0.000,    0.120,
```

```
30,   1.578,   0.128,   0.000,   0.128,   3.003,   0.185,   0.000,   0.180,
3.122,   0.175,   0.000,   0.175,   0.000,   0.000,   0.000,   0.000,
0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
0.030,   0.526,   0.000,   0.331,   0.000,   0.000,   0.000,   0.000,
0.000,   0.000,   0.000,   0.000,   0.057,   0.156,   0.000,   0.154,
40,   1.716,   0.138,   0.000,   0.138,   3.240,   0.200,   0.000,   0.195,
3.367,   0.189,   0.000,   0.189,   0.000,   0.000,   0.000,   0.000,
0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
0.032,   0.573,   0.000,   0.360,   0.000,   0.000,   0.000,   0.000,
0.000,   0.000,   0.000,   0.000,   0.062,   0.169,   0.000,   0.167,
```

Hot soak results are scaled to reflect zero emissions for trip lengths of less than 5 minutes (about 25% of in-use trips).

Title   : Lewis Lincoln
Version   : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/09/18 18:07:23
Scen Year: 2020 -- All model years in the range 1976 to 2020 selected
Season   : Annual
Area   : Placer
****
****
Year:,2020,, -- Model Years,,1976, to ,2020, Inclusive --,,,Annual
     Emfac2007 Emission Factors: V2.3 Nov 1 2006

County Average,,,,,   Placer,,,,,,County Average

,,,,Table 5a: Partial Day Diurnal Loss Emissions (grams/hour)

Pollutant Name: Total Organic Gases,,,,Temperature: ALL,,Relative Humidity: ALL

Temp,LDA,LDA,LDA,LDA,LDT1,LDT1,LDT1,LDT1,LDT2,LDT2,LDT2,LDT2,MDV,MDV,MDV,MDV,L
HD1,LHD1,LHD1,LHD1,LHD2,LHD2,LHD2,LHD2,MHD,MHD,MHD,MHD,HHD,HHD,HHD,HHD,OBUS,OB
US,OBUS,OBUS,UBUS,UBUS,UBUS,UBUS,MCY,MCY,MCY,MCY,SBUS,SBUS,SBUS,SBUS,MH,MH,MH,
MH,ALL,ALL,ALL,ALL,
degF,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,
CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,AL
L,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT
,DSL,ALL,

```
60,   0.563,   0.028,   0.000,   0.028,   0.464,   0.049,   0.000,   0.047,
0.482,   0.044,   0.000,   0.044,   0.000,   0.000,   0.000,   0.000,
0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
0.005,   0.214,   0.000,   0.132,   0.000,   0.000,   0.000,   0.000,
0.000,   0.000,   0.000,   0.000,   0.007,   0.043,   0.000,   0.042,
```

Title   : Lewis Lincoln
Version   : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/09/18 18:07:23
Scen Year: 2020 -- All model years in the range 1976 to 2020 selected

Season   : Annual
Area   : Placer
****
****
Year:,2020,, -- Model Years,,1976, to ,2020, Inclusive --,,,Annual
      Emfac2007 Emission Factors: V2.3 Nov 1 2006

County Average,,,,,   Placer,,,,,,County Average

,,,,Table 5b: Multi-Day Diurnal Loss Emissions (grams/hour)

Pollutant Name: Total Organic Gases,,,,Temperature: ALL,,Relative Humidity:
ALL

Temp,LDA,LDA,LDA,LDA,LDT1,LDT1,LDT1,LDT1,LDT2,LDT2,LDT2,LDT2,MDV,MDV,MDV,MDV,L
HD1,LHD1,LHD1,LHD1,LHD2,LHD2,LHD2,LHD2,MHD,MHD,MHD,MHD,HHD,HHD,HHD,HHD,OBUS,OB
US,OBUS,OBUS,UBUS,UBUS,UBUS,UBUS,MCY,MCY,MCY,MCY,SBUS,SBUS,SBUS,SBUS,MH,MH,MH,
MH,ALL,ALL,ALL,ALL,
degF,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,
CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,AL
L,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT
,DSL,ALL,

   60,   0.034,   0.002,   0.000,   0.002,   0.028,   0.004,   0.000,   0.004,
   0.029,   0.003,   0.000,   0.003,   0.000,   0.000,   0.000,   0.000,
   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
   0.000,   0.020,   0.000,   0.012,   0.000,   0.000,   0.000,   0.000,
   0.000,   0.000,   0.000,   0.000,   0.000,   0.003,   0.000,   0.003,

Title   : Lewis Lincoln
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/09/18 18:07:23
Scen Year: 2020 -- All model years in the range 1976 to 2020 selected
Season   : Annual
Area   : Placer
****
****
Year:,2020,, -- Model Years,,1976, to ,2020, Inclusive --,,,Annual
      Emfac2007 Emission Factors: V2.3 Nov 1 2006

County Average,,,,,   Placer,,,,,,County Average

,,,,Table 6a: Partial Day Resting Loss Emissions (grams/hour)

Pollutant Name: Total Organic Gases,,,,Temperature: ALL,,Relative Humidity:
ALL

Temp,LDA,LDA,LDA,LDA,LDT1,LDT1,LDT1,LDT1,LDT2,LDT2,LDT2,LDT2,MDV,MDV,MDV,MDV,L
HD1,LHD1,LHD1,LHD1,LHD2,LHD2,LHD2,LHD2,MHD,MHD,MHD,MHD,HHD,HHD,HHD,HHD,OBUS,OB
US,OBUS,OBUS,UBUS,UBUS,UBUS,UBUS,MCY,MCY,MCY,MCY,SBUS,SBUS,SBUS,SBUS,MH,MH,MH,
MH,ALL,ALL,ALL,ALL,
degF,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,
CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,AL
L,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT
,DSL,ALL,

   60,   0.308,   0.016,   0.000,   0.016,   0.285,   0.026,   0.000,   0.026,
   0.296,   0.026,   0.000,   0.026,   0.000,   0.000,   0.000,   0.000,
   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,

```
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.002,    0.080,    0.000,    0.050,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.004,    0.023,    0.000,    0.022,
```

Title   : Lewis Lincoln
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/09/18 18:07:23
Scen Year: 2020 -- All model years in the range 1976 to 2020 selected
Season   : Annual
Area   : Placer
****
****
Year:,2020,, -- Model Years,,1976, to ,2020, Inclusive --,,,Annual
     Emfac2007 Emission Factors: V2.3 Nov 1 2006

County Average,,,,,   Placer,,,,,,County Average

,,,,Table 6b: Multi-Day Resting Loss Emissions (grams/hour)

Pollutant Name: Total Organic Gases,,,,Temperature: ALL,,Relative Humidity:
ALL

Temp,LDA,LDA,LDA,LDA,LDT1,LDT1,LDT1,LDT1,LDT2,LDT2,LDT2,LDT2,MDV,MDV,MDV,MDV,L
HD1,LHD1,LHD1,LHD1,LHD2,LHD2,LHD2,LHD2,MHD,MHD,MHD,MHD,HHD,HHD,HHD,HHD,OBUS,OB
US,OBUS,OBUS,UBUS,UBUS,UBUS,UBUS,MCY,MCY,MCY,MCY,SBUS,SBUS,SBUS,SBUS,MH,MH,MH,
MH,ALL,ALL,ALL,ALL,
degF,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,
CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,AL
L,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT
,DSL,ALL,

```
   60,    0.019,    0.001,    0.000,    0.001,    0.018,    0.002,    0.000,    0.002,
       0.019,    0.002,    0.000,    0.002,    0.000,    0.000,    0.000,    0.000,
       0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
       0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
       0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
       0.000,    0.008,    0.000,    0.005,    0.000,    0.000,    0.000,    0.000,
       0.000,    0.000,    0.000,    0.000,    0.000,    0.002,    0.000,    0.002,
```

Title   : Lewis Lincoln
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/09/18 18:07:23
Scen Year: 2020 -- All model years in the range 1976 to 2020 selected
Season   : Annual
Area   : Placer
****
****
Year:,2020,, -- Model Years,,1976, to ,2020, Inclusive --,,,Annual
     Emfac2007 Emission Factors: V2.3 Nov 1 2006

County Average,,,,,   Placer,,,,,,County Average

,,,,Table 7: Estimated Travel Fractions

Pollutant Name: ,,,,Temperature: ALL,,Relative Humidity: ALL

,LDA,LDA,LDA,LDA,LDT1,LDT1,LDT1,LDT1,LDT2,LDT2,LDT2,LDT2,MDV,MDV,MDV,MDV,LHD1,
LHD1,LHD1,LHD1,LHD2,LHD2,LHD2,LHD2,MHD,MHD,MHD,MHD,HHD,HHD,HHD,HHD,OBUS,OBUS,O

LHD1,LHD1,LHD1,LHD2,LHD2,LHD2,LHD2,MHD,MHD,MHD,MHD,HHD,HHD,HHD,HHD,OBUS,OBUS,O
BUS,OBUS,UBUS,UBUS,UBUS,UBUS,MCY,MCY,MCY,MCY,SBUS,SBUS,SBUS,SBUS,MH,MH,MH,MH,A
LL,ALL,ALL,ALL,
,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,
DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NC
AT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL
,ALL,

```
%VMT,    0.000,    0.521,    0.000,    0.521,    0.000,    0.181,    0.004,    0.185,
0.000,    0.278,    0.000,    0.278,    0.000,    0.000,    0.000,    0.000,    0.000,
0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
0.000,    0.000,    0.000,    0.000,    0.000,    0.006,    0.010,    0.000,    0.016,
0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.006,
0.990,    0.004,    1.000,
%TRIP,   0.000,    0.529,    0.000,    0.529,    0.000,    0.173,    0.005,    0.178,
0.000,    0.271,    0.000,    0.272,    0.000,    0.000,    0.000,    0.000,    0.000,
0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
0.000,    0.000,    0.000,    0.000,    0.000,    0.008,    0.013,    0.000,    0.021,
0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.009,
0.986,    0.006,    1.000,
%VEH,    0.000,    0.503,    0.000,    0.503,    0.000,    0.167,    0.006,    0.172,
0.000,    0.260,    0.000,    0.260,    0.000,    0.000,    0.000,    0.000,    0.000,
0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
0.000,    0.000,    0.000,    0.000,    0.000,    0.025,    0.039,    0.000,    0.064,
0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.025,
0.968,    0.006,    1.000,
```

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Title    : Lewis Lincoln
Version  : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/09/18 18:07:23
Scen Year: 2020 -- All model years in the range 1976 to 2020 selected
Season   : Annual
Area     : Placer
********************************************************************************
***********
Year:,2020,, -- Model Years,,1976, to ,2020, Inclusive --,,,Annual
      Emfac2007 Emission Factors: V2.3 Nov 1 2006

County Average,,,,,          Placer,,,,,,County Average

,,,,Table  8:  Evaporative Running Loss Emissions (grams/minute)

Pollutant Name: Total Organic Gases,,,,Temperature: 60F,,Relative Humidity:
ALL

Time,LDA,LDA,LDA,LDA,LDT1,LDT1,LDT1,LDT1,LDT2,LDT2,LDT2,LDT2,MDV,MDV,MDV,MDV,L
HD1,LHD1,LHD1,LHD1,LHD2,LHD2,LHD2,LHD2,MHD,MHD,MHD,MHD,HHD,HHD,HHD,HHD,OBUS,OB
US,OBUS,OBUS,UBUS,UBUS,UBUS,UBUS,MCY,MCY,MCY,MCY,SBUS,SBUS,SBUS,SBUS,MH,MH,MH,
MH,ALL,ALL,ALL,ALL,

 min,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,
 CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,A
 LL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,CAT,DSL,ALL,NCAT,C
 AT,DSL,ALL,

    1,   1.097,    0.008,    0.000,    0.008,    1.283,    0.328,    0.000,    0.321,
    1.319,    0.271,    0.000,    0.270,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
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   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.010,    0.004,    0.000,    0.006,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.023,    0.140,    0.000,    0.139,
   2,    0.855,    0.008,    0.000,    0.008,    0.738,    0.168,    0.000,    0.164,
   0.760,    0.139,    0.000,    0.139,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.010,    0.058,    0.000,    0.041,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.018,    0.074,    0.000,    0.074,
   3,    0.775,    0.010,    0.000,    0.010,    0.556,    0.116,    0.000,    0.114,
   0.574,    0.097,    0.000,    0.097,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.010,    0.086,    0.000,    0.059,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.016,    0.055,    0.000,    0.054,
   4,    0.735,    0.012,    0.000,    0.012,    0.466,    0.092,    0.000,    0.091,
   0.481,    0.078,    0.000,    0.078,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.010,    0.103,    0.000,    0.069,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.016,    0.046,    0.000,    0.046,
   5,    0.711,    0.014,    0.000,    0.014,    0.411,    0.078,    0.000,    0.077,
   0.425,    0.066,    0.000,    0.066,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.010,    0.113,    0.000,    0.076,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.015,    0.041,    0.000,    0.041,
   10,    0.665,    0.017,    0.000,    0.018,    0.303,    0.052,    0.000,    0.051,
   0.314,    0.045,    0.000,    0.045,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.011,    0.135,    0.000,    0.090,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.015,    0.033,    0.000,    0.032,
   15,    0.651,    0.019,    0.000,    0.019,    0.267,    0.044,    0.000,    0.043,
   0.277,    0.039,    0.000,    0.039,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.012,    0.143,    0.000,    0.095,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.015,    0.030,    0.000,    0.030,
   20,    0.645,    0.020,    0.000,    0.020,    0.249,    0.041,    0.000,    0.040,
   0.259,    0.037,    0.000,    0.037,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.012,    0.147,    0.000,    0.098,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.016,    0.030,    0.000,    0.030,
   25,    0.643,    0.020,    0.000,    0.020,    0.238,    0.040,    0.000,    0.039,
   0.248,    0.037,    0.000,    0.037,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.013,    0.149,    0.000,    0.100,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.016,    0.030,    0.000,    0.030,
