

2016-2020 Summary

Davie County 5 Year Capital Improvement Plan

1/20/2015

	Current	Past	1	2	3	4	5
Project Cost Estimates	2014-15	Prior Years	2015-16	2016-17	2017-18	2018-19	2019-20
Planning		\$0		\$175,000			
Land Acquisition		\$0					
Construction		\$0			\$825,000		
Equip/Furnishings		\$0			\$2,000,000		
Other		\$0					
Contingencies		\$0					
Project Total	\$0	\$0	\$0	\$175,000	\$2,825,000	\$0	\$0

Funding Sources

County Contribution		\$0					
General Obligation Bonds		\$0					
Two Thirds Bonds		\$0					
Limited Obligation Bonds		\$0					
Bank Financing		\$0					
Enterprise Fund		\$0		\$175,000			
Revenue Bonds		\$0			\$2,825,000	\$0	\$0
Miscellaneous Revenue		\$0					
Funding Total	\$0	\$0	\$0	\$175,000	\$2,825,000	\$0	\$0

Operating Impact

Personnel		\$0					
Utilities		\$0					
Operating Costs		\$0					
Capital		\$0					
Minus Savings		\$0					
Net Additional Expenses	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Minus New Revenues		\$0					
Operating Total	\$0						

Project Title: Cooleemee Nutrient Renewal
 Start Date/Comp. Date: May 2017 to June 2018
 Department: Public Utilities

FY 2016-2020 CIP
Project Description Form

Project Title: Cooleemee WWTP Nutrient Removal Upgrade.

Project Manager/Department: Public Utilities

Project Description: Due to new upcoming regulations that will be implemented by DENR in the Yadkin River Basin. We will have to meet new levels this will require additional treatment process. This will be done on site with no additional land purchase required.

Project Justification: *This will meet new water quality standards that will be issued in the future for all point source discharge permits in the Yadkin River Basin. This will create a nutrient removal process that will create a more environmental friendly discharge process. We expect this process to be implemented in the 2017-2018 permit renewals.*

Project Alternatives: There will be no alternative that will prevent this upgrade.

Project Status/Updated: N/A

Relationship to Other Projects: N/A

Explanation of Annual Operating Costs and Operations Related to Project: *Explain the operating impact (costs and savings) that you indicate on the Project Cost Form. There will be no cost reduction or savings. Operation cost will be determined when the limits are set in the permit when received knowing how the level of treatment that will need to be added.*

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Project Cost Estimates	2014-15	Prior Years	2015-16	2016-17	2017-18	2018-19	2019-20
Planning		\$0					\$175,000
Land Acquisition		\$0					\$250,000
Construction		\$0					
Equip/Furnishings		\$0					
Other		\$0					
Contingencies		\$0					
Project Total	\$0	\$0	\$0	\$0	\$0	\$0	\$425,000

Funding Sources

County Contribution		\$0					
General Obligation Bonds		\$0					
Two Thirds Bonds		\$0					
Limited Obligation Bonds		\$0					
Bank Financing		\$0					
Enterprise Fund		\$0					\$425,000
Revenue Bonds		\$0	\$0	\$0	\$0	\$0	
Miscellaneous Revenue		\$0					
Funding Total	\$0	\$0	\$0	\$0	\$0	\$0	\$425,000

Operating Impact

Personnel		\$0					
Utilities		\$0					
Operating Costs		\$0					
Capital		\$0					
Minus Savings		\$0					
Net Additional Expenses	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Minus New Revenues		\$0					
Operating Total	\$0						

Project Title: Cooleemee Water Treatment Plant
 Start Date/Comp. Date: May 2020 to June 2022
 Department: Public Utilities

FY 2016-2020 CIP
Project Description Form

Project Title: New Cooleemee Water Treatment Plant

Project Manager/Department: Public Utilities

Project Description: Construct a new water treatment plant with increased capacity and a more efficient treatment process to deliver the highest quality potable water to the customers of Davie County. This project would require but not limited to: Pre-Design, Land Acquisition, Final Design, Permitting, Construction, and Demolition of current water treatment facility.

