

Appendix F Public Facilities Element (PFE), 2006 Wastewater Constraints Analysis, and Fiscal Year 2017 – 2018 Wastewater CIPS
May 16, 2018

**Appendix F PUBLIC FACILITIES ELEMENT (PFE), 2006
WASTEWATER CONSTRAINTS ANALYSIS, AND
FISCAL YEAR 2017 – 2018 WASTEWATER CIPS**

(Included on CD)

FY 2017- 2018 BUDGET

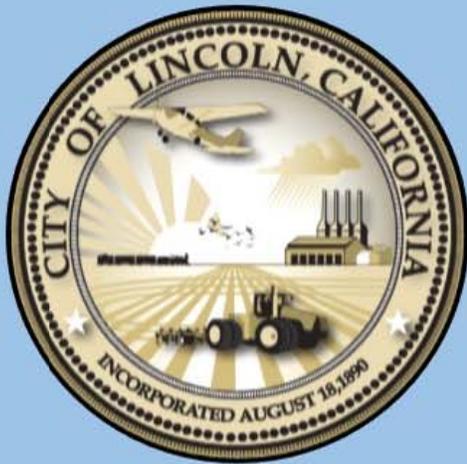


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Wastewater

CPPC Rank	#	PROJECT TITLE	PRIOR YEAR	FISCAL YEAR 17/18	FISCAL YEAR 18/19	FISCAL YEAR 19/20	FISCAL YEAR 20/21	FUTURE YEARS	TOTAL
1	411	WWTRF Expansion Phase 1	\$ 270,000	\$ 1,540,000	\$ 5,950,000	\$ 10,505,000	\$ -	\$ -	\$ 18,265,000
2	395	Nicolaus Road Pump Station Upgrades	\$ 220,000	\$ 185,000	\$ -	\$ -	\$ -	\$ -	\$ 405,000
3	396	Markham Ravine Sewer Rehabilitation	\$ 290,000	\$ 250,000	\$ -	\$ -	\$ -	\$ -	\$ 540,000
4	302	Existing Sewer Collection System Rehab	\$ -	\$ -	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 160,000
5	407	WWTRF Solar Project	\$ 35,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 35,000
6	425	Silver Spur Sanitary Sewer Lift Station	\$ -	\$ 400,000	\$ -	\$ -	\$ -	\$ -	\$ 400,000
7	426	WWTRF Reclaimed Water Storage	\$ -	\$ 1,280,000	\$ 1,550,000	\$ -	\$ -	\$ -	\$ 2,830,000
8	427	Aviation & Venture Sewer Line Rehab	\$ -	\$ 62,000	\$ 575,000	\$ -	\$ -	\$ -	\$ 637,000
9	300	Phase 2 Reclamation	\$ -	\$ 305,000	\$ -	\$ -	\$ -	\$ -	\$ 305,000
10	TBD	WWTRF Expansion Phase 2	\$ 815,000	\$ 4,022,000	\$ 8,115,000	\$ 11,295,000	\$ 750,000	\$ 11,500,000	\$ 13,000,000
		TOTAL	\$ 815,000	\$ 4,022,000	\$ 8,115,000	\$ 11,295,000	\$ 790,000	\$ 11,540,000	\$ 36,577,000



Project Title:
WWTRF Expansion Phase 1

Department/Division/Contact
City Engineer / Ray Leftwich

Project Duration
Fiscal Year Start = 17/18
Fiscal Year End = 19/20

Project Location or Request
WWTRF

Strategic Goal Relevance
Infrastructure, Economic Development

Legislative/Regulatory; Health & Safety; Council Priority
Plant requires immediate expansion in order to facilitate continued development.

Prioritization		Project No.
Depart. Score	Final Rank	
92	1	411

Relevant Graphic Detail



Project Description/Business Justification
Expand WWTRF capacity by 1.2mgd with addition of Oxidation Ditch and related components. Next expansion will include addition of a Clarifier and related components for additional 0.9mgd of capacity. WWTRF is nearing facility capacity and additional capacity is needed to facilitate future development.

Project's Return on Investment

Operating Cost Impacts of Project/Request
Operation of WWTRF is funded through monthly utility bills of rate payers. Capital cost of project will be funded through payment of Connection Fees from builders and developers as a requirement of Building Permits and Final Maps.