   30,    0.643,    0.020,    0.000,    0.020,    0.239,    0.040,    0.000,    0.039,
   0.248,    0.037,    0.000,    0.037,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,    0.000,
   0.013,    0.149,    0.000,    0.100,    0.000,    0.000,    0.000,    0.000,
   0.000,    0.000,    0.000,    0.000,    0.016,    0.030,    0.000,    0.030,
   35,    0.644,    0.020,    0.000,    0.020,    0.239,    0.040,    0.000,    0.039,
```

```
0.249,   0.037,   0.000,   0.037,   0.000,   0.000,   0.000,   0.000,
0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
0.013,   0.150,   0.000,   0.100,   0.000,   0.000,   0.000,   0.000,
0.000,   0.000,   0.000,   0.000,   0.016,   0.030,   0.000,   0.030,
40,   0.644,   0.020,   0.000,   0.020,   0.240,   0.040,   0.000,   0.039,
0.249,   0.037,   0.000,   0.037,   0.000,   0.000,   0.000,   0.000,
0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
0.013,   0.150,   0.000,   0.101,   0.000,   0.000,   0.000,   0.000,
0.000,   0.000,   0.000,   0.000,   0.016,   0.030,   0.000,   0.030,
45,   0.644,   0.020,   0.000,   0.020,   0.240,   0.040,   0.000,   0.039,
0.250,   0.037,   0.000,   0.037,   0.000,   0.000,   0.000,   0.000,
0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
0.013,   0.150,   0.000,   0.101,   0.000,   0.000,   0.000,   0.000,
0.000,   0.000,   0.000,   0.000,   0.017,   0.030,   0.000,   0.030,
50,   0.613,   0.020,   0.000,   0.020,   0.241,   0.040,   0.000,   0.039,
0.250,   0.037,   0.000,   0.037,   0.000,   0.000,   0.000,   0.000,
0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
0.013,   0.150,   0.000,   0.101,   0.000,   0.000,   0.000,   0.000,
0.000,   0.000,   0.000,   0.000,   0.016,   0.030,   0.000,   0.030,
55,   0.570,   0.020,   0.000,   0.020,   0.241,   0.040,   0.000,   0.039,
0.251,   0.037,   0.000,   0.037,   0.000,   0.000,   0.000,   0.000,
0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
0.012,   0.151,   0.000,   0.101,   0.000,   0.000,   0.000,   0.000,
0.000,   0.000,   0.000,   0.000,   0.016,   0.030,   0.000,   0.030,
60,   0.534,   0.020,   0.000,   0.020,   0.241,   0.040,   0.000,   0.040,
0.251,   0.037,   0.000,   0.037,   0.000,   0.000,   0.000,   0.000,
0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,   0.000,
0.012,   0.151,   0.000,   0.101,   0.000,   0.000,   0.000,   0.000,
0.000,   0.000,   0.000,   0.000,   0.015,   0.030,   0.000,   0.030,
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URBEMIS Construction Output

11/18/2009 2:50:37 PM

Urbemis 2007 Version 9.2.4

Detail Report for Annual Construction Unmitigated Emissions (Tons/Year)

File Name: U:\Lewis Lincoln\From Client\URBEMIS files\Construction Emissions\Lewis Phase 1.urb924

Project Name: Lewis Phase 1

Project Location: Placer County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Annual Tons Per Year, Unmitigated)

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10 Total	PM2.5 Dust	PM2.5 Exhaust	PM2.5 Total	CO2
2010	0.16	1.24	0.63	0.00	9.00	0.06	9.06	1.88	0.06	1.94	120.41
Fine Grading 11/30/2010-01/11/2011	0.14	1.15	0.59	0.00	9.00	0.06	9.06	1.88	0.05	1.93	109.18
Fine Grading Dust	0.00	0.00	0.00	0.00	9.00	0.00	9.00	1.88	0.00	1.88	0.00
Fine Grading Off Road Diesel	0.13	1.15	0.56	0.00	0.00	0.06	0.06	0.00	0.05	0.05	106.11
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.07
Asphalt 12/28/2010-01/11/2011	0.03	0.10	0.04	0.00	0.00	0.01	0.01	0.00	0.01	0.01	11.23
Paving Off-Gas	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.01	0.04	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.84
Paving On Road Diesel	0.00	0.06	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.14
Paving Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26

2011	4.21	4.59	9.81	0.01	2.67	0.28	2.96	0.57	0.26	0.82	1,396.35
Asphalt 12/28/2010-01/11/2011	0.05	0.15	0.07	0.00	0.00	0.01	0.01	0.00	0.01	0.01	19.65
Paving Off-Gas	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.01	0.06	0.04	0.00	0.00	0.01	0.01	0.00	0.01	0.01	4.97
Paving On Road Diesel	0.01	0.09	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.24
Paving Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
Fine Grading 11/30/2010-01/11/2011	0.04	0.31	0.16	0.00	2.63	0.01	2.64	0.55	0.01	0.56	31.85
Fine Grading Dust	0.00	0.00	0.00	0.00	2.63	0.00	2.63	0.55	0.00	0.55	0.00
Fine Grading Off Road Diesel	0.04	0.31	0.15	0.00	0.00	0.01	0.01	0.00	0.01	0.01	30.95
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
Building 01/11/2011-08/22/2012	0.77	4.12	9.54	0.01	0.05	0.26	0.31	0.02	0.23	0.25	1,340.85
Building Off Road Diesel	0.48	2.77	1.77	0.00	0.00	0.20	0.20	0.00	0.18	0.18	286.93
Building Vendor Trips	0.07	0.98	0.70	0.00	0.01	0.04	0.04	0.00	0.03	0.04	211.86
Building Worker Trips	0.22	0.37	7.07	0.01	0.04	0.02	0.06	0.01	0.02	0.03	842.06
Coating 08/08/2011-01/01/2013	3.35	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.00
Architectural Coating	3.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.00
2012	8.80	2.51	5.93	0.01	0.03	0.15	0.19	0.01	0.14	0.15	897.02
Building 01/11/2011-08/22/2012	0.47	2.51	5.86	0.01	0.03	0.15	0.19	0.01	0.14	0.15	887.07
Building Off Road Diesel	0.29	1.72	1.14	0.00	0.00	0.12	0.12	0.00	0.11	0.11	189.78
Building Vendor Trips	0.04	0.57	0.43	0.00	0.01	0.02	0.03	0.00	0.02	0.02	140.12
Building Worker Trips	0.13	0.22	4.28	0.01	0.03	0.01	0.04	0.01	0.01	0.02	557.16
Coating 08/08/2011-01/01/2013	8.33	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.95
Architectural Coating	8.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.95

2013	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
Coating 08/08/2011-01/01/2013	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
Architectural Coating	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04

Phase Assumptions

Phase: Fine Grading 11/30/2010 - 01/11/2011 - Default Fine Site Grading Description

Total Acres Disturbed: 150

Maximum Daily Acreage Disturbed: 37.5

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day

1 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day

3 Scrapers (313 hp) operating at a 0.72 load factor for 8 hours per day

3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Paving 12/28/2010 - 01/11/2011 - Default Paving Description

Acres to be Paved: 37.5

Off-Road Equipment:

1 Pavers (100 hp) operating at a 0.62 load factor for 8 hours per day

2 Paving Equipment (104 hp) operating at a 0.53 load factor for 8 hours per day

2 Rollers (95 hp) operating at a 0.56 load factor for 6 hours per day

Phase: Building Construction 01/11/2011 - 08/22/2012 - Default Building Construction Description

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 7 hours per day

3 Forklifts (145 hp) operating at a 0.3 load factor for 8 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

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1 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 08/08/2011 - 01/01/2013 - Default Architectural Coating Description
Rule: Residential Interior Coatings begins 01/01/2005 ends 12/31/2040 specifies a VOC of 250
Rule: Residential Exterior Coatings begins 01/01/2005 ends 12/31/2040 specifies a VOC of 250
Rule: Nonresidential Interior Coatings begins 01/01/2005 ends 12/31/2040 specifies a VOC of 250
Rule: Nonresidential Exterior Coatings begins 01/01/2005 ends 12/31/2040 specifies a VOC of 250

Urbemis 2007 Version 9.2.4

Detail Report for Annual Construction Unmitigated Emissions (Tons/Year)

File Name: U:\Lewis Lincoln\From Client\URBEMIS files\Construction Emissions\Lewis Phase 2.urb924

Project Name: Lewis Ranch Phase 2

Project Location: Placer County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Annual Tons Per Year, Unmitigated)

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10 Total	PM2.5 Dust	PM2.5 Exhaust	PM2.5 Total	CO2
2010	0.17	1.26	0.63	0.00	11.24	0.06	11.30	2.35	0.06	2.40	122.44
Fine Grading 11/30/2010-01/11/2011	0.14	1.15	0.59	0.00	11.24	0.06	11.30	2.35	0.05	2.40	109.18
Fine Grading Dust	0.00	0.00	0.00	0.00	11.24	0.00	11.24	2.35	0.00	2.35	0.00
Fine Grading Off Road Diesel	0.13	1.15	0.56	0.00	0.00	0.06	0.06	0.00	0.05	0.05	106.11
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.07
Asphalt 12/28/2010-01/11/2011	0.03	0.11	0.05	0.00	0.00	0.01	0.01	0.00	0.01	0.01	13.26
Paving Off-Gas	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.01	0.04	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.84
Paving On Road Diesel	0.00	0.07	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.16
Paving Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26

2011	0.94	4.95	11.72	0.01	3.34	0.30	3.64	0.71	0.27	0.98	1,658.20
Asphalt 12/28/2010-01/11/2011	0.06	0.18	0.08	0.00	0.00	0.01	0.01	0.00	0.01	0.01	23.20
Paving Off-Gas	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.01	0.06	0.04	0.00	0.00	0.01	0.01	0.00	0.01	0.01	4.97
Paving On Road Diesel	0.01	0.11	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.78
Paving Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
Fine Grading 11/30/2010-01/11/2011	0.04	0.31	0.16	0.00	3.28	0.01	3.29	0.68	0.01	0.70	31.85
Fine Grading Dust	0.00	0.00	0.00	0.00	3.28	0.00	3.28	0.68	0.00	0.68	0.00
Fine Grading Off Road Diesel	0.04	0.31	0.15	0.00	0.00	0.01	0.01	0.00	0.01	0.01	30.95
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
Building 01/11/2011-08/22/2014	0.85	4.46	11.48	0.01	0.06	0.27	0.33	0.02	0.25	0.27	1,603.15
Building Off Road Diesel	0.48	2.77	1.77	0.00	0.00	0.20	0.20	0.00	0.18	0.18	286.93
Building Vendor Trips	0.09	1.22	0.87	0.00	0.01	0.05	0.06	0.00	0.04	0.05	264.59
Building Worker Trips	0.28	0.47	8.83	0.01	0.05	0.02	0.08	0.02	0.02	0.04	1,051.63
2012	0.80	4.21	10.92	0.01	0.06	0.25	0.32	0.02	0.23	0.25	1,647.74
Building 01/11/2011-08/22/2014	0.80	4.21	10.92	0.01	0.06	0.25	0.32	0.02	0.23	0.25	1,647.74
Building Off Road Diesel	0.45	2.67	1.78	0.00	0.00	0.19	0.19	0.00	0.17	0.17	294.84
Building Vendor Trips	0.09	1.11	0.83	0.00	0.01	0.04	0.05	0.00	0.04	0.04	271.87
Building Worker Trips	0.26	0.43	8.31	0.01	0.05	0.03	0.08	0.02	0.02	0.04	1,081.03
2013	0.72	3.85	10.12	0.01	0.06	0.23	0.29	0.02	0.21	0.23	1,648.08
Building 01/11/2011-08/22/2014	0.72	3.85	10.12	0.01	0.06	0.23	0.29	0.02	0.21	0.23	1,648.08
Building Off Road Diesel	0.42	2.48	1.74	0.00	0.00	0.17	0.17	0.00	0.15	0.15	294.84
Building Vendor Trips	0.08	0.97	0.77	0.00	0.01	0.04	0.05	0.00	0.03	0.04	271.86
Building Worker Trips	0.23	0.39	7.62	0.01	0.05	0.03	0.08	0.02	0.02	0.04	1,081.38

2014	5.84	2.26	6.08	0.01	0.04	0.13	0.17	0.01	0.12	0.13	1,067.52
Building 01/11/2011-08/22/2014	0.42	2.26	6.04	0.01	0.04	0.13	0.17	0.01	0.12	0.13	1,061.05
Building Off Road Diesel	0.25	1.48	1.10	0.00	0.00	0.09	0.09	0.00	0.09	0.09	189.78
Building Vendor Trips	0.05	0.55	0.45	0.00	0.01	0.02	0.03	0.00	0.02	0.02	174.99
Building Worker Trips	0.13	0.23	4.49	0.01	0.03	0.02	0.05	0.01	0.01	0.03	696.28
Coating 08/08/2014-09/05/2015	5.41	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.47
Architectural Coating	5.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.47
2015	9.22	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.02
Coating 08/08/2014-09/05/2015	9.22	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.02
Architectural Coating	9.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.02

Phase Assumptions

Phase: Fine Grading 11/30/2010 - 01/11/2011 - Default Fine Site Grading Description

Total Acres Disturbed: 187.33

Maximum Daily Acreage Disturbed: 46.83

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day

1 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day

3 Scrapers (313 hp) operating at a 0.72 load factor for 8 hours per day

3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Paving 12/28/2010 - 01/11/2011 - Default Paving Description

Acres to be Paved: 46.83

Off-Road Equipment:

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1 Pavers (100 hp) operating at a 0.62 load factor for 8 hours per day

2 Paving Equipment (104 hp) operating at a 0.53 load factor for 8 hours per day

2 Rollers (95 hp) operating at a 0.56 load factor for 6 hours per day

Phase: Building Construction 01/11/2011 - 08/22/2014 - Default Building Construction Description

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 7 hours per day

3 Forklifts (145 hp) operating at a 0.3 load factor for 8 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 08/08/2014 - 09/05/2015 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 01/01/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 01/01/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Interior Coatings begins 01/01/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 01/01/2005 ends 12/31/2040 specifies a VOC of 250

