

Environmental Health

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ENVIRONMENTAL HEALTH

Project Title	Budget Year 2008-2009	Planning Year 2009-2010	Planning Year 2010-2011	Planning Year 2011-2012	Planning Year 2012-2013	Planning Year 2013-2014	Total Planned
Solid Waste Disposal:							
New Construction and Demolition Landfill Site Development	\$0	\$14,200,000	\$0	\$0	\$0	\$0	\$14,200,000
Hanes Landfill Cell Construction	0	1,100,000	0	0	6,600,000	0	7,700,000
Hanes Landfill Gas System Construction	0	0	0	400,000	0	0	400,000
Water and Wastewater Treatment:							
Thomas Water Treatment Plant Modernization	\$25,700,000	\$21,500,000	\$14,999,610	\$0	\$0	\$0	\$62,199,610
Nutrient Removal at Wastewater Treatment Plants	0	0	0	1,948,600	20,785,160	37,673,120	60,406,880
Primary and Preliminary Treatment Upgrade at Wastewater Treatment Plants	25,600,000	25,500,000	4,324,820	0	0	0	55,424,820
R.W. Neilson Water Treatment Plant - Phase II Modernization	0	0	500,000	4,500,000	13,000,000	15,000,000	33,000,000
Wastewater Lift Station Rehabilitation	55,650	866,040	508,880	5,533,800	1,844,600	0	8,808,970
Treatment Facilities Reliability	0	0	680,000	7,160,000	0	0	7,840,000
Chitty High Service Pumping Station - Standby Power	0	0	0	3,250,000	2,762,500	487,500	6,500,000
Water Tank Rehabilitation	1,338,750	690,500	690,500	0	0	0	2,719,750
Miscellaneous Water and Wastewater Treatment Capital Projects	1,980,960	0	0	0	0	0	1,980,960
Idol's Pump Station Rehabilitation	2,150,000	0	0	0	0	350,000	2,500,000
Lift Station Supervisory Control and Data Acquisition, Flowmetering and Telemetry System Upgrade	302,820	0	0	0	0	0	302,820
Water Distribution and Wastewater Collection:							
2006 Annexation - Potential Petition Projects	\$2,500,000	\$2,500,000	\$5,000,000	\$5,000,000	\$5,000,000	\$5,000,000	\$25,000,000
Wastewater Collection System Improvements	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	18,000,000
Ardmore Area Water and Sewer Rehabilitation	4,400,000	4,400,000	4,400,000	0	0	0	13,200,000
2" Water Main Replacement	1,135,260	1,135,260	1,135,260	1,135,260	1,135,260	1,135,260	6,811,560
Water Distribution System Improvements	1,430,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	6,430,000
New Elevated Water Tanks	0	0	0	2,600,000	2,600,000	0	5,200,000
Salem Creek Outfall Extension	474,840	3,798,610	0	0	0	0	4,273,450
2006 Annexation - Major Mains and Five-Day Petitions	4,098,630	64,340	0	0	0	0	4,162,970
Muddy Creek Find and Fix Project	1,417,100	1,417,100	0	0	0	0	2,834,200
Construction and Maintenance Facilities Improvements	137,500	100,000	2,400,000	0	0	0	2,637,500
Winston-Salem State University Campus Distribution System Improvement	1,165,200	766,800	410,400	0	0	0	2,342,400
Polo Road Outfall Sewer Rehabilitation	1,125,000	0	0	0	0	0	1,125,000
Water and Sewer GIS/Work Order Management System	400,000	483,390	0	0	0	0	883,390
Permanent Flow Monitoring	285,000	0	0	0	0	0	285,000

ENVIRONMENTAL HEALTH Continued

Project Title	Budget Year 2008-2009	Planning Year 2009-2010	Planning Year 2010-2011	Planning Year 2011-2012	Planning Year 2012-2013	Planning Year 2013-2014	Total Planned
Stormwater Management:							
Bath Branch Regional Stormwater Control Project	\$180,040	\$0	\$10,492,680	\$0	\$0	\$0	\$10,672,720
Stormwater Infrastructure Improvements	0	0	4,285,850	0	1,389,200	1,324,950	7,000,000
Drainage Improvements on Private Property	250,000	250,000	250,000	500,000	500,000	500,000	2,250,000
Hutton Street Rehabilitation	245,000	0	0	0	0	0	245,000
Municipal Stormwater Pollution Prevention Plans	108,800	108,800	0	0	0	0	217,600
Federal Emergency Management Agency Severe Repetitive Loss Grant Assistance	187,550	0	0	0	0	0	187,550
Total Expenditures	\$79,668,100	\$82,880,840	\$54,078,000	\$36,027,660	\$59,616,720	\$65,470,830	\$377,742,150
Funding Sources							
Bonds:							
Revenue Bonds	\$70,025,490	\$62,086,780	\$48,692,740	\$29,992,400	\$45,992,260	\$58,510,620	\$315,300,290
Reserves:							
Solid Waste Disposal Fund	\$0	\$15,300,000	\$0	\$400,000	\$6,600,000	\$0	\$22,300,000
Stormwater Management Fund	971,390	358,800	250,000	500,000	1,889,200	1,824,950	5,794,340
Water and Sewer Fund Balance	8,671,220	5,135,260	5,135,260	5,135,260	5,135,260	5,135,260	34,347,520
Total Funding Sources	\$79,668,100	\$82,880,840	\$54,078,000	\$36,027,660	\$59,616,720	\$65,470,830	\$377,742,150

PROJECT TITLE New Construction and Demolition Landfill Site Development	DEPARTMENT/DIVISION Utilities / Solid Waste
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PROJECT DESCRIPTION/JUSTIFICATION

This project includes the land purchase, rezoning, site development, permitting, and construction of a new construction and demolition landfill located off of U.S. Highway 311, north of Walkertown.