Project's Impact on Other Departments

Project Linkages/Synergies

Strength of Projection(s) & Detail

Bid Numbers
 Engineer's Estimate
 Quote
 Best Judgement
 Guesstimate/#ers Rolled Forward

CAPITAL COSTS

Expenditures	Prior Year	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Project/Const. Management		\$ 140,000	\$ 750,000	\$ 1,400,000			\$ 2,290,000
Design/Engineering	\$ 270,000	\$ 1,400,000	\$ 200,000	\$ 105,000			\$ 1,975,000
Permitting							\$ -
Land/ROW/Acquisition							\$ -
Construction			\$ 5,000,000	\$ 9,000,000			\$ 14,000,000
Equipment							\$ -
Other (Specify)							\$ -
Total Expenditures	\$ 270,000	\$ 1,540,000	\$ 5,950,000	\$ 10,505,000	\$ -	\$ -	\$ 18,265,000

Funding Sources	Prior Year	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Fund: 725 Waste Water PFE	\$ 270,000	\$ 1,540,000	\$ 200,000	\$ 105,000			\$ 2,115,000
Fund: SRF or Muni Bond			\$ 5,750,000	\$ 10,400,000			\$ 16,150,000
Fund:							\$ -
Fund:							\$ -
Fund:							\$ -
Total Funding Sources	\$ 270,000	\$ 1,540,000	\$ 5,950,000	\$ 10,505,000	\$ -	\$ -	\$ 18,265,000

OPERATING COSTS

Expenditures	Prior Year	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
On-Going Operations							\$ -
Maintenance							\$ -
Personnel Costs							\$ -
Other (Specify)							\$ -
							\$ -
Total Expenditures	\$ -	\$ -					

Funding Sources	Prior Year	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Fund:							\$ -
Fund:							\$ -
Fund:							\$ -
Total Funding Sources	\$ -	\$ -					

Capital &/or Operating Costs Detail (if Necessary)



Project Title:
Nicolaus Road Pump Station Upgrades

Department/Division/Contact
City Engineer/Ray Leftwich

Project Duration
Fiscal Year Start = 16/17
Fiscal Year End = 17/18

Project Location or Request
Nicolaus Road Sanitary Sewer Pump Station

Strategic Goal Relevance
Infrastructure

Legislative/Regulatory; Health & Safety; Council Priority
Sewer System Management Plan (SSMP)

Prioritization		Project No.
Depart. Score	Final Rank	
	2	395

Relevant Graphic Detail



Project Description/Business Justification

The Nicolaus Road Sanitary Sewer Pump Station lacks redundancy and operates at maximum capacity during rain events, causing the current pumping system to run continuously, at risk without redundancy. This project will provide a redundant 60 hp pump within the existing large wet well with associated piping and appurtenant electrical and control system modifications for system reliability in the event the existing 60hp duty pump should fail. Additional safety features have been added to the wet well for maintenance operations access.

Project's Return on Investment

Ability to recruit commercial/industrial uses to the Air Center that create significant sewer demands, and reduce potential of pump station failure.

Operating Cost Impacts of Project/Request

Increase pump life with improved telemetry and reduce Public Services emergency call outs. Potential annual savings of \$25,000/year.

Project's Impact on Other Departments

This project will reduce the costs associated with operating the Nicolaus Road Sanitary Sewer Pump Station and improve the ability of Economic Development to recruit businesses to the Air Center.

Project Linkages/Synergies

Markham Ravine Sewer Rehabilitation.

Strength of Projection(s) & Detail

Bid Numbers
 Engineer's Estimate
 Quote
 Best Judgement
 Guesstimate/#ers Rolled Forward

Project budget is based on best judgement and approximate costs associated with similar projects.

CAPITAL COSTS

Expenditures	Prior Year	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Project/Const Management	\$ 10,000	\$ 10,000					\$ 20,000
Design/Engineering	\$ 60,000	\$ 25,000					\$ 85,000
Permitting							\$ -
Land/ROW/Acquisition							\$ -
Construction	\$ 150,000	\$ 150,000					\$ 300,000
Equipment							\$ -
Other (Specify)							\$ -
Total Expenditures	\$ 220,000	\$ 185,000	\$ -	\$ -	\$ -	\$ -	\$ 405,000

Funding Sources	Prior Year	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Fund: 721 WW Capital Rep.	\$ 220,000	\$ 185,000					\$ 405,000
Fund:							\$ -
Fund:							\$ -
Fund:							\$ -
Fund:							\$ -
Total Funding Sources	\$ 220,000	\$ 185,000	\$ -	\$ -	\$ -	\$ -	\$ 405,000

OPERATING COSTS

Expenditures	Prior Year	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
On-Going Operations							\$ -
Maintenance							\$ -
Personnel Costs							\$ -
Other (Specify)							\$ -
							\$ -
Total Expenditures	\$ -	\$ -					

Funding Sources	Prior Year	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Fund:							\$ -
Fund:							
Fund:							
Total Funding Sources	\$ -	\$ -					

Capital &/or Operating Costs Detail (if Necessary)

Operating costs for the Nicolaus Road Sanitary Sewer Pump Station will be lowered by improving system reliability, which reduces emergency call-outs, and with improved cycle times of pump operation that results in improved pump life.



Project Title:
 Markham Ravine Sewer Rehabilitation

Department/Division/Contact
 City Engineer/Ray Leftwich

Project Duration
 Fiscal Year Start = 16/17
 Fiscal Year End = 17/18

Project Location or Request
 Investigate, evaluate and repair I&I (inflow and infiltration) in the Markham Ravine Sewer area.