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Urbemis 2007 Version 9.2.4

Detail Report for Annual Construction Unmitigated Emissions (Tons/Year)

File Name: U:\Lewis Lincoln\From Client\URBEMIS files\Construction Emissions\Lewis Phase 3.urb924

Project Name: Lewis Phase 3

Project Location: Placer County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Annual Tons Per Year, Unmitigated)

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10 Total	PM2.5 Dust	PM2.5 Exhaust	PM2.5 Total	CO2
2013	0.75	4.33	8.64	0.01	8.28	0.25	8.53	1.74	0.23	1.96	1,433.90
Building 01/11/2013-08/22/2015	0.64	3.46	8.18	0.01	0.05	0.21	0.26	0.02	0.19	0.21	1,333.81
Building Off Road Diesel	0.40	2.41	1.69	0.00	0.00	0.16	0.16	0.00	0.15	0.15	285.80
Building Vendor Trips	0.06	0.75	0.59	0.00	0.01	0.03	0.04	0.00	0.03	0.03	210.54
Building Worker Trips	0.18	0.30	5.90	0.01	0.04	0.02	0.06	0.01	0.02	0.03	837.47
Fine Grading 11/30/2013-01/11/2014	0.11	0.87	0.46	0.00	8.23	0.04	8.27	1.72	0.04	1.76	100.09
Fine Grading Dust	0.00	0.00	0.00	0.00	8.23	0.00	8.23	1.72	0.00	1.72	0.00
Fine Grading Off Road Diesel	0.10	0.86	0.44	0.00	0.00	0.04	0.04	0.00	0.04	0.04	97.27
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.82

2014	0.66	3.60	8.03	0.01	3.04	0.21	3.25	0.64	0.19	0.83	1,421.06
Building 01/11/2013-08/22/2015	0.60	3.26	7.84	0.01	0.05	0.19	0.24	0.02	0.17	0.19	1,376.25
Building Off Road Diesel	0.38	2.30	1.70	0.00	0.00	0.14	0.14	0.00	0.13	0.13	294.84
Building Vendor Trips	0.06	0.68	0.56	0.00	0.01	0.03	0.03	0.00	0.02	0.03	217.20
Building Worker Trips	0.17	0.28	5.57	0.01	0.04	0.02	0.06	0.02	0.02	0.03	864.22
Fine Grading 11/30/2013-01/11/2014	0.04	0.29	0.16	0.00	2.99	0.01	3.01	0.63	0.01	0.64	36.40
Fine Grading Dust	0.00	0.00	0.00	0.00	2.99	0.00	2.99	0.63	0.00	0.63	0.00
Fine Grading Off Road Diesel	0.04	0.29	0.15	0.00	0.00	0.01	0.01	0.00	0.01	0.01	35.37
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.02
Asphalt 12/28/2014-01/11/2015	0.02	0.05	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.41
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.13
Paving On Road Diesel	0.00	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.09
Paving Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19

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2015	4.71	2.00	4.75	0.01	0.03	0.12	0.15	0.01	0.11	0.12	905.50
Asphalt 12/28/2014-01/11/2015	0.04	0.10	0.06	0.00	0.00	0.01	0.01	0.00	0.01	0.01	19.62
Paving Off-Gas	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.01	0.05	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.97
Paving On Road Diesel	0.00	0.05	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.21
Paving Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
Building 01/11/2013-08/22/2015	0.35	1.89	4.67	0.01	0.03	0.11	0.14	0.01	0.10	0.11	880.72
Building Off Road Diesel	0.22	1.35	1.07	0.00	0.00	0.09	0.09	0.00	0.08	0.08	188.65
Building Vendor Trips	0.03	0.38	0.33	0.00	0.01	0.01	0.02	0.00	0.01	0.02	138.98
Building Worker Trips	0.10	0.16	3.26	0.01	0.03	0.01	0.04	0.01	0.01	0.02	553.10
Coating 08/08/2015-09/05/2016	4.31	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.15
Architectural Coating	4.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.15
2016	7.34	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.77
Coating 08/08/2015-09/05/2016	7.34	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.77
Architectural Coating	7.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.77

Phase Assumptions

Phase: Fine Grading 11/30/2013 - 01/11/2014 - Default Fine Site Grading Description

Total Acres Disturbed: 149.67

Maximum Daily Acreage Disturbed: 37.42

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day

1 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day

3 Scrapers (313 hp) operating at a 0.72 load factor for 8 hours per day

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3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Paving 12/28/2014 - 01/11/2015 - Default Paving Description

Acres to be Paved: 37.42

Off-Road Equipment:

1 Pavers (100 hp) operating at a 0.62 load factor for 8 hours per day

2 Paving Equipment (104 hp) operating at a 0.53 load factor for 8 hours per day

2 Rollers (95 hp) operating at a 0.56 load factor for 6 hours per day

Phase: Building Construction 01/11/2013 - 08/22/2015 - Default Building Construction Description

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 7 hours per day

3 Forklifts (145 hp) operating at a 0.3 load factor for 8 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 08/08/2015 - 09/05/2016 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 01/01/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 01/01/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Interior Coatings begins 01/01/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 01/01/2005 ends 12/31/2040 specifies a VOC of 250

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Urbemis 2007 Version 9.2.4

Detail Report for Annual Construction Unmitigated Emissions (Tons/Year)

File Name: U:\Lewis Lincoln\From Client\URBEMIS files\Construction Emissions\Lewis Phase 4.urb924

Project Name: Lewis - Phase 4

Project Location: Placer County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Annual Tons Per Year, Unmitigated)

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10 Total	PM2.5 Dust	PM2.5 Exhaust	PM2.5 Total	CO2
2013	0.12	0.90	0.48	0.00	7.55	0.04	7.59	1.58	0.04	1.62	105.36
Fine Grading 11/30/2013-01/11/2014	0.11	0.87	0.46	0.00	7.55	0.04	7.59	1.58	0.04	1.61	100.09
Fine Grading Dust	0.00	0.00	0.00	0.00	7.55	0.00	7.55	1.58	0.00	1.58	0.00
Fine Grading Off Road Diesel	0.10	0.86	0.44	0.00	0.00	0.04	0.04	0.00	0.04	0.04	97.27
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.82
Asphalt 12/28/2013-01/11/2014	0.01	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.27
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.42
Paving On Road Diesel	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.72
Paving Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13

2014	0.65	3.50	7.34	0.01	2.79	0.20	2.99	0.59	0.18	0.77	1,305.17
Asphalt 12/28/2013-01/11/2014	0.05	0.13	0.07	0.00	0.00	0.01	0.01	0.00	0.01	0.01	21.09
Paving Off-Gas	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.01	0.06	0.04	0.00	0.00	0.01	0.01	0.00	0.00	0.00	5.68
Paving On Road Diesel	0.00	0.06	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.90
Paving Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
Fine Grading 11/30/2013-01/11/2014	0.04	0.29	0.16	0.00	2.75	0.01	2.76	0.57	0.01	0.59	36.40
Fine Grading Dust	0.00	0.00	0.00	0.00	2.75	0.00	2.75	0.57	0.00	0.57	0.00
Fine Grading Off Road Diesel	0.04	0.29	0.15	0.00	0.00	0.01	0.01	0.00	0.01	0.01	35.37
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.02
Building 01/11/2014-08/22/2015	0.57	3.09	7.11	0.01	0.04	0.18	0.23	0.02	0.16	0.18	1,247.69
Building Off Road Diesel	0.37	2.23	1.65	0.00	0.00	0.14	0.14	0.00	0.13	0.13	285.80
Building Vendor Trips	0.05	0.60	0.50	0.00	0.01	0.02	0.03	0.00	0.02	0.02	193.19
Building Worker Trips	0.15	0.25	4.95	0.01	0.04	0.02	0.05	0.01	0.01	0.03	768.70
2015	4.30	1.85	4.40	0.01	0.03	0.11	0.14	0.01	0.10	0.11	828.42
Building 01/11/2014-08/22/2015	0.34	1.85	4.37	0.01	0.03	0.11	0.14	0.01	0.10	0.11	823.69
Building Off Road Diesel	0.22	1.35	1.07	0.00	0.00	0.09	0.09	0.00	0.08	0.08	188.65
Building Vendor Trips	0.03	0.35	0.31	0.00	0.00	0.01	0.02	0.00	0.01	0.01	127.53
Building Worker Trips	0.09	0.15	2.99	0.00	0.02	0.01	0.04	0.01	0.01	0.02	507.52
Coating 08/08/2015-09/05/2016	3.96	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.73
Architectural Coating	3.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.73
2016	6.73	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.05
Coating 08/08/2015-09/05/2016	6.73	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.05
Architectural Coating	6.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.05

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Phase Assumptions

Phase: Fine Grading 11/30/2013 - 01/11/2014 - Default Fine Site Grading Description

Total Acres Disturbed: 137.33

Maximum Daily Acreage Disturbed: 34.33

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day

1 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day

3 Scrapers (313 hp) operating at a 0.72 load factor for 8 hours per day

3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Paving 12/28/2013 - 01/11/2014 - Default Paving Description

Acres to be Paved: 34.33

Off-Road Equipment:

1 Pavers (100 hp) operating at a 0.62 load factor for 8 hours per day

2 Paving Equipment (104 hp) operating at a 0.53 load factor for 8 hours per day

2 Rollers (95 hp) operating at a 0.56 load factor for 6 hours per day

Phase: Building Construction 01/11/2014 - 08/22/2015 - Default Building Construction Description

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 7 hours per day

3 Forklifts (145 hp) operating at a 0.3 load factor for 8 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 08/08/2015 - 09/05/2016 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 01/01/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 01/01/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Interior Coatings begins 01/01/2005 ends 12/31/2040 specifies a VOC of 250

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Rule: Nonresidential Exterior Coatings begins 01/01/2005 ends 12/31/2040 specifies a VOC of 250

Urbemis 2007 Version 9.2.4

Detail Report for Annual Construction Unmitigated Emissions (Tons/Year)

File Name: U:\Lewis Lincoln\From Client\URBEMIS files\Construction Emissions\Lewis Phase 5.urb924

Project Name: Lewis Phase 5

Project Location: Placer County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Annual Tons Per Year, Unmitigated)

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10 Total	PM2.5 Dust	PM2.5 Exhaust	PM2.5 Total	CO2
2014	0.62	3.59	6.11	0.01	5.88	0.20	6.08	1.23	0.19	1.42	1,089.97
Building 01/11/2014-08/22/2015	0.52	2.86	5.69	0.01	0.03	0.17	0.20	0.01	0.15	0.17	997.88
Building Off Road Diesel	0.37	2.23	1.65	0.00	0.00	0.14	0.14	0.00	0.13	0.13	285.80
Building Vendor Trips	0.04	0.45	0.37	0.00	0.01	0.02	0.02	0.00	0.02	0.02	143.02
Building Worker Trips	0.11	0.19	3.67	0.01	0.03	0.01	0.04	0.01	0.01	0.02	569.06
Fine Grading 11/30/2014-01/11/2015	0.09	0.69	0.39	0.00	5.85	0.03	5.88	1.22	0.03	1.25	85.64
Fine Grading Dust	0.00	0.00	0.00	0.00	5.85	0.00	5.85	1.22	0.00	1.22	0.00
Fine Grading Off Road Diesel	0.09	0.69	0.38	0.00	0.00	0.03	0.03	0.00	0.03	0.03	82.99
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.65
Asphalt 12/28/2014-01/11/2015	0.01	0.04	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.46
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.13
Paving On Road Diesel	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.14
Paving Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19

2015	3.30	2.00	3.70	0.00	1.80	0.12	1.92	0.38	0.11	0.49	703.40
Asphalt 12/28/2014-01/11/2015	0.03	0.09	0.05	0.00	0.00	0.01	0.01	0.00	0.01	0.01	15.07
Paving Off-Gas	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.01	0.05	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.97
Paving On Road Diesel	0.00	0.04	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.65
Paving Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
Building 01/11/2014-08/22/2015	0.31	1.72	3.51	0.00	0.02	0.10	0.13	0.01	0.09	0.10	658.77
Building Off Road Diesel	0.22	1.35	1.07	0.00	0.00	0.09	0.09	0.00	0.08	0.08	188.65
Building Vendor Trips	0.02	0.26	0.23	0.00	0.00	0.01	0.01	0.00	0.01	0.01	94.41
Building Worker Trips	0.06	0.11	2.22	0.00	0.02	0.01	0.03	0.01	0.01	0.01	375.71
Fine Grading 11/30/2014-01/11/2015	0.02	0.19	0.12	0.00	1.78	0.01	1.79	0.37	0.01	0.38	26.06
Fine Grading Dust	0.00	0.00	0.00	0.00	1.78	0.00	1.78	0.37	0.00	0.37	0.00
Fine Grading Off Road Diesel	0.02	0.19	0.11	0.00	0.00	0.01	0.01	0.00	0.01	0.01	25.26
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81
Coating 08/08/2015-09/05/2016	2.93	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.50
Architectural Coating	2.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.50
2016	4.98	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.96
Coating 08/08/2015-09/05/2016	4.98	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.96
Architectural Coating	4.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.96

Phase Assumptions

Phase: Fine Grading 11/30/2014 - 01/11/2015 - Default Fine Site Grading Description

Total Acres Disturbed: 101.67

Maximum Daily Acreage Disturbed: 25.42