FINANCIAL SUMMARY:

	Prior Years	Planned Appropriations 2009-2014						Grand Total
	Total Approp To Date	Budget FY 08-09	Planning FY 09-10	Planning FY 10-11	Planning FY 11-12	Planning FY 12-13	Planning FY 13-14	
Expenditures								
Planning/Design/Engineering	\$600,000	\$0	\$0	\$0	\$0	\$0	\$0	\$600,000
Land/Right-of-Way Acquisition	2,000,000	0	0	0	0	0	0	2,000,000
Construction	5,500,000	0	14,200,000	0	0	0	0	19,700,000
Total Project Expenditures	\$8,100,000	\$0	\$14,200,000	\$0	\$0	\$0	\$0	\$22,300,000
Funding Sources								
Solid Waste Disposal Fund	\$8,100,000	\$0	\$14,200,000	\$0	\$0	\$0	\$0	\$22,300,000
Total Project Funding Sources	\$8,100,000	\$0	\$14,200,000	\$0	\$0	\$0	\$0	\$22,300,000

PROJECT TITLE Hanes Landfill Cell Construction	DEPARTMENT/DIVISION Utilities / Solid Waste
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PROJECT DESCRIPTION/JUSTIFICATION

This project provides for the future construction of cells for the disposal of municipal solid waste at Hanes Landfill. For this planning period, the project includes all cells in Phase 1 and a portion of Phase 2.

FINANCIAL SUMMARY:

	Prior Years	Planned Appropriations 2009-2014						Grand Total
	Total Approp To Date	Budget FY 08-09	Planning FY 09-10	Planning FY 10-11	Planning FY 11-12	Planning FY 12-13	Planning FY 13-14	
Expenditures								
Planning/Design/Engineering	\$1,188,900	\$0	\$0	\$0	\$0	\$400,000	\$0	\$1,588,900
Construction	7,000,000	0	1,100,000	0	0	6,200,000	0	14,300,000
Total Project Expenditures	\$8,188,900	\$0	\$1,100,000	\$0	\$0	\$6,600,000	\$0	\$15,888,900
Funding Sources								
Solid Waste Disposal Fund	\$8,188,900	\$0	\$1,100,000	\$0	\$0	\$6,600,000	\$0	\$15,888,900
Total Project Funding Sources	\$8,188,900	\$0	\$1,100,000	\$0	\$0	\$6,600,000	\$0	\$15,888,900

PROJECT TITLE Hanes Landfill Gas System Construction	DEPARTMENT/DIVISION Utilities / Solid Waste
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PROJECT DESCRIPTION/JUSTIFICATION

This project provides for the ongoing construction of various components of a system to extract landfill gas from existing lined cells. Current environmental regulations require the construction of gas extraction systems for sanitary waste landfills.

FINANCIAL SUMMARY:

	Prior Years	Planned Appropriations 2009-2014						Grand Total
	Total Approp To Date	Budget FY 08-09	Planning FY 09-10	Planning FY 10-11	Planning FY 11-12	Planning FY 12-13	Planning FY 13-14	
Expenditures								
Planning/Design/Engineering	\$340,000	\$0	\$0	\$0	\$0	\$0	\$0	\$340,000
Construction	1,800,000	0	0	0	400,000	0	0	2,200,000
Total Project Expenditures	\$2,140,000	\$0	\$0	\$0	\$400,000	\$0	\$0	\$2,540,000
Funding Sources								
Solid Waste Disposal Fund	\$2,140,000	\$0	\$0	\$0	\$400,000	\$0	\$0	\$2,540,000
Total Project Funding Sources	\$2,140,000	\$0	\$0	\$0	\$400,000	\$0	\$0	\$2,540,000

PROJECT TITLE Thomas Water Treatment Plant Modernization	DEPARTMENT/DIVISION Utilities / Water and Wastewater Treatment
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PROJECT DESCRIPTION/JUSTIFICATION

The Thomas Water Treatment Plant has been a reliable water treatment facility for over 80 years. A design has now been completed to rebuild the Thomas Plant. The new Thomas Plant will be a modern 18 million-gallon-per-day conventional water treatment facility. The decision to rebuild the plant was made based on water quality advantages gained due to the location of the current plant in the system as well as providing for the necessary capacity to meet the expected population growth over the next 20 years. Construction on the plant is expected to begin in the fall of 2008 and will be complete in 2011. Once completed, the plant would again be a reliable water treatment facility for the next 80 years.

FINANCIAL SUMMARY:

	Prior Years	Planned Appropriations 2009-2014						Grand Total
	Total Approp To Date	Budget FY 08-09	Planning FY 09-10	Planning FY 10-11	Planning FY 11-12	Planning FY