Strategic Goal Relevance
 Infrastructure and Economic Development

Legislative/Regulatory; Health & Safety; Council Priority

Prioritization		Project No.
Depart. Score	Final Rank	
	3	396

Relevant Graphic Detail



Project Description/Business Justification
 During storm events, the Nicolaus Road Sanitary Sewer Pump Station operates at full capacity, which leaves little availability for commercial and industrial connection capacity in the Lincoln Air Center Business Park. It is known by Public Services that there is an I&I problem in the Markham Ravine Trunk Sewer collection system that serves the Lincoln Air Center, Teal Hollow and Lakeside area. This project will investigate, through closed circuit television inspection service (CCTV), exact location and nature of the I&I. The project will establish provisional access to the ravine areas and specific manhole and pipeline rehabilitation for known system deficiencies identified to date. The CCTV investigations will enable extended improvements upon their discovery. Additional capacity within both the collection system and RWWTF through reduction of I&I.

Project's Return on Investment
 Ability to recruit commercial/industrial uses to the Air Center that create significant sewer demands.

Operating Cost Impacts of Project/Request
 Reduced the operating costs for both the Nicolaus Road Sanitary Sewer Pump Station and RWWTF by reducing the volume of water processed and treated. Prolonged service life of equipment and pumps and reduced power and chemical costs.

Project's Impact on Other Departments
 This project will reduce the costs associated with operating the Nicolaus Road Sanitary Sewer Pump Station and improve the ability of Economic Development to recruit businesses to the Air Center.

Project Linkages/Synergies
 Nicolaus Road Pump Station Improvements

Strength of Projection(s) & Detail

Bid Numbers
 Engineer's
 Quote
 Best Judgement
 Guesstimate/#ers Rolled

Project budget is based on best judgement. The nature and extent of I&I is not currently known. As better information is developed, project cost estimates will be refined.

CAPITAL COSTS

Expenditures	Prior Year	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Project/Const Management	\$ 10,000	\$ 10,000					\$ 20,000
Design/Engineering	\$ 80,000	\$ 40,000					\$ 120,000
Permitting							\$ -
Land/ROW/Acquisition							\$ -
Construction	\$ 200,000	\$ 200,000					\$ 400,000
Equipment							\$ -
Other (Specify)							\$ -
Total Expenditures	\$ 290,000	\$ 250,000	\$ -	\$ -	\$ -	\$ -	\$ 540,000

Funding Sources	Prior Year	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Fund: 720 WW Operations	\$ 90,000						\$ 90,000
Fund: 721 WW Capital Rep.	\$ 200,000	\$ 250,000					\$ 450,000
							\$ -
							\$ -
Fund:							\$ -
Total Funding Sources	\$ 290,000	\$ 250,000	\$ -	\$ -	\$ -	\$ -	\$ 540,000

OPERATING COSTS

Expenditures	Prior Year	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
On-Going Operations							\$ -
Maintenance							\$ -
Personnel Costs							\$ -
Other (Specify)							\$ -
							\$ -
Total Expenditures	\$ -	\$ -					

Funding Sources	Prior Year	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Fund:							\$ -
Fund:							\$ -
Fund:							\$ -
Total Funding Sources	\$ -	\$ -					

Capital &/or Operating Costs Detail (if Necessary)

Operating costs for the Nicolaus Road Sanitary Sewer Pump Station will be lowered by reducing the amount of I&I in the collection system that flows to the pump station and RWWTF. Annual savings of \$10,000/year are anticipated.



Project Title:
Existing Sewer Collection System Rehab

Department/Division/Contact
City Engineer/Araceli Cazarez

Project Duration
Fiscal Year Start = 7/1/17
Fiscal Year End = 7/1/18

Project Location or Request
Replace old and deteriorated sewer mains, manholes and other related appurtenances.

Strategic Goal Relevance
Infrastructure

Legislative/Regulatory; Health & Safety; Council Priority
Sewer System Management Plan (SSMP)

Prioritization		Project No.
Depart. Score	Final Rank	
	4	302



Project Description/Business Justification
Improvements include manhole rehabilitation and pipeline repairs. These repairs would be based on condition assessments and CCTV inspections performed as part of the Sewer System Management Plan in conjunction with the Sewer Master Plan. Elimination of inflow and infiltration (I&I) is a primary goal for the project, which will eliminate the need to treat I&I water at the WWTRF and allow the City to meet all the State and Federal statues related to I&I.

For Fiscal Year 2017/18 the sewer rehab projects will be included as part of the following CIP projects currently under wastewater: Nicolaus Road Pump Station Upgrades and Markham Ravine Sewer Rehab.