Fugitive Dust Level of Detail: Default

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20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day

1 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day

2 Scrapers (313 hp) operating at a 0.72 load factor for 8 hours per day

3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Paving 12/28/2014 - 01/11/2015 - Default Paving Description

Acres to be Paved: 25.42

Off-Road Equipment:

1 Pavers (100 hp) operating at a 0.62 load factor for 8 hours per day

2 Paving Equipment (104 hp) operating at a 0.53 load factor for 8 hours per day

2 Rollers (95 hp) operating at a 0.56 load factor for 6 hours per day

Phase: Building Construction 01/11/2014 - 08/22/2015 - Default Building Construction Description

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 7 hours per day

3 Forklifts (145 hp) operating at a 0.3 load factor for 8 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 08/08/2015 - 09/05/2016 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 01/01/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 01/01/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Interior Coatings begins 01/01/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 01/01/2005 ends 12/31/2040 specifies a VOC of 250

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Urbemis 2007 Version 9.2.4

Detail Report for Annual Construction Unmitigated Emissions (Tons/Year)

File Name: U:\Lewis Lincoln\From Client\URBEMIS files\Construction Emissions\Lewis Phase 6.urb924

Project Name: Lewis Phase 6

Project Location: Placer County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Annual Tons Per Year, Unmitigated)

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10 Total	PM2.5 Dust	PM2.5 Exhaust	PM2.5 Total	CO2
2015	0.79	4.27	11.32	0.02	8.79	0.24	9.03	1.85	0.22	2.06	2,171.09
Building 01/11/2015-08/22/2016	0.67	3.41	10.83	0.02	0.08	0.20	0.28	0.03	0.18	0.21	2,050.94
Building Off Road Diesel	0.34	2.05	1.63	0.00	0.00	0.13	0.13	0.00	0.12	0.12	286.93
Building Vendor Trips	0.08	0.94	0.86	0.00	0.01	0.04	0.05	0.00	0.03	0.04	350.92
Building Worker Trips	0.24	0.42	8.34	0.01	0.07	0.03	0.10	0.02	0.03	0.05	1,413.09
Fine Grading 11/30/2015-01/11/2016	0.10	0.80	0.46	0.00	8.70	0.04	8.74	1.82	0.03	1.85	109.19
Fine Grading Dust	0.00	0.00	0.00	0.00	8.70	0.00	8.70	1.82	0.00	1.82	0.00
Fine Grading Off Road Diesel	0.10	0.80	0.44	0.00	0.00	0.04	0.04	0.00	0.03	0.03	106.11
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.07
Asphalt 12/28/2015-01/11/2016	0.02	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.96
Paving Off-Gas	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.00	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.84
Paving On Road Diesel	0.00	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.87
Paving Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26

2016	7.45	2.35	6.89	0.01	2.59	0.13	2.72	0.55	0.12	0.67	1,407.84
Asphalt 12/28/2015-01/11/2016	0.04	0.09	0.05	0.00	0.00	0.01	0.01	0.00	0.01	0.01	19.19
Paving Off-Gas	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.01	0.05	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.97
Paving On Road Diesel	0.00	0.05	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.77
Paving Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
Building 01/11/2015-08/22/2016	0.40	2.04	6.66	0.01	0.05	0.12	0.17	0.02	0.10	0.12	1,348.46
Building Off Road Diesel	0.21	1.24	1.05	0.00	0.00	0.07	0.07	0.00	0.07	0.07	188.65
Building Vendor Trips	0.05	0.55	0.53	0.00	0.01	0.02	0.03	0.00	0.02	0.02	230.72
Building Worker Trips	0.15	0.25	5.07	0.01	0.05	0.02	0.07	0.02	0.02	0.03	929.09
Fine Grading 11/30/2015-01/11/2016	0.03	0.22	0.13	0.00	2.54	0.01	2.55	0.53	0.01	0.54	31.85
Fine Grading Dust	0.00	0.00	0.00	0.00	2.54	0.00	2.54	0.53	0.00	0.53	0.00
Fine Grading Off Road Diesel	0.03	0.22	0.12	0.00	0.00	0.01	0.01	0.00	0.01	0.01	30.95
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
Coating 08/08/2016-09/05/2017	6.98	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.34
Architectural Coating	6.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.34
2017	11.76	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.06
Coating 08/08/2016-09/05/2017	11.76	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.06
Architectural Coating	11.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.06

Phase Assumptions

Phase: Fine Grading 11/30/2015 - 01/11/2016 - Default Fine Site Grading Description

Total Acres Disturbed: 145.08

Maximum Daily Acreage Disturbed: 36.27

Fugitive Dust Level of Detail: Default

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20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day

1 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day

3 Scrapers (313 hp) operating at a 0.72 load factor for 8 hours per day

3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Paving 12/28/2015 - 01/11/2016 - Default Paving Description

Acres to be Paved: 36.27

Off-Road Equipment:

1 Pavers (100 hp) operating at a 0.62 load factor for 8 hours per day

2 Paving Equipment (104 hp) operating at a 0.53 load factor for 8 hours per day

2 Rollers (95 hp) operating at a 0.56 load factor for 6 hours per day

Phase: Building Construction 01/11/2015 - 08/22/2016 - Default Building Construction Description

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 7 hours per day

3 Forklifts (145 hp) operating at a 0.3 load factor for 8 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 08/08/2016 - 09/05/2017 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 01/01/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 01/01/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Interior Coatings begins 01/01/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 01/01/2005 ends 12/31/2040 specifies a VOC of 250

Unmitigated URBEMIS Operational (Mobile Only) Output

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Urbemis 2007 Version 9.2.4

Detail Report for Annual Operational Unmitigated Emissions (Tons/Year)

File Name: U:\Lewis Lincoln\Calculations\Traffic\ENVIRON URBEMIS files\ENVIRON_Lewis Lincoln_operational.urb924

Project Name: Full Development Year 202-0

Project Location: Placer County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL EMISSION ESTIMATES (Annual Tons Per Year, Unmitigated)

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	14.65	15.95	150.26	0.24	43.56	8.30	24,778.13
Apartments low rise	3.66	3.86	36.37	0.06	10.54	2.01	5,997.12
Elementary school	1.51	1.04	9.54	0.02	2.83	0.54	1,599.61
Racquet club	0.16	0.18	1.64	0.00	0.49	0.09	277.13
Strip mall	3.35	3.94	35.66	0.06	10.69	2.03	6,022.24
General office building	0.02	0.03	0.24	0.00	0.07	0.01	39.60
TOTALS (tons/year, unmitigated)	23.35	25.00	233.71	0.38	68.18	12.98	38,713.83

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2020 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	566.00	9.57	dwelling units	1,698.00	16,249.86	138,931.43
Apartments low rise	35.62	6.90	dwelling units	570.00	3,933.00	33,625.97
Elementary school		1.29	students	900.00	1,161.00	9,032.58
Racquet club		14.03	1000 sq ft	15.00	210.45	1,569.43
Strip mall		42.94	1000 sq ft	107.50	4,616.05	34,126.46
General office building		11.01	1000 sq ft	2.50	27.53	223.02
					26,197.89	217,508.89

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	40.1	0.0	100.0	0.0
Light Truck < 3750 lbs	13.9	0.0	96.4	3.6
Light Truck 3751-5750 lbs	22.4	0.0	100.0	0.0
Med Truck 5751-8500 lbs	11.1	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	2.6	0.0	76.9	23.1
Lite-Heavy Truck 10,001-14,000 lbs	0.9	0.0	55.6	44.4
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	1.1	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	5.5	40.0	60.0	0.0
School Bus	0.1	0.0	0.0	100.0

<u>Vehicle Fleet Mix</u>

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Motor Home	1.3	0.0	84.6	15.4

<u>Travel Conditions</u>

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Elementary school				20.0	10.0	70.0
Racquet club				5.0	2.5	92.5
Strip mall				2.0	1.0	97.0
General office building				35.0	17.5	47.5

<u>Operational Changes to Defaults</u>

Mitigated URBEMIS Operational (Mobile Only) Output – Housing Density

Urbemis 2007 Version 9.2.4

Detail Report for Annual Operational Mitigated Emissions (Tons/Year)

File Name: U:\Lewis Lincoln\Calculations\Traffic\ENVIRON URBEMIS files\ENVIRON_Lewis Lincoln_operational_HousingDensity.urb924

Project Name: Full Development Year 202-0

Project Location: Placer County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL EMISSION ESTIMATES (Annual Tons Per Year, Mitigated)

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	11.76	12.51	117.91	0.19	34.18	6.51	19,444.49
Apartments low rise	3.42	3.57	33.68	0.05	9.76	1.86	5,553.86
Elementary school	1.51	1.04	9.54	0.02	2.83	0.54	1,599.61
Racquet club	0.16	0.18	1.64	0.00	0.49	0.09	277.13
Strip mall	3.35	3.94	35.66	0.06	10.69	2.03	6,022.24
General office building	0.02	0.03	0.24	0.00	0.07	0.01	39.60
TOTALS (tons/year, mitigated)	20.22	21.27	198.67	0.32	58.02	11.04	32,936.93

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2020 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Operational Mitigation Options Selected

Residential Mitigation Measures

Operational Mitigation Options Selected

Residential Mitigation Measures

Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 0% (calculated as a % of 9.57 trips/day)))

Note that the above percent is applied to a baseline of 9.57 and that product is

subtracted from the Unmitigated Trips

Inputs Selected:

The Presence of Local-Serving Retail checkbox was NOT selected.

Nonresidential Mitigation Measures

Non-Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 0%

Inputs Selected:

The Presence of Local-Serving Retail checkbox was NOT selected.

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	156.20	7.51	dwelling units	1,698.00	12,751.98	109,025.61
Apartments low rise	24.90	6.39	dwelling units	570.00	3,642.30	31,140.57
Elementary school		1.29	students	900.00	1,161.00	9,032.58
Racquet club		14.03	1000 sq ft	15.00	210.45	1,569.43

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Strip mall		42.94	1000 sq ft	107.50	4,616.05	34,126.46
General office building		11.01	1000 sq ft	2.50	27.53	223.02
					22,409.31	185,117.67

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	40.1	0.0	100.0	0.0
Light Truck < 3750 lbs	13.9	0.0	96.4	3.6
Light Truck 3751-5750 lbs	22.4	0.0	100.0	0.0
Med Truck 5751-8500 lbs	11.1	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	2.6	0.0	76.9	23.1
Lite-Heavy Truck 10,001-14,000 lbs	0.9	0.0	55.6	44.4
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	1.1	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	5.5	40.0	60.0	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.3	0.0	84.6	15.4

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Elementary school				20.0	10.0	70.0
Racquet club				5.0	2.5	92.5
Strip mall				2.0	1.0	97.0
General office building				35.0	17.5	47.5

Operational Changes to Defaults

Mitigated URBEMIS Operational (Mobile Only) Output – Local Serving Retail

Urbemis 2007 Version 9.2.4

Detail Report for Annual Operational Mitigated Emissions (Tons/Year)

File Name: U:\Lewis Lincoln\Calculations\Traffic\ENVIRON URBEMIS files\ENVIRON_Lewis Lincoln_operational_LocalServingRetail.urb924

Project Name: Full Development Year 202-0

Project Location: Placer County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL EMISSION ESTIMATES (Annual Tons Per Year, Mitigated)

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	14.38	15.63	147.25	0.24	42.69	8.13	24,282.57
Apartments low rise	3.57	3.75	35.36	0.06	10.25	1.95	5,830.77
Elementary school	1.50	1.02	9.35	0.02	2.77	0.53	1,567.62
Racquet club	0.16	0.18	1.61	0.00	0.48	0.09	271.58
Strip mall	3.29	3.86	34.95	0.06	10.48	1.99	5,901.79
General office building	0.02	0.03	0.23	0.00	0.07	0.01	38.81
TOTALS (tons/year, mitigated)	22.92	24.47	228.75	0.38	66.74	12.70	37,893.14

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2020 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

<u>Operational Mitigation Options Selected</u>

<u>Residential Mitigation Measures</u>

Operational Mitigation Options Selected

Residential Mitigation Measures

Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 2% (calculated as a % of 9.57 trips/day)))

Note that the above percent is applied to a baseline of 9.57 and that product is

subtracted from the Unmitigated Trips

Inputs Selected:

The Presence of Local-Serving Retail checkbox was selected.