Project Justification: Cooleemee Water Treatment Plant was constructed in 1926 as a water supply for the Erwin Textile mill. Major additions to the facility and treatment process were performed in 1939, 1955 and 1987-89. The original 88 year old structure is in need of major structural repair due to concrete deterioration. The Cooleemee Water Treatment Plant's primary challenge is to comply with the increasingly stringent state and federal water quality regulations at a reasonable cost with a plant that has many components nearing or exceeding their useful life expectancy. The plant is rated at 2.6 Million Gallons Per Day capacity. With the steady increase in demand the county will have to increase capacity to meet the demand in future years. Increasing capacity at the current location will be limited due to the unavailability of land needed to increase the footprint of the process needed. Land acquisition in close proximity to the current location will allow some cost savings by using the same raw water withdrawal infrastructure as well as a lesser impact to the surrounding environment. A new facility can be constructed to a higher capacity to meet the demand projected for Davie County. New facilities and treatment processes normally offer more energy conservation potential than that of retrofitting existing processes allowing it to be operated more efficiently as a whole. The Cooleemee Water Treatment plant can continue to be operational until final construction is near completion to insure adequate potable water demand is met. The new facility will continue to be able to serve the entire county customer base but with a higher capacity than that of the existing treatment plant.

Project Alternatives: Alternatives for this facility are unfeasible due to the existing footprint and structural condition of the facility. Even if land on site was available to expand capacity, the core structure would need an exponential amount of repair to insure a reasonable life expectancy. Most of the equipment present on site has met or exceeded its life expectancy compounding to the cost of upgrade and repair to the current Cooleemee Water Treatment Facility. The site the Cooleemee Water Plant resides on is not suitable for a new larger plant to be constructed on leaving a new plant on a new location as the only feasible option.

Project Status/Updated: N/A.

Relationship to Other Projects: N/A

Explanation of Annual Operating Costs and Operations Related to Project: *N/A*

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Project Cost Estimates	2014-15	Prior Years	2015-16	2016-17	2017-18	2018-19	2019-20
Planning		\$0	\$300,000	\$300,000			
Land Acquisition		\$0		\$250,000			
Construction		\$0		\$10,575,000			
Equip/Furnishings		\$0					
Other		\$0					
Contingencies		\$0			\$515,000		
Project Total	\$0	\$0	\$300,000	\$11,125,000	\$515,000	\$0	\$0

Funding Sources							
County Contribution		\$0					
General Obligation Bonds		\$0					
Two Thirds Bonds		\$0					
Limited Obligation Bonds		\$0					
Bank Financing		\$0					
Enterprise Fund		\$0	\$300,000				
Revenue Bonds		\$0		\$10,466,000			
Miscellaneous Revenue		\$0		\$659,000	\$515,000		
Funding Total	\$0	\$0	\$300,000	\$11,125,000	\$515,000	\$0	\$0

Operating Impact							
Personnel		\$0					
Utilities		\$0					
Operating Costs		\$0					
Capital		\$0					
Minus Savings		\$0					
Net Additional Expenses	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Minus New Revenues		\$0					
Operating Total	\$0						

Project Title: Eastern Davie Pump Station / Waste Water Treatment Plant
 Start Date/Comp. Date: July 2015 to February 2018
 Department: Public Utilities

FY 2016-2020 CIP
Project Description Form

Project Title: WWTP/Lift Station Eastern Davie
Project Manager/Department: Public Utilities

Project Description The Eastern Davie Sewer Area covers approximately 7.6% of the County's area and is a higher growth area for Davie County. This project involves the planning, design, and construction for a new WWTP or Pump Station for Eastern Davie Sewer. Both options are still under review by engineers and staff.

Project Justification Due to capacity restrictions and paying two times the inside rate Davie County has looked at two alternatives to correct the waste water issues for Davie County. Both alternatives being looked at will stabilize sewer rates and expand capacity for Eastern Davie. This project should be completed by 2017-2018 due to current agreement with CCUC (Forsyth County) that would require \$150,000 in February 2017 for design to upgrade their infrastructure and in February 2018 \$1,000,000 to begin construction of their infrastructure.

Project Alternatives: Both alternatives are still being looked at by staff and consulting engineer.

Project Status/Updated: *N/A*

Relationship to Other Projects: *N/A.*

Explanation of Annual Operating Costs and Operations Related to Project:

Depending on the alternative that staff recommends to BOC this cost could vary with each alternative.