Project's Return on Investment
The return on the investment will depend on the location of the project and the condition of the sewer appurtenances. Factors that will impact the calculation include the number of service calls to the project area and the reduction of I&I treatment costs at the WWTRF.

Operating Cost Impacts of Project/Request
Operating cost would decrease with the new assets installed.

Project's Impact on Other Departments
It is anticipated the project will provide a benefit to the operators in the Public Services department with a decrease in maintenance/repair time. It will also provide a benefit to safety of the public by reducing the number of potential sanitary sewer overflows.

Project Linkages/Synergies
Project is linked to the Water Master Plan, Sewer Master Plan and the Sewer System Management Plan in order to address utility deficiencies.

Strength of Projection(s) & Detail

Bid Numbers
 Engineer's Estimate
 Quote
 Best Judgement
 Guesstimate/#ers Rolled Forward

Costs are shown within each sewer project respectively. E. 9th & E. 5th street projects

CAPITAL COSTS

Expenditures	Prior Year	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Project/Const Management							
Design/Engineering			\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 20,000
Permitting							
Land/ROW/Acquisition							
Construction			\$ 35,000	\$ 35,000	\$ 35,000	\$ 35,000	\$ 140,000
Equipment							
Other (Specify)							
Total Expenditures	\$ -		\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 160,000

Funding Sources	Prior Year	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Fund: 721 WW Capital Rep.		\$ -	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 160,000
Fund:							\$ -
Fund:							\$ -
Fund:							\$ -
Fund:							\$ -
Total Funding Sources	\$ -	\$ -	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 160,000

OPERATING COSTS

Expenditures	Prior Year	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
On-Going Operations							\$ -
Maintenance							\$ -
Personnel Costs							\$ -
Other (Specify)							\$ -
Total Expenditures	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Funding Sources	Prior Year	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Fund:							\$ -
Fund:							\$ -
Fund:							\$ -
Total Funding Sources	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Capital &/or Operating Costs Detail (if Necessary)

Operating costs will be reduced depending on the severity of the existing sewer appurtenances to be replaced.



Project Title:
WWTRF Solar Project

Department/Division/Contact
Public Services / WWTRF / Jennifer Hanson

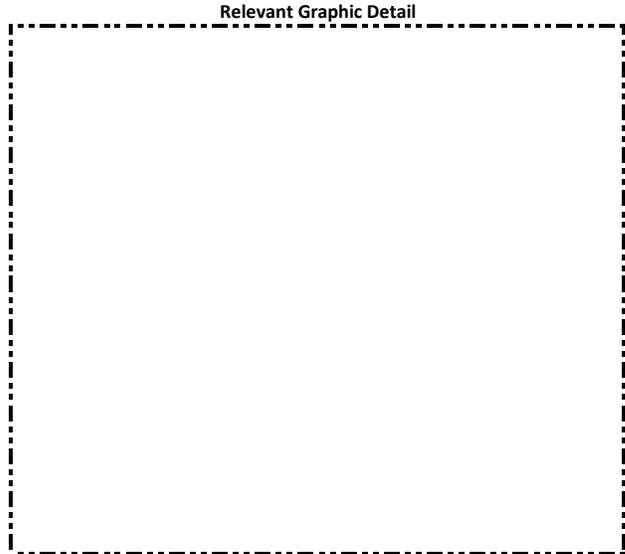
Project Duration
Fiscal Year Start =
Fiscal Year End =

Project Location or Request
WWTRF

Strategic Goal Relevance
Infrastructure

Legislative/Regulatory; Health & Safety; Council Priority

Prioritization		Project No.
Depart. Score	Final Rank	
	5	407



Project Description/Business Justification
Construct Solar Farm under PG&Es Option R Program to offset energy use at the WWTRF. The system would be a ground mounted tracking system. Staff is evaluating financing options for the project and the options for completing a design build.

Project's Return on Investment
The simple payback for this project is 10.0 years.

Operating Cost Impacts of Project/Request
Maintenance of the panels will be required.

Project's Impact on Other Departments

Project Linkages/Synergies

Strength of Projection(s) & Detail

Bid Numbers
 Engineer's Estimate
 Quote
 Best Judgment
 Guesstimate/#ers Rolled Forward

CAPITAL COSTS

Expenditures	Prior Year	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Project/Const Management							\$ -
Design/Engineering	\$ 35,000						\$ 35,000
Permitting							\$ -
Land/ROW/Acquisition							\$ -
Construction							\$ -
Equipment							\$ -
Debt Service		\$ 624,705	\$ 624,705	\$ 624,705	\$ 624,705	\$ 8,121,165	\$ 10,619,985
Total Expenditures	\$ 35,000	\$ 624,705	\$ 624,705	\$ 624,705	\$ 624,705	\$ 8,121,165	\$ 10,654,985