Nonresidential Mitigation Measures

Non-Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 2%

Inputs Selected:

The Presence of Local-Serving Retail checkbox was selected.

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	566.00	9.38	dwelling units	1,698.00	15,924.86	136,152.80
Apartments low rise	35.62	6.71	dwelling units	570.00	3,823.90	32,693.22
Elementary school		1.26	students	900.00	1,137.78	8,851.93
Racquet club		13.75	1000 sq ft	15.00	206.24	1,538.04

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Strip mall		42.08	1000 sq ft	107.50	4,523.73	33,443.93
General office building		10.79	1000 sq ft	2.50	26.97	218.56
					25,643.48	212,898.48

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	40.1	0.0	100.0	0.0
Light Truck < 3750 lbs	13.9	0.0	96.4	3.6
Light Truck 3751-5750 lbs	22.4	0.0	100.0	0.0
Med Truck 5751-8500 lbs	11.1	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	2.6	0.0	76.9	23.1
Lite-Heavy Truck 10,001-14,000 lbs	0.9	0.0	55.6	44.4
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	1.1	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	5.5	40.0	60.0	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.3	0.0	84.6	15.4

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4

<u>Travel Conditions</u>

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Elementary school				20.0	10.0	70.0
Racquet club				5.0	2.5	92.5
Strip mall				2.0	1.0	97.0
General office building				35.0	17.5	47.5

<u>Operational Changes to Defaults</u>

Mitigated URBEMIS Operational (Mobile Only) Output – Bicycle Network

Urbemis 2007 Version 9.2.4

Detail Report for Annual Operational Mitigated Emissions (Tons/Year)

File Name: U:\Lewis Lincoln\Calculations\Traffic\ENVIRON URBEMIS files\ENVIRON_Lewis Lincoln_operational_BicycleNetwork.urb924

Project Name: Full Development Year 202-0

Project Location: Placer County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL EMISSION ESTIMATES (Annual Tons Per Year, Mitigated)

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	14.24	15.47	145.75	0.24	42.25	8.05	24,034.79
Apartments low rise	3.52	3.70	34.85	0.06	10.10	1.93	5,747.59
Elementary school	1.49	1.01	9.25	0.02	2.75	0.52	1,551.62
Racquet club	0.16	0.18	1.59	0.00	0.48	0.09	268.81
Strip mall	3.26	3.83	34.59	0.06	10.37	1.97	5,841.57
General office building	0.02	0.02	0.23	0.00	0.07	0.01	38.41
TOTALS (tons/year, mitigated)	22.69	24.21	226.26	0.38	66.02	12.57	37,482.79

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2020 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

<u>Operational Mitigation Options Selected</u>

<u>Residential Mitigation Measures</u>

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<u>Operational Mitigation Options Selected</u>

<u>Residential Mitigation Measures</u>

Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 0% (calculated as a % of 9.57 trips/day)))

Note that the above percent is applied to a baseline of 9.57 and that product is

subtracted from the Unmitigated Trips

Inputs Selected:

The Presence of Local-Serving Retail checkbox was NOT selected.

Residential Pedestrian/Bicycle Friendliness Mitigation

Percent Reduction in Trips is 3% (calculated as a % of 9.57 trips/day)

Note that the above percent is applied to a baseline of 9.57 and that product is

subtracted from the Unmitigated Trips

Inputs Selected:

The Number of Intersections per Square Mile is 0

The Percent of Streets with Sidewalks on One Side is 0%

The Percent of Streets with Sidewalks on Both Sides is 0%

The Percent of Arterials/Collectors with Bike Lanes or where Suitable,

Direct Parallel Routes Exist is 100%

<u>Nonresidential Mitigation Measures</u>

Non-Residential Local-Serving Retail Mitigation

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Nonresidential Mitigation Measures

Percent Reduction in Trips is 0%

Inputs Selected:

The Presence of Local-Serving Retail checkbox was NOT selected.

Non-Residential Pedestrian/Bicycle Friendliness Mitigation

Percent Reduction in Trips is 3%

Inputs Selected:

The Number of Intersections per Square Mile is 0

The Percent of Streets with Sidewalks on One Side is 0%

The Percent of Streets with Sidewalks on Both Sides is 0%

The Percent of Arterials/Collectors with Bike Lanes or where Suitable,

Direct Parallel Routes Exist is 100%

<div align="center">Summary of Land Uses</div>

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	566.00	9.28	dwelling units	1,698.00	15,762.36	134,763.48
Apartments low rise	35.62	6.61	dwelling units	570.00	3,769.35	32,226.84
Elementary school		1.25	students	900.00	1,126.17	8,761.60
Racquet club		13.61	1000 sq ft	15.00	204.14	1,522.35
Strip mall		41.65	1000 sq ft	107.50	4,477.57	33,102.66

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
General office building	10.68		1000 sq ft	2.50	26.70	216.33
					25,366.29	210,593.26

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	40.1	0.0	100.0	0.0
Light Truck < 3750 lbs	13.9	0.0	96.4	3.6
Light Truck 3751-5750 lbs	22.4	0.0	100.0	0.0
Med Truck 5751-8500 lbs	11.1	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	2.6	0.0	76.9	23.1
Lite-Heavy Truck 10,001-14,000 lbs	0.9	0.0	55.6	44.4
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	1.1	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	5.5	40.0	60.0	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.3	0.0	84.6	15.4

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Elementary school				20.0	10.0	70.0
Racquet club				5.0	2.5	92.5
Strip mall				2.0	1.0	97.0
General office building				35.0	17.5	47.5

Operational Changes to Defaults

Mitigated URBEMIS Operational (Mobile Only) Output – Pedestrian Network

Urbemis 2007 Version 9.2.4

Detail Report for Annual Operational Mitigated Emissions (Tons/Year)

File Name: U:\Lewis Lincoln\Calculations\Traffic\ENVIRON URBEMIS files\ENVIRON_Lewis Lincoln_operational_PedestrianNetwork.urb924

Project Name: Full Development Year 202-0

Project Location: Placer County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL EMISSION ESTIMATES (Annual Tons Per Year, Mitigated)

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	14.24	15.47	145.75	0.24	42.25	8.05	24,034.79
Apartments low rise	3.52	3.70	34.85	0.06	10.10	1.93	5,747.59
Elementary school	1.49	1.01	9.25	0.02	2.75	0.52	1,551.62
Racquet club	0.16	0.18	1.59	0.00	0.48	0.09	268.81
Strip mall	3.26	3.83	34.59	0.06	10.37	1.97	5,841.57
General office building	0.02	0.02	0.23	0.00	0.07	0.01	38.41
TOTALS (tons/year, mitigated)	22.69	24.21	226.26	0.38	66.02	12.57	37,482.79

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2020 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Operational Mitigation Options Selected

Residential Mitigation Measures

<u>Operational Mitigation Options Selected</u>

<u>Residential Mitigation Measures</u>

Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 0% (calculated as a % of 9.57 trips/day)))

Note that the above percent is applied to a baseline of 9.57 and that product is

subtracted from the Unmitigated Trips

Inputs Selected:

The Presence of Local-Serving Retail checkbox was NOT selected.

Residential Pedestrian/Bicycle Friendliness Mitigation

Percent Reduction in Trips is 3% (calculated as a % of 9.57 trips/day)

Note that the above percent is applied to a baseline of 9.57 and that product is

subtracted from the Unmitigated Trips

Inputs Selected:

The Number of Intersections per Square Mile is 0

The Percent of Streets with Sidewalks on One Side is 0%

The Percent of Streets with Sidewalks on Both Sides is 100%

The Percent of Arterials/Collectors with Bike Lanes or where Suitable,

Direct Parallel Routes Exist is 0%

<u>Nonresidential Mitigation Measures</u>

Non-Residential Local-Serving Retail Mitigation

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Nonresidential Mitigation Measures

Percent Reduction in Trips is 0%

Inputs Selected:

The Presence of Local-Serving Retail checkbox was NOT selected.

Non-Residential Pedestrian/Bicycle Friendliness Mitigation

Percent Reduction in Trips is 3%

Inputs Selected:

The Number of Intersections per Square Mile is 0

The Percent of Streets with Sidewalks on One Side is 0%

The Percent of Streets with Sidewalks on Both Sides is 100%

The Percent of Arterials/Collectors with Bike Lanes or where Suitable,

Direct Parallel Routes Exist is 0%

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	566.00	9.28	dwelling units	1,698.00	15,762.36	134,763.48
Apartments low rise	35.62	6.61	dwelling units	570.00	3,769.35	32,226.84
Elementary school		1.25	students	900.00	1,126.17	8,761.60
Racquet club		13.61	1000 sq ft	15.00	204.14	1,522.35
Strip mall		41.65	1000 sq ft	107.50	4,477.57	33,102.66

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
General office building		10.68	1000 sq ft	2.50	26.70	216.33
					25,366.29	210,593.26

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	40.1	0.0	100.0	0.0
Light Truck < 3750 lbs	13.9	0.0	96.4	3.6
Light Truck 3751-5750 lbs	22.4	0.0	100.0	0.0
Med Truck 5751-8500 lbs	11.1	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	2.6	0.0	76.9	23.1
Lite-Heavy Truck 10,001-14,000 lbs	0.9	0.0	55.6	44.4
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	1.1	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	5.5	40.0	60.0	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.3	0.0	84.6	15.4

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6

<div align="center">Travel Conditions</div>

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Elementary school				20.0	10.0	70.0
Racquet club				5.0	2.5	92.5
Strip mall				2.0	1.0	97.0
General office building				35.0	17.5	47.5

<div align="center">Operational Changes to Defaults</div>

Mitigated URBEMIS Operational (Mobile Only) Output – Connectivity

Urbemis 2007 Version 9.2.4

Detail Report for Annual Operational Mitigated Emissions (Tons/Year)

File Name: U:\Lewis Lincoln\Calculations\Traffic\ENVIRON URBEMIS files\ENVIRON_Lewis Lincoln_operational_Connectivity.urb924

Project Name: Full Development Year 202-0

Project Location: Placer County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL EMISSION ESTIMATES (Annual Tons Per Year, Mitigated)

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	14.50	15.77	148.61	0.24	43.08	8.21	24,507.10
Apartments low rise	3.61	3.80	35.82	0.06	10.38	1.98	5,906.14
Elementary school	1.50	1.03	9.44	0.02	2.80	0.53	1,582.11
Racquet club	0.16	0.18	1.63	0.00	0.49	0.09	274.09
Strip mall	3.32	3.90	35.27	0.06	10.58	2.01	5,956.36
General office building	0.02	0.03	0.23	0.00	0.07	0.01	39.17
TOTALS (tons/year, mitigated)	23.11	24.71	231.00	0.38	67.40	12.83	38,264.97

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2020 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Operational Mitigation Options Selected

Residential Mitigation Measures

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<u>Operational Mitigation Options Selected</u>

<u>Residential Mitigation Measures</u>

Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 0% (calculated as a % of 9.57 trips/day)))

Note that the above percent is applied to a baseline of 9.57 and that product is

subtracted from the Unmitigated Trips

Inputs Selected:

The Presence of Local-Serving Retail checkbox was NOT selected.

Residential Pedestrian/Bicycle Friendliness Mitigation

Percent Reduction in Trips is 1.09% (calculated as a % of 9.57 trips/day)

Note that the above percent is applied to a baseline of 9.57 and that product is

subtracted from the Unmitigated Trips

Inputs Selected:

The Number of Intersections per Square Mile is 474

The Percent of Streets with Sidewalks on One Side is 0%

The Percent of Streets with Sidewalks on Both Sides is 0%

The Percent of Arterials/Collectors with Bike Lanes or where Suitable,

Direct Parallel Routes Exist is 0%

<u>Nonresidential Mitigation Measures</u>

Non-Residential Local-Serving Retail Mitigation

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Nonresidential Mitigation Measures

Percent Reduction in Trips is 0%

Inputs Selected:

The Presence of Local-Serving Retail checkbox was NOT selected.