Funding Sources	Prior Year	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Fund: 720 WW Operations	\$ 35,000	\$ 624,705	\$ 624,705	\$ 624,705	\$ 624,705	\$ 8,121,165	\$ 10,654,985
Fund:							\$ -
Fund:							\$ -
Fund:							\$ -
Fund:							\$ -
Total Funding Sources	\$ 35,000	\$ 624,705	\$ 624,705	\$ 624,705	\$ 624,705	\$ 8,121,165	\$ 10,654,985

OPERATING COSTS

Expenditures	Prior Year	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
On-Going Operations		\$ (624,705)	\$ (624,705)	\$ (624,705)	\$ (624,705)	\$ (8,121,165)	\$ (10,619,985)
Maintenance							\$ -
Personnel Costs							\$ -
Utility Reduction							\$ -
							\$ -
Total Expenditures	\$ -	\$ (624,705)	\$ (624,705)	\$ (624,705)	\$ (624,705)	\$ (8,121,165)	\$ (10,619,985)

Funding Sources	Prior Year	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Fund: 720 WW Operations		\$ (624,705)	\$ (624,705)	\$ (624,705)	\$ (624,705)	\$ (8,121,165)	\$ (10,619,985)
Fund:							
Fund:							
Total Funding Sources	\$ -	\$ (624,705)	\$ (624,705)	\$ (624,705)	\$ (624,705)	\$ (8,121,165)	\$ (10,619,985)

Capital &/or Operating Costs Detail (if Necessary)

The most efficient proposal is that the estimated construction costs of \$7.3 million would be financed with a 17-year term. The net result after payment of the debt service and the reduction in utility costs is a savings for each year.



Project Title:
Silver Spur Sanitary Sewer Lift Station

Department/Division/Contact
City Engineer / Roland Neufeld

Project Duration
Fiscal Year Start = 17/18
Fiscal Year End = 17/18

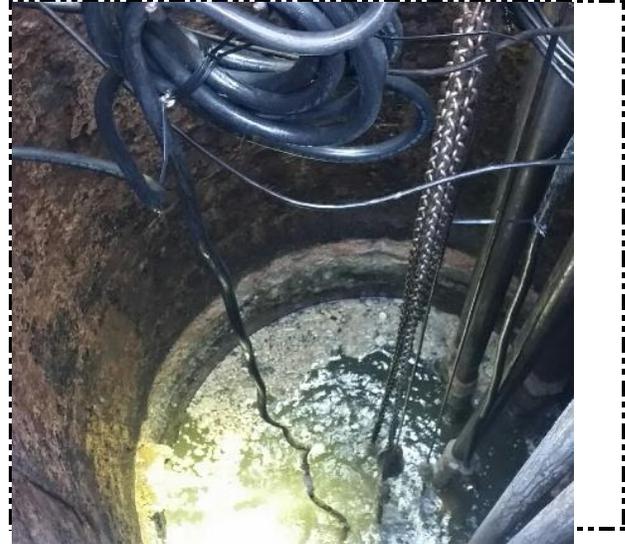
Project Location or Request
Silver Spur Circle

Strategic Goal Relevance
Infrastructure, and Health & Safety

Legislative/Regulatory; Health & Safety; Council Priority
Health & Safety

Prioritization		Project No.
Depart. Score	Final Rank	
72	6	425

Relevant Graphic Detail



Project Description/Business Justification
The existing sanitary sewer lift station that services the residents along Silver Spur Circle is old, requires constant maintenance and the wet well is in imminent threat of collapsing. The entire sanitary sewer lift station including wet well, pump, electrical cabinet, pipes and valves need to be replaced to ensure the safe functionality of the neighborhood sewer system.

Project's Return on Investment
A decrease in maintenance costs and the elimination of the need for emergency repairs to fix a wet well collapse that is likely in the near future.

Operating Cost Impacts of Project/Request
Decrease in maintenance costs.

Project's Impact on Other Departments
Decrease in maintenance costs.

Project Linkages/Synergies
N/A

Strength of Projection(s) & Detail

- Bid Numbers
 Engineer's Estimate
 Quote
 Best Judgment
 Guesstimate/#ers Rolled Forward

Quote for equipment provided by designer/manufacturer Romtec.

CAPITAL COSTS

Expenditures	Prior Year	FY17/18	FY18/19	FY19/20	FY19/21	Future Years	Total
Project/Const. Management		\$ 50,000					\$ 50,000
Design/Engineering							\$ -
Permitting							\$ -
Land/ROW/Acquisition							\$ -
Construction		\$ 200,000					\$ 200,000
Equipment		\$ 150,000					\$ 150,000
Other (Specify)							\$ -
Total Expenditures	\$ -	\$ 400,000	\$ -	\$ -	\$ -	\$ -	\$ 400,000

Funding Sources	Prior Year	FY17/18	FY18/19	FY19/20	FY19/21	Future Years	Total
Fund: 721 WW Non-Oper		\$ 400,000	\$ -				\$ 400,000
Fund:							\$ -
Fund:							\$ -
Fund:							\$ -
Fund:							\$ -
Total Funding Sources	\$ -	\$ 400,000	\$ -	\$ -	\$ -	\$ -	\$ 400,000

OPERATING COSTS

Expenditures	Prior Year	FY17/18	FY18/19	FY19/20	FY19/21	Future Years	Total
On-Going Operations							\$ -
Maintenance							\$ -
Personnel Costs							\$ -
Other (Specify)							\$ -
							\$ -
Total Expenditures	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Funding Sources	Prior Year	FY17/18	FY18/19	FY19/20	FY19/21	Future Years	Total
Fund:							\$ -
Fund:							\$ -
Fund:							\$ -
Total Funding Sources	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Capital &/or Operating Costs Detail (if Necessary)



Project Title:
WWTRF Reclaimed Water Storage

Department/Division/Contact
Public Services/WWTRF/Jennifer Hansen

Project Duration
Fiscal Year Start =
Fiscal Year End =

Project Location or Request
Wastewater Treatment and Reclamation Facility (WWTRF) - 1245 Fiddymont Road

Strategic Goal Relevance
Infrastructure

Legislative/Regulatory; Health & Safety; Council Priority
Regulatory

Prioritization		Project No.
Depart. Score	Final Rank	
	7	426



Project Description/Business Justification
Once flows from the Regional Sewer project are started, there will be a reclaimed water storage deficiency at the WWTRF. The current WWTRF NPDES permit includes temperature limitations for the Auburn Ravine, which can limit our ability to discharge to the ravine during specific times of the year. During periods when the effluent is too warm to discharge, we are required to either transmit the reclaimed water to a permitted user or store the reclaimed water in storage ponds. In order to maximize the sale of reclaimed water and to aid in the operation of the plant it is necessary to increase reclaimed water storage at the WWTRF. Estimated basin volume is 100 million gallons.

Project's Return on Investment
It is anticipated that the return on investment will \$14,150 per year (10% per year over a 20 year period).

Operating Cost Impacts of Project/Request
There will be monthly maintenance cost associated with the software and hardware.

Project's Impact on Other Departments

Project Linkages/Synergies
The project is consistent with improving and protecting the City's infrastructure.

Strength of Projection(s) & Detail

Bid Numbers
 Engineer's Estimate
 Quote
 Best Judgement
 Guesstimate/#ers Rolled Forward

CAPITAL COSTS

Expenditures	Prior Year	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Project/Const Management		\$ 30,000	\$ 50,000				\$ 80,000
Design/Engineering		\$ 250,000					\$ 250,000
Permitting							\$ -
Land/ROW/Acquisition							\$ -
Construction		\$ 1,000,000	\$ 1,500,000				\$ 2,500,000
Equipment							\$ -
Other (Specify)							\$ -
Total Expenditures	\$ -	\$ 1,280,000	\$ 1,550,000	\$ -	\$ -	\$ -	\$ 2,830,000

Funding Sources	Prior Year	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Fund: 725 Wastewater PFE		\$ 1,280,000	\$ 1,550,000	\$ -	\$ -		\$ 2,830,000
Fund:					\$ -		\$ -
Fund:							\$ -
Fund:							\$ -
Fund:							\$ -
Total Funding Sources	\$ -	\$ 1,280,000	\$ 1,550,000	\$ -	\$ -	\$ -	\$ 2,830,000

OPERATING COSTS

Expenditures	Prior Year	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
On-Going Operations				\$ 10,000	\$ 10,000		\$ 20,000
Maintenance					\$ 5,000	\$ 60,000	\$ 65,000
Personnel Costs							\$ -
Other (Specify)							\$ -
Total Expenditures	\$ -	\$ -	\$ -	\$ 10,000	\$ 15,000	\$ 60,000	\$ 85,000

Funding Sources	Prior Year	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Fund: 720 WW Operations			\$ -	\$ 10,000	\$ 15,000	\$ 60,000	\$ 85,000
Fund:							
Fund:							
Total Funding Sources	\$ -	\$ -	\$ -	\$ 10,000	\$ 15,000	\$ 60,000	\$ 85,000

Capital &/or Operating Costs Detail (if Necessary)

Future operating costs could be reduced if the WWTRF implements solar. Future year cost is based on anticipation of replacing the basins pump on a 15 year life cycle.



Project Title:

Aviation & Venture Sewer Line Rehab

Department/Division/Contact

City Engineer / Araceli Cazarez

Project Duration

Fiscal Year Start = 17/18
Fiscal Year End = 18/19

Project Location or Request

Replacement of approximately 400 Linear feet of sewer line near the Aviation Blvd. and Venture Dr. intersection.