Non-Residential Pedestrian/Bicycle Friendliness Mitigation

Percent Reduction in Trips is 1.09%

Inputs Selected:

The Number of Intersections per Square Mile is 474

The Percent of Streets with Sidewalks on One Side is 0%

The Percent of Streets with Sidewalks on Both Sides is 0%

The Percent of Arterials/Collectors with Bike Lanes or where Suitable,

Direct Parallel Routes Exist is 0%

<div align="center">Summary of Land Uses</div>

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	566.00	9.47	dwelling units	1,698.00	16,072.11	137,411.73
Apartments low rise	35.62	6.80	dwelling units	570.00	3,873.33	33,115.83
Elementary school		1.28	students	900.00	1,148.30	8,933.78
Racquet club		13.88	1000 sq ft	15.00	208.15	1,552.26
Strip mall		42.47	1000 sq ft	107.50	4,565.56	33,753.17

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
General office building		10.89	1000 sq ft	2.50	27.22	220.58
					25,894.67	214,987.35

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	40.1	0.0	100.0	0.0
Light Truck < 3750 lbs	13.9	0.0	96.4	3.6
Light Truck 3751-5750 lbs	22.4	0.0	100.0	0.0
Med Truck 5751-8500 lbs	11.1	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	2.6	0.0	76.9	23.1
Lite-Heavy Truck 10,001-14,000 lbs	0.9	0.0	55.6	44.4
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	1.1	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	5.5	40.0	60.0	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.3	0.0	84.6	15.4

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Elementary school				20.0	10.0	70.0
Racquet club				5.0	2.5	92.5
Strip mall				2.0	1.0	97.0
General office building				35.0	17.5	47.5

Operational Changes to Defaults

Mitigated URBEMIS Operational (Mobile Only) Output – All Mitigation Measures

Urbemis 2007 Version 9.2.4

Detail Report for Annual Operational Mitigated Emissions (Tons/Year)

File Name: U:\Lewis Lincoln\Calculations\Traffic\ENVIRON URBEMIS files\ENVIRON_Lewis Lincoln_operational_ALL mitigation measures.urb924

Project Name: Full Development Year 202-0

Project Location: Placer County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL EMISSION ESTIMATES (Annual Tons Per Year, Mitigated)

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	10.54	11.06	104.25	0.17	30.22	5.76	17,191.21
Apartments low rise	3.01	3.09	29.09	0.05	8.43	1.61	4,797.45
Elementary school	1.43	0.95	8.67	0.01	2.57	0.49	1,454.14
Racquet club	0.15	0.16	1.49	0.00	0.45	0.09	251.92
Strip mall	3.06	3.59	32.42	0.05	9.72	1.85	5,474.59
General office building	0.02	0.02	0.22	0.00	0.06	0.01	36.00
TOTALS (tons/year, mitigated)	18.21	18.87	176.14	0.28	51.45	9.81	29,205.31

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2020 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

<u>Operational Mitigation Options Selected</u>

<u>Residential Mitigation Measures</u>

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<u>Operational Mitigation Options Selected</u>

<u>Residential Mitigation Measures</u>

Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 2% (calculated as a % of 9.57 trips/day)))

Note that the above percent is applied to a baseline of 9.57 and that product is

subtracted from the Unmitigated Trips

Inputs Selected:

The Presence of Local-Serving Retail checkbox was selected.

Residential Pedestrian/Bicycle Friendliness Mitigation

Percent Reduction in Trips is 7.09% (calculated as a % of 9.57 trips/day)

Note that the above percent is applied to a baseline of 9.57 and that product is

subtracted from the Unmitigated Trips

Inputs Selected:

The Number of Intersections per Square Mile is 474

The Percent of Streets with Sidewalks on One Side is 0%

The Percent of Streets with Sidewalks on Both Sides is 100%

The Percent of Arterials/Collectors with Bike Lanes or where Suitable,

Direct Parallel Routes Exist is 100%

<u>Nonresidential Mitigation Measures</u>

Non-Residential Local-Serving Retail Mitigation

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Nonresidential Mitigation Measures

Percent Reduction in Trips is 2%

Inputs Selected:

The Presence of Local-Serving Retail checkbox was selected.

Non-Residential Pedestrian/Bicycle Friendliness Mitigation

Percent Reduction in Trips is 7.09%

Inputs Selected:

The Number of Intersections per Square Mile is 474

The Percent of Streets with Sidewalks on One Side is 0%

The Percent of Streets with Sidewalks on Both Sides is 100%

The Percent of Arterials/Collectors with Bike Lanes or where Suitable,

Direct Parallel Routes Exist is 100%

<div align="center">Summary of Land Uses</div>

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	156.20	6.64	dwelling units	1,698.00	11,274.24	96,391.40
Apartments low rise	24.90	5.52	dwelling units	570.00	3,146.24	26,899.41
Elementary school		1.17	students	900.00	1,055.42	8,211.17
Racquet club		12.75	1000 sq ft	15.00	191.31	1,426.71
Strip mall		39.04	1000 sq ft	107.50	4,196.27	31,023.05

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
General office building		10.01	1000 sq ft	2.50	25.02	202.74
					19,888.50	164,154.48

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	40.1	0.0	100.0	0.0
Light Truck < 3750 lbs	13.9	0.0	96.4	3.6
Light Truck 3751-5750 lbs	22.4	0.0	100.0	0.0
Med Truck 5751-8500 lbs	11.1	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	2.6	0.0	76.9	23.1
Lite-Heavy Truck 10,001-14,000 lbs	0.9	0.0	55.6	44.4
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	1.1	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	5.5	40.0	60.0	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.3	0.0	84.6	15.4

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6

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Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Elementary school				20.0	10.0	70.0
Racquet club				5.0	2.5	92.5
Strip mall				2.0	1.0	97.0
General office building				35.0	17.5	47.5

Operational Changes to Defaults

**Appendix B:
Life Cycle Greenhouse Gas Emissions from
Building Materials**

Life Cycle Greenhouse
Gas Emissions
from Building Materials

Prepared for:
Lewis Planned Communities
Sacramento, California

Prepared by:
ENVIRON International Corporation
San Francisco, California

Date:
March 25, 2010

Project Number:
03-22097D

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Contents

Acronyms

AP-42	Compilation of Air Pollutant Emission Factors
$CaCO_3$	limestone
CaO	calcium oxide
CCAR	California Climate Action Registry
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
DOE	Department of Energy
EERE	Energy Efficiency and Renewable Energy
EIA	Energy Information Administration
ENVIRON	ENVIRON International Corporation
ft^2	square feet
GHG	greenhouse gas
GRP	General Reporting Protocol
kWh/m^2	kilowatt hour per square meter
LCA	life cycle analyses
MMBTU	million British thermal units

EXECUTIVE SUMMARY

This report evaluates the life cycle greenhouse gas (GHG) emissions associated with the building materials used in the construction of the Lewis Property at Village 7 (the "Project"). The life cycle GHG emissions include the embodied energy from the materials manufacture and the energy used to transport those materials to the site. This report then compares the life cycle GHG emissions to the overall annual operational emissions of the Project. The materials analyzed in this report include materials for 1) residential and non-residential buildings and 2) site infrastructure. This report calculates the overall life cycle emissions from construction materials to be 367 – 2,866 tonnes per year, or 1.7 – 13% of the overall mitigated Project emissions.

ENVIRON estimated the life cycle GHG emissions for buildings by conducting an analysis of available literature on life cycle analyses (LCA) for buildings. According to these studies, approximately 75 - 97% of GHG emissions from buildings are associated with energy usage during the operational phase; the other 3 - 25% of the GHG emissions are due to material manufacture and transport. Using the GHG emissions from the operation of the Lewis Property at Village 7, 3% to 25% corresponds to 256 – 2,755 tonnes CO_2 per year or 1.2 – 13% of the Project's mitigated emissions.

ENVIRON calculated the life cycle GHG emissions for infrastructure (roads, storm drains, utilities, gas, electricity, cable) to be equal to a one time emission of 4,441 tonnes CO_2. This analysis considered the manufacture and transport of concrete and asphalt. Based on this analysis, the manufacture of the materials leads to 3,756 tonnes of emissions, and the transport of the materials leads to 685 tonnes of CO_2 emissions. The majority of the emissions for infrastructure result from the manufacture of concrete because of the higher CO_2 emission factor associated with this process. Because the asphalt and concrete are locally sourced, the transportation emissions are relatively small. If a 40 year lifespan of the infrastructure is assumed, the total annualized emissions are 111 tonnes per year or 0.5% of the Project's mitigated emissions.

The overall life cycle emissions from embodied energy in Lewis Property building materials, annualized by 40 years, are 367 – 2,866 tonnes CO_2 per year. This represents 1.7 – 13% of the annualized GHG mitigated emissions from the Project. The emissions are based on general life cycle analysis studies and may not reflect the design features of the Project.

1 Introduction

This report evaluates the life cycle greenhouse gas (GHG) emissions associated with the building materials used in the construction of the Lewis Property at Village 7 (the "Project"). The life cycle GHG emissions include the embodied energy from the materials manufacture and the energy used to transport those materials to the site. This report then compares the life cycle GHG emissions to the overall annual operational emissions of the Project. The materials analyzed in this report include materials for 1) residential and non-residential buildings and 2) site infrastructure.

1.1 Background on Life Cycle Analysis

LCA is a method developed to evaluate the mass balance of inputs and outputs of systems and to organize and convert those inputs and outputs into environmental themes or categories. In this case, the LCA is related to GHG emissions associated with the different stages of a life cycle. The LCA field is still relatively new, and while there are general standards for goals and general practices for LCAs[1] the specific methodologies and, in particular, the boundaries chosen for the LCA makes inter-comparison of various studies difficult. Simple choices such as the useful life of a building or road, for example, can change the LCA outcome substantially. Additionally, the geographic location, climatic zone and building type significantly influence patterns of energy consumption (and energy efficiency) and therefore determine life cycle GHG emissions, which makes comparisons among different studies difficult.

The calculations and results presented in this report are estimates and should be used only for a general comparison to the overall GHG emissions estimated in the Climate Change Section of the Draft EIR for the Project. LCA emissions vary based on input assumptions and assessment boundaries (e.g., how far back to trace the origin of a material). Assumptions made in this report are generally conservative. However, due to the open-ended nature of LCAs, the analysis is not exact and may be highly uncertain.

2 Emissions Estimates

2.1 Life Cycle GHG Emissions from Building Materials

ENVIRON estimated the life cycle GHG emissions for building materials by conducting an analysis of available literature on LCA for buildings. According to these studies, approximately 75 - 97% of GHG emissions from buildings are associated with energy usage during the operational phase; the other 3 - 25% of the GHG emissions are due to building material manufacture and transport. Based on the GHG emissions from the operation of Lewis Property

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[1] ISO 14044 and ISO 14040

buildings[2], 3% to 25% corresponds to 256 – 2,755 tonnes CO_2 per year, as shown in Table 1. The specific LCA studies used are discussed in the next section.

With the current energy generation mix in the US which relies heavily on fossil fuel based sources, focusing on energy efficiency measures (which ultimately reduces lifetime GHG emissions) is more effective in reducing the overall GHG footprint than focusing on materials with low embodied energy. As the energy generation measures reduce their GHG intensity (shift away from fossil fuel to renewable fuels), material selection will be a more critical factor in a building's GHG emissions over its life cycle.

2.1.1 LCA Studies for Buildings

The LCA literature studies tend to compare the energy used to make and transport building materials, or the embodied energy, with the operational energy use. In this manner, the relative importance of the embodied energy can be assessed. ENVIRON discusses several studies that compare the embodied energy and the operational energy.

A life cycle assessment of a 66,000 ft^2 sustainably-designed university building[3] in the US Mid-west[4] estimated that the GHG emissions associated with its energy use over a 100-year time horizon to be 135,000 metric tones of carbon dioxide equivalent (CO_2e), 96.5% of which result from operations phase activities, 3% from material production (of which ⅓ is cement production) and 0.5% from transportation and decommissioning combined. The study also notes that the GHG emissions closely matches the distribution of life cycle energy distributions, indicating that operational energy requirements are the key factor determining overall GHG emissions, especially when considering fossil fuel based energy generation.

A study of single-family homes in the US Mid-west,[5] one built using standard construction techniques and the second incorporating energy efficiency measures, reached similar conclusions. Over the life cycle of the homes (assumed to be 50 years), the conventional home uses 15,000 MMBTU and the energy efficient configuration uses 6,000 MMBTU of energy, representing a 60% reduction in overall energy. As GHG emissions closely match the distribution of life cycle energy distributions, the energy efficient variant resulted in 63% fewer emissions. Of the total energy use over the structure's life cycle, 91% of the conventional house total energy results from energy consumed in the use stage (e.g., operating energy). This value drops to 74% in the energy efficient home as the energy embodied in the building materials stays the same or is slightly higher than that in the conventional home and operating energy is reduced.

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[2] ENVIRON. 2010. *Climate Change Technical Report: Lewis Property at Village 7.* March.
[3] This evaluation includes 4 floors of classroom and open-plan offices and 3 floors of hotel rooms used as a surrogate for a generic commercial structure.
[4] Scheuer, C., G.A. Keoleian, and P. Reppe. 2003. Life cycle energy and environmental performance of a new university building: Modeling challenges and design implications. *Energy and Buildings*, **35**(10): p. 1049.
[5] Keoleian, G.A., S. Blanchard, and P. Reppe. 2000. Life-cycle energy, costs, and strategies for improving a single-family house. *Journal of Industrial Ecology*, **4**(2): p. 135.

Similarly, a review of 60 case studies of homes from nine European countries in a variety of climates[6] indicated that operating energy represents the largest part of energy demand by a building during its life cycle. In one evaluation the operating energy is reported as between 92 - 95% for conventional construction and 72 - 90% for low-energy buildings[7] (which are also consistent with other literature references[8]). Sartori and Hestnes[6] also note that buildings constructed with energy efficiency measures may have a higher energy (and concomitant GHG emissions) embodied by the materials used in construction (e.g., more insulation, higher thermal mass), but over the lifespan of the building the overall energy use (operating and embodied energy) is dramatically lower due to the large reductions in operating energy. As an example, the embodied energy was estimated to be 1,171 kWh/m^2 for a conventional house and 1391 kWh/m^2 for a passive, energy efficient home, an increase of 220 kWh/m^2 or 19%. Over the lifetime of the building, however, the total energy (operating and embodied) of the conventional house was approximately 22,500 kWh/m^2, while the passive house was roughly 5,500 kWh/m^2, a four-fold decrease in the total energy over an assumed 80 year life cycle.

2.1.2 Energy Efficiency vs. Embodied Energy in Buildings

From our analysis of these assessments, we note the following major conclusions:

- To minimize GHG lifetime emissions, optimization of energy efficiency (both thermal and electrical) for the operational phase of a building should be the primary emphasis for design, especially when the energy supplied is generated from fossil fuel sources.

- Passive design measures such as the orientation of structure to maximize solar heating and daylighting as well as natural ventilation; heavy construction to increase the thermal mass of the structure with materials that have a high capacity for absorbing heat and change temperature slowly; and solar control like window shading[9] should be emphasized[10,11,12] as they have a negligible increase in embodied energy (GHG emissions from material production) and can reduce total energy substantially.[13]

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[6] Sartori, I. and A.G. Hestnes. 2007. Energy use in the life cycle of conventional and low-energy buildings: A review article. *Energy and Buildings*, **39**(3): p. 249.

[7] Winther, B.N. and A.G. Hestnes. 1999. Solar versus green: The analysis of a Norwegian row house. *Solar Energy*, **66**(6): p. 387.

[8] Adalberth, K., A. Almgren, and E.H. Petersen. 2001. Life Cycle Assessment of Four Multi-Family Buildings. *International Journal of Low Energy and Sustainable Buildings*, **2**.

[9] United Nations Environment Program 2007 Buildings and Climate Change report whole-house system measures are recommended for the Mediterranean and desert climate zones.

[10] Browning, W.D. and J.J. Romm. 1998. *Greening the Building and the Bottom Line.* Snowmass, Colorado: Rocky Mountain Institute.

[11] United Nations Environment Program. 2007. *Buildings and Climate Change: Status, Challenges and Opportunities.*

[12] US Department of Energy Building Technologies Program. 2007. www.eere.energy.gov/buildings/. October.

[13] Sartori, I. and A.G. Hestnes. 2007. Energy use in the life cycle of conventional and low-energy buildings: A review article. *Energy and Buildings*, **39**(3): p. 249.

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- Active energy efficiency measures (e.g., mechanical ventilation, artificial cooling, free cooling) may as much as double the embodied energy of the structure, but can halve overall energy usage.

- With the current energy generation mix in the US which relies heavily on fossil fuel based sources, focusing on energy efficiency measures (which ultimately reduces lifetime GHG emissions) is more effective in reducing the overall GHG footprint than focusing on materials with low embodied energy. As the energy generation measures reduce their GHG intensity (shift away from fossil fuel to renewable), material selection will be a more critical factor in a building's GHG emissions over its life cycle.

One cannot evaluate the life cycle emissions of a building product independent of the impact that the building product has on energy use. For example, studies that evaluate the relative embodied energy and GHG emissions associated with the production of structural materials such as steel, concrete or wood generally indicate that the wood products have the lowest GHG emissions as it is produced from a renewable resource that may actually remove CO_2 during its production phase and sequester it during its use phase.[14,15] However, these studies do not account for the effect of the material on overall building energy efficiency, which is often heavily dependent on the climate in which the building is located. For example, in desert climates, the thermal mass of the structure is important for energy savings, as the thermal mass cools at night and keeps the house cool during the day during hot weather and conversely heats during the day and keeps the house warm during the evening during cool weather. To increase thermal mass, concrete is much more effective than wood. In other types of climates (cooler with less solar heating), wood with insulation has a greater impact at improving overall building efficiency.

For some building products or systems, the net energy savings during the operational portion of the building's life cycle are comparable. If this is the case, then the alternative with the lowest embodied GHG emissions will result in the lowest life cycle GHG emissions.

Building materials with high replacement rates, like carpeting and wiring, can often have a high contribution to the overall GHG emissions as their impact is dependent on renovation schedules. For example, if two building materials have the same embodied energy but one is replaced every 5 years and the second is replaced every 25 years then the first will have five times the embodied energy over the lifetime of the building. As such Scheuer et al.[16] indicate that "[d]esign strategies that maximize the service life of building materials should be maximized." These strategies include designing the structure for minimal material use and choosing materials with low embodied energy, high recycled content, and long life spans.

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[14] Borjesson, P. and L. Gustavsson. 2000. Greenhouse gas balances in building construction: Wood versus concrete from life-cycle and forest land-use perspectives. *Energy Policy*, **28**(9): p. 575.

[15] Lenzen, M. and G. Treloar. 2002. Embodied energy in buildings: Wood versus concrete - Reply to Borjesson and Gustavsson. *Energy Policy*, **30**(3): p. 249.

[16] Scheuer, C., G.A. Keoleian, and P. Reppe. 2003. Life cycle energy and environmental performance of a new university building: Modeling challenges and design implications. *Energy and Buildings*, **35**(10): p. 1049.

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From our analysis of these product or system specific assessments, we note the following major conclusions:

- Products or systems which have the greatest impact in improving overall building energy efficiency over the building's life cycle should be selected to minimize life cycle GHG emissions. These alternatives may not necessarily have the lowest embodied GHG emissions.

- When evaluating products or systems that have similar impacts on overall building energy efficiency, alternatives with the lowest embodied GHG emissions should be selected to minimize GHG emissions.

- Materials with high replacement rates (e.g., carpeting, wiring) tend to have higher embodied energy due to their short life cycle, therefore minimizing embodied GHG emissions is most critical for these types of products or systems to minimize overall GHG emissions. Materials with low replacement rates (e.g., piping, air ducts) tend to have lower embodied energy over the life cycle of the building, therefore differences in overall GHG emissions between several alternatives are likely to be small.

2.2   GHG Emissions from Manufacture of Infrastructure Materials

ENVIRON evaluated the embodied energies of materials likely to be found in the infrastructure of the Lewis Property. The embodied energies of different materials vary based upon the transportation distance and manufacturing processes. A material that is locally-sourced may require a large amount of energy to be produced and, on the contrary, a material with a relatively low energy intensity may be sourced from farther away. ENVIRON assumed that concrete and asphalt will be among the dominant materials used in the infrastructure and estimated the embodied energies of these two materials. The manufacture of these materials results in overall CO_2 emissions of 3,756 tonnes.

2.2.1   Embodied Energy in Concrete Production

Concrete is composed primarily of cement, water, and aggregate such as sand and gravel, with small amounts of chemical admixtures. A typical concrete mix contains approximately 15% cement by volume.[17] Because the remaining 85% of concrete is composed of water and aggregate, ENVIRON assumed that all of the manufacture-related embodied energy in concrete stems from the production of cement.

There are two main sources of CO_2 emissions from the production of cement: "calcining" emissions and fossil fuel combustion emissions. Calcining emissions result from the chemical conversion of limestone ($CaCO_3$) to calcium oxide (CaO) and carbon dioxide (CO_2). CaO is a precursor to cement and CO_2 is released to the atmosphere. The emissions from fossil fuel

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[17]   Portland Cement Association. Cement and Concrete Basics. Available at:
http://www.cement.org/basics/concretebasics_concretebasics.asp

combustion vary based on fuel type, but in general slightly more than half of the emissions associated with cement production are attributed to calcining emissions and the remainder result from fossil fuel combustion.[18]

ENVIRON used three sources to estimate CO_2 emission factors for the production of cement. The Energy Information Administration (EIA)[19] and AP-42[20] estimate that 0.5 tonnes of CO_2 are emitted from the calcining process for every 1 tonne of cement produced. AP-42 also provides a range (0.75 – 1.19 tonnes CO_2 / tonne cement) of total CO_2 emission factors (including calcining emissions and fossil fuel combustion emissions). The consulting group Battelle[21] estimates a total CO_2 emission factor for cement production in North America of 0.99 tonnes CO_2 / tonne cement. These emission factors are presented in Table 2.

2.2.2 Embodied Energy in Asphalt Production

The manufacture of asphalt is less energy intensive than the manufacture of cement. Asphalt is composed of asphalt cement and aggregate; the aggregate typically constitutes 92% by weight of the asphalt mixture.[22] AP-42 estimates CO_2 emission factors for batch mix (37 pounds CO_2 / short ton asphalt) and drum mix (33 pounds CO_2 / short ton asphalt) hot mix asphalt plants based on fuel usage within the plants.[23] ENVIRON used the average of these two values to represent the embodied energy of asphalt for the Lewis Property infrastructure.

2.2.3 Embodied Energy in Infrastructure

ENVIRON used the CO_2 emission factors from cement and asphalt to estimate the embodied energy of the infrastructure materials in the Lewis Property. ENVIRON used volumes of virgin concrete and asphalt as provided by Lewis Planned Communities (Lewis), resulting in the predicted material amounts shown in Table 3. The estimated emissions from the manufacture of the infrastructure materials are presented in Table 4. Because concrete is 15% cement by volume,[24] the total volume of concrete in Table 3 is multiplied by 15% to yield the volume of cement presented in Table 4. The emissions from the cement manufacture are assumed to be equal to the emissions from concrete manufacture. One-time emissions from concrete and

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[18] USGS 2005 Minerals Yearbook: Cement. February 2007. pg 16.1-16.2. Available at:
http://minerals.usgs.gov/minerals/pubs/commodity/cement/cemenmyb05.pdf

[19] EIA. 2007. Energy Market and Economic Impacts of S.280, the Climate Stewardship and Innovation Act of 2007. August. Available at: http://www.eia.doe.gov/oiaf/servicerpt/csia/special_topics.html

[20] USEPA. 1995. AP42 Section 11.6: Portland Cement Manufacturing. January.
Available at: http://www.epa.gov/ttn/chief/ap42/ch11/final/c11s06.pdf

[21] Battelle. Humphreys, K. and Mahasenan, M. 2002. *Climate Change: Toward a Sustainable Cement Industry.* March.

[22] USEPA. 2004. AP42 section 11.1: Hot Mix Asphalt Plants. March.
Available at:http://www.epa.gov/ttn/chief/ap42/ch11/final/c11s01.pdf, pg 11.1-1.

[23] USEPA. 2004. AP42 section 11.1: Hot Mix Asphalt Plants. March.
Available at: http://www.epa.gov/ttn/chief/ap42/ch11/final/c11s01.pdf, Tables 11.1-5 and 11.1-7.

[24] Portland Cement Association. Cement and Concrete Basics.
Available at: http://www.cement.org/basics/concretebasics_concretebasics.asp

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asphalt manufacture for infrastructure materials are estimated to be 3,462 and 294 tonnes CO_2, respectively.

2.3   Transportation of Materials for Infrastructure

ENVIRON estimated the emissions from the transportation of the infrastructure. Based on information provided by Lewis, cement and asphalt are expected to be sourced within a distance of approximately 50 miles of the Project. Using the infrastructure material quantities specified in Table 3, ENVIRON estimated emissions of 685 tonnes CO_2 from the transportation of the concrete and asphalt in the infrastructure.[25] Details of the calculations are outlined in Table 5.

2.3.1   Calculation of Emissions from Transportation of Materials for Buildings

Although each particular shipper operates with greater or lesser efficiencies, ENVIRON assumed an average GHG emission rate per tonne-mile[26] for each mode of transportation. Although it is likely that more dense material has a slightly lower GHG shipping intensity than does less dense material, this analysis developed a single emission factor per tonne-mile of material moved, regardless of density, for each mode of transportation.