Strategic Goal Relevance

Infrastructure

Legislative/Regulatory; Health & Safety; Council Priority

Council Priority and Health & Safety

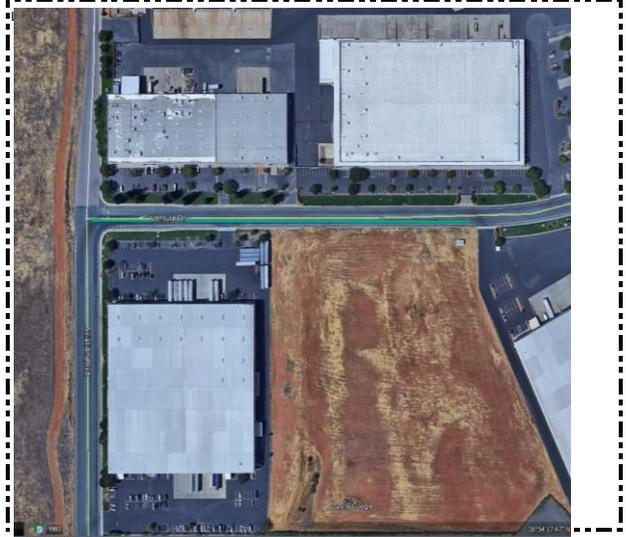
Prioritization

Depart. Score	Final Rank
65	8

Project No.

427

Relevant Graphic Detail



Project Description/Business Justification

The existing 12-inch sewer line is not functioning as designed. Currently City operators go the the site and pump out sewage that is remaining stagnant in the manhole and line. The plan is to evaluate sewer system in the vicinity and surrounding area to establish potential solutions to the non-properly fucitoning system.

Project's Return on Investment

It is currently estimated staff is out there once every six months pumping the system at \$1,100/hour (includes 2 operators plus equipment) at 4 hours per cleaning is \$8,800/year. Although the ROI will be 170 years; it could be significantly reduced if the impact from the economic development is considered with new business coming in the area as the current system of sewer operations severely limits the amount of flows that can be served.

Operating Cost Impacts of Project/Request

Project's Impact on Other Departments

The operating cost would be reduced with the implementation of this project reducing the workload for the operators and respective equipment.

Project Linkages/Synergies

Strength of Projection(s) & Detail

Bid Numbers
 Engineer's Estimate
 Quote
 Best Judgement
 Guesstimate/#ers Rolled Forward

CAPITAL COSTS

Expenditures	Prior Year	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Project/Const. Mgmt		\$ 12,000	\$ 75,000				
Design/Engineering		\$ 50,000					
Permitting							
Land/ROW/Acquisition							
Construction			\$ 500,000				
Equipment							
Other (Specify)							
Total Expenditures	\$ -	\$ 62,000	\$ 575,000	\$ -	\$ -	\$ -	\$ -

Funding Sources	Prior Year	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Fund: 721 WW Capital Rep.		\$ 62,000	\$ 575,000				\$ 637,000
Fund:							\$ -
Fund:							\$ -
Fund:							\$ -
Fund:							\$ -
Total Funding Sources	\$ -	\$ 62,000	\$ 575,000	\$ -	\$ -	\$ -	\$ 637,000

OPERATING COSTS

Expenditures	Prior Year	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
On-Going Operations							\$ -
Maintenance							\$ -
Personnel Costs							\$ -
Other (Specify)							\$ -
							\$ -
Total Expenditures	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Funding Sources	Prior Year	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Fund:							\$ -
Fund:							\$ -
Fund:							\$ -
Total Funding Sources	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Capital &/or Operating Costs Detail (if Necessary)

The project is not expected to create additional operating cost to public services.



Project Title:
Phase 2 Reclamation

Department/Division/Contact
City Engineer/Ray Leftwich

Project Duration
Fiscal Year Start = 17/18
Fiscal Year End = 17/18

Project Location or Request
Extend reclaimed water for irrigation to Pete Singer Park and Joiner Park.

Strategic Goal Relevance
Infrastructure

Legislative/Regulatory; Health & Safety; Council Priority

Prioritization		Project No.
Depart. Score	Final Rank	
55	9	300

Relevant Graphic Detail



Project Description/Business Justification
Installation of (1) approximately 510 LF of 6" reclaimed water main on Groveland Lane to serve Pete Singer Park irrigation, (2) approximately 500 LF of 4" reclaimed water main on Downing Circle to serve Machado Park irrigation, and (3) approximately 1,280 LF of 8" reclaimed water main on Nicolaus Road to serve Joiner Park irrigation. By irrigating these three parks with reclaimed water, the City will offset approximately 20 million gallons of domestic water use each year. This reduction offsets 0.8% of the City's total domestic water use, and assists in meeting the City's water reduction goals mandated by the State.

Project's Return on Investment
20 million gallons of domestic irrigation use costs approximately \$100,000. The cost to deliver reclaimed water for public use is anticipated to be \$35,000, for an annual savings of \$65,000 to the Water Operations Fund.

Operating Cost Impacts of Project/Request
2,290 LF of reclaimed main will depreciate at a rate of approximately \$5,000/yr.

Project's Impact on Other Departments
The project will create additional pipe infrastructure for Public Services to maintain and increased regulatory reporting requirements.

Project Linkages/Synergies
The project assists the City in meeting its mandated reduction of domestic water.

Strength of Projection(s) & Detail

Bid Numbers
 Engineer's Estimate
 Quote
 Best Judgment
 Guesstimate/#ers Rolled Forward

Project budget was determined by median bid prices the cost to install similar reclaimed water pipe for the Phase 1 Reclamation Project in April 2015.

CAPITAL COSTS

Expenditures	Prior Year	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Project/Const Management		\$ 10,000					\$ 10,000
Design/Engineering		\$ 30,000					\$ 30,000
Permitting							\$ -
Land/ROW/Acquisition							\$ -
Construction		\$ 265,000					\$ 265,000
Equipment							\$ -
Other (Specify)							\$ -
Total Expenditures	\$ -	\$ 305,000	\$ -	\$ -	\$ -	\$ -	\$ 305,000

Funding Sources	Prior Year	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Fund: 725 Wastewater PFE		\$ 305,000					\$ 305,000
Fund:							\$ -
Fund:							\$ -
Fund:							\$ -
Total Funding Sources	\$ -	\$ 305,000	\$ -	\$ -	\$ -	\$ -	\$ 305,000

OPERATING COSTS

Expenditures	Prior Year	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
On-Going Operations							\$ -
Maintenance		\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 25,000
Personnel Costs							\$ -
Other (Specify)							\$ -
Total Expenditures	\$ -	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 25,000

Funding Sources	Prior Year	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Fund: 720 WW Operations		\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 25,000
Fund:							
Fund:							
Total Funding Sources	\$ -	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 25,000

Capital &/or Operating Costs Detail (if Necessary)

Pipeline requires minimal maintenance during its service life, but will depreciate at approximately \$5,000/year.



Project Title:
 WWTRF Expansion Phase 2

Department/Division/Contact
 City Engineer / Ray Leftwich

Project Duration
 Fiscal Year Start = 19/20
 Fiscal Year End = 21/22

Project Location or Request
 WWTRF

Strategic Goal Relevance
 Infrastructure, Economic Development

Legislative/Regulatory; Health & Safety; Council Priority
 Plant requires immediate expansion in order to facilitate continued development.

Prioritization		Project No.
Depart. Score	Final Rank	
92	10	TBD

Relevant Graphic Detail



Project Description/Business Justification
 Expand WWTRF capacity by 0.9mgd with addition of Clarifier and related components. Depending upon the absorption rate that occurs, the additional capacity added by the Phase 1 expansion could be used up within one year after completion of the Phase 1 expansion project. Placer County anticipates participating for 0.3mgd of the Phase 2 Expansion Project, leaving 0.6mgd available for City of Lincoln Development.

Project's Return on Investment

Operating Cost Impacts of Project/Request
 Operation of WWTRF is funded through monthly utility bills of rate payers. Capital cost of project will be funded through payment of Connection Fees from builders and developers as a requirement of Building Permits and Final Maps.

Project's Impact on Other Departments
 Project is necessary in order to facilitate continued development of the City of Lincoln.

Project Linkages/Synergies

Strength of Projection(s) & Detail

Bid Numbers
 Engineer's Estimate
 Quote
 Best Judgement
 Guesstimate/#ers Rolled Forward

CAPITAL COSTS

Expenditures	Prior Year	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Project/Const. Management				\$ 100,000	\$ 100,000	\$ 1,500,000	\$ 1,700,000
Design/Engineering				\$ 650,000	\$ 650,000		\$ 1,300,000
Permitting							\$ -
Land/ROW/Acquisition							\$ -
Construction						\$ 10,000,000	\$ 10,000,000
Equipment							\$ -
Other (Specify)							\$ -
Total Expenditures	\$ -	\$ -	\$ -	\$ 750,000	\$ 750,000	\$ 11,500,000	\$ 13,000,000

Funding Sources	Prior Year	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Fund: 725 Wastewater PFE				\$ 750,000	\$ 750,000		\$ 1,500,000
Fund: SRF or Muni Bond						\$ 11,500,000	\$ 11,500,000
Fund:							\$ -
Fund:							\$ -
Fund:							\$ -
Total Funding Sources	\$ -	\$ -	\$ -	\$ 750,000	\$ 750,000	\$ 11,500,000	\$ 13,000,000

OPERATING COSTS

Expenditures	Prior Year	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
On-Going Operations							\$ -
Maintenance							\$ -
Personnel Costs							\$ -
Other (Specify)							\$ -
							\$ -
Total Expenditures	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Funding Sources	Prior Year	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Fund:							\$ -
Fund:							\$ -
Fund:							\$ -
Total Funding Sources	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Capital &/or Operating Costs Detail (if Necessary)