2.3.1.1   Emissions associated with transporting the material

Emission factors were calculated from DOE EERE energy intensity indicators.[27] EERE data is presented in terms of energy per mile traveled. These were converted using AP-42 conversion factors[28] for energy in different types of fuel, and California Climate Action Registry (CCAR) General Reporting Protocol (GRP)[29] emission factors for mass of CO_2 emitted per gallon of fuel. Trains and trucks are assumed to run on diesel. These emission factors are listed in Table 5. The emission factors developed above were multiplied by the distances traveled by each type of transportation.

2.4   Summary of Emissions from Buildings and Infrastructure

Table 6 presents the summary of the life cycle greenhouse gas (GHG) emissions associated with the building materials used in the construction of the Lewis Property. The life cycle GHG emissions include the embodied energy from the materials manufacture and the energy used to

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[25] For the estimates of emissions from material transportation, ENVIRON conservatively assumed that the entire concrete mix, not just cement, is transported from the source locations to the development site.

[26] A tonne-mile refers to the amount of material (in tonnes) moved a distance of one mile.

[27] Grams CO_2 per tonne-mile. See http://www1.eere.energy.gov/ba/pba/intensityindicators/.   Transportation sector data.

[28] USEPA. 1985. AP42 Appendix A: Miscellaneous Data and Conversion Factors. September. Available at http://www.epa.gov/ttn/chief/ap42/appendix/appa.pdf

[29] California Climate Action Registry (CCAR). 2009. *General Reporting Protocol (GRP), Version 3.1*. April. Available at: http://www.climateregistry.org/resources/docs/protocols/grp/GRP_3.1_January2009.pdf.

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transport those materials to the site. The materials analyzed include materials for 1) residential and non-residential buildings and 2) site infrastructure. This report calculates the overall life cycle emissions from construction materials to be 367 – 2,866 tonnes per year, or 1.7 – 13% of the overall Project's mitigated emissions.

Table 1
Life Cycle Greenhouse Gas (GHG) Emissions From Materials[1] Used for Buildings
Lewis Property at Village 7
Lincoln, California

GHG Emissions from Energy Usage Associated with Residential and Non-Residential Buildings[2]	Embodied Energy as Percentage of Overall Energy[3]	
	3%	**25%**
(tonnes CO_2 / year)		
8,264	256	2,755

Notes:

1. All materials were analyzed. See references below for more details.

2. Represents CO_2 emissions from electricity and natural gas use, which were calculated in the climate change technical report.

3. Percentages are based upon LCA studies below. The studies compared energy used in the manufacture and transport of materials to energy use from electricity and natural gas. Varying lifetimes of homes were assumed in each study. As homes become more energy efficient, the portion of GHGs from embodied energy increases.

Abbreviations:

CO_2 = carbon dioxide
LCA = life cycle analysis

Sources:

PBS&J Consulting. 2009. *Draft Environmental Impact Report SCH No. 2005062001: Village 7 Specific Plan Project.* June.

Scheuer, C., G.A. Keoleian, and P. Reppe. 2003. Life cycle energy and environmental performance of a new university building: Modeling challenges and design implications. *Energy and Buildings* , **35**(10): p. 1049.

Keoleian, G.A., S. Blanchard, and P. Reppe. 2000. Life-cycle energy, costs, and strategies for improving a single-family house. *Journal of Industrial Ecology* , **4**(2): p. 135.

Sartori, I. and A.G. Hestnes. 2007. Energy use in the life cycle of conventional and low-energy buildings: A review article. *Energy and Buildings* , **39**(3): p. 249.

Winther, B.N. and A.G. Hestnes. 1999. Solar versus green: The analysis of a Norwegian row house. *Solar Energy* , **66**(6): p. 387.

Adalberth, K., A. Almgren, and E.H. Petersen. 2001. Life Cycle Assessment of Four Multi-Family Buildings. *International Journal of Low Energy and Sustainable Buildings* , **2**.

Table 2
Greenhouse Gas (GHG) Emission Factors for the Manufacture of Cement
Lewis Property at Village 7
Lincoln, California

Data Source	Calcining Emissions[4]	Fossil Fuel Emissions[5]
	(tonnes CO_2/tonne cement)	
EIA[1]	0.5	-
EPA AP-42[2]	0.5	-
	0.75 - 1.19	
	0.92	
Battelle[3]	0.99	

Notes:

1. From the Energy Market and Economic Impacts of S.280, the Climate Stewardship and Innovation Act of 2007. Calculations are detailed in the Documentation for Emissions of Greenhouse Gases in the United States 2004, pg 35 - 38.

2. From AP-42 section 11.6: Portland Cement Manufacturing. Approximately 500 kg of CO_2 are released per Mg of cement produced during the calcining process; total manufacturing emissions depend on energy consumption (pg 11.6-6). Table 11.6-8 specifies 2,100 lbs CO_2 per ton of clinker produced (ENVIRON used the higher value instead of 1,800 lbs / ton to be conservative). Clinker is a precursor to cement. Using a clinker factor of 0.88 lb clinker/lb cement (from the Battelle report) yields an emission factor of 0.92 tonnes CO_2/tonne cement.

3. From Table 1-2 of the Battelle report. The North American average emission factor is 0.99 kg CO_2/kg cement; the global average is 0.87 kg CO_2/kg cement.

4. There are two main sources of CO_2 emissions from the manufacture of cement: the calcining process and fossil fuel combustion. Calcining emissions result from the chemical reaction of converting limestone ($CaCO_3$) to calcium oxide (CaO) and carbon dioxide (CO_2). CaO is a precursor to concrete and CO_2 is released to the atmosphere.

5. Fossil fuel combustion usually provides the energy necessary to manufacture cement. The emissions from the fossil fuel combustion vary depending on the type of fuel used; in general the combustion accounts for slightly less than half of the CO_2 emissions from the manufacture of cement.

Abbreviations:
AP-42 = Compilation of Air Pollutant Emission Factors
$CaCO_3$ = limestone
CaO = calcium oxide
CO_2 = carbon dioxide
EIA = Energy Information Administration
EPA = Environmental Protection Agency
kg = kilogram
lbs = pounds
Mg = megagram = 1,000 kg

Sources:
EIA Energy Market and Economic Impacts of S.280, the Climate Stewardship and Innovation Act of 2007. August 2007. http://www.eia.doe.gov/oiaf/servicerpt/csia/special_topics.html
USEPA AP42 Section 11.6: Portland Cement Manufacturing.
http://www.epa.gov/ttn/chief/ap42/ch11/final/c11s06.pdf
Battelle. Humphreys, K. and Mahasenan, M. 2002. Climate Change: Toward a Sustainable Cement Industry. March.

Table 3
Quantities of Infrastructure Materials
Lewis Property at Village 7
Lincoln, California

Material	Total Volume[1]
	(cu ft)
Concrete	555,010
Asphalt	578,573

Notes:

1. Materials volumes provided by Lewis Planned Communities.

Abbreviations:

cu ft = cubic foot

Table 4
Greenhouse Gas (GHG) Emissions from Manufacture of Infrastructure Materials
Lewis Property at Village 7
Lincoln, California

Material	Emission Factor	Volume of Material	Density	Mass of Material	Emissions from Manufacture of Material[3]
	(tonnes CO_2/tonne material)	(cu ft)	lbs/cu ft	(tonnes)	(tonnes CO_2)
Cement (in new concrete)[1]	0.990	83,252	93	3,497	3,462
Asphalt, new[2]	0.018	578,573	64	16,824	294
TOTAL					3,756

Notes:

1. Concrete is composed of cement, water, aggregate, and chemical admixtures; concrete mixtures are approximately 15% cement by volume (Portland Cement Association). Cement accounts for almost all of the CO_2 emissions associated with the manufacture of concrete. The cement emission factors provided by AP-42 cover a wide range of processing technologies and emission factors, so ENVIRON used the cement emission factor provided by the Battelle report.

2. From AP-42 section 11.1: Hot Mix Asphalt Plants. Tables 11.1-5 and 11.1-7. ENVIRON assumed an average emission factor from batch mix hot asphalt plants and drum mix hot asphalt plants.

3. Because the manufacture of cement is the main contributor to CO_2 emissions in the production of concrete, ENVIRON assumed that the emissions from the manufacture of cement are equal to the emissions from the overall manufacture of concrete.

Abbreviations:
CO_2 = carbon dioxide
cu ft = cubic feet
lbs = pounds

Sources:
Battelle. Humphreys, K. and Mahasenan, M. 2002. Climate Change: Toward a Sustainable Cement Industry. March.

USEPA AP42 section 11.1: Hot Mix Asphalt Plants. Tables 11.1-5 and 11.1-7. http://www.epa.gov/ttn/chief/ap42/ch11/final/c11s01.pdf
Intergovernmental Panel on Climate Change, Fourth Assessment Report, 2007. Table 2.14. Available at: http://ipcc-wg1.ucar.edu/wg1/Report/AR4WG1_Print_Ch02.pdf.
Portland Cement Association. Cement and Concrete Basics. http://www.cement.org/basics/concretebasics_concretebasics.asp

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Table 5
Greenhouse Gas (GHG) Emissions from Transportation of Infrastructure Raw Materials
Lewis Property at Village 7
Lincoln, California

Material	Total Mass Transported[1]	Distance from Source Location[2,3]	Mass-Distance[4]	Emission Factor[5]	Emissions to Transport to Construction Site[6]	
		Local Source	Local Source	Truck	Local Source	Total
	(tonnes material)	(miles)	(tonne-miles)	(grams CO_2/ tonne-mile)	(tonnes CO_2)	
Concrete	37,296	50	1,864,802	253	472	472
Asphalt	16,824	50	841,214		213	213
TOTAL						685

Notes:

1. The total mass transported is assumed to contain only virgin materials. For manufacturing emissions, only the amount of cement is considered; however, for transportation emissions, the entire mass of virgin concrete is considered because the concrete mix is transported from the source locations.

2. Based on information provided by Lewis Planned Communities, building materials are expected to be sources within approximately 50 miles of the Project.

3. Assumes all concrete and asphalt aggregate originates from a local source and the petroleum used in the asphalt also originates from a local source.

4. Mass distance is the mass of material multipled by the distance traveled. ENVIRON assumed that the petroleum, concrete and asphalt aggregate come from local sources.

5. Emission factors for truck calculated from DOE EERE energy intensity indicators. EERE data is presented in BTU / ton mile. These were converted using AP-42 conversion factors for energy in different types of fuel, and CCAR GRP emission factors for mass CO_2 emitted per gallon of fuel. Trucks are assumed to run on diesel.

6. Emissions calculated by multiplying the mass-distance by the emission factor. Because of the close proximity of potential source locations to Lewis Property at Village 7, ENVIRON conservatively assumed that all infrastructure materials will be transported by truck.

Abbreviations:
BTU = British thermal unit
CCAR = California Climate Action Registry
CO_2 = carbon dioxide
DOE = Department of Energy
EERE = Energy Efficiency and Renewable Energy
GRP = General Reporting Protocol

Sources:
DOE EERE energy intensity indicators. http://www1.eere.energy.gov/ba/pba/intensityindicators/. Transportation sector data.
AP42 conversions available at http://www.epa.gov/ttn/chief/ap42/appendix/appa.pdf

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Table 6
Summary of Life Cycle Greenhouse Gas (GHG) Emissions from Buildings and Infrastructure
Lewis Property at Village 7
Lincoln, California

Emissions Source[1]		Emissions from Manufacture of Materials[3]	Emissions from Transportation of Materials[4]	Total Emissions	Assumed Lifetime of Emissions Source[5]	Total Annualized Emissions[6]	Total Annual Emissions[7]	LCA Fraction of Total Emissions[8]
		(tonnes CO_2)			(years)	(tonnes CO_2 / year)	(tonnes CO_2 / year)	(%)
Buildings[2]	Low Estimate	10,224		10,224	40	256	21,937	1.2%
	High Estimate	110,189		110,189		2,755		13%
Infrastructure		3,756	685	4,441		111		0.5%
TOTAL		14664 - 114630		14664 - 114630		367 - 2866		1.7% - 13%

Notes:

1. ENVIRON estimated LCA emissions from two sources: buildings and infrastructure.

2. Emissions from buildings are shown as a range from a low to a high estimate based on the range presented in Table 1. The values in Table 1 are multiplied by the assumed lifetime of 40 years to yield total emissions in tonnes CO_2.

3. Emissions from the manufacture of materials for infrastructure are from Table 4.

4. Emissions from the transportation of materials for infrastructure are from Table 5.

5. The assumed lifetime of emissions source may be adjusted; here ENVIRON has assumed a conservatively short lifetime of 40 years.

6. Total emissions are divided by the assumed lifetime of emissions sources to yield the total annualized emissions.

7. From ENVIRON's Lewis Property at Village 7 Climate Change Report.

8. The LCA fraction of total emissions is calculated by dividing the total annualized emissions by the total emissions from Lewis Property at Village 7.

Abbreviations:

CO_2 = carbon dioxide
LCA = life cycle assessment

Sources:

Values are calculated using Tables 1 through 5 and the emissions presented in ENVIRON's Climate Change Technical Report for the Lewis Property at Village 7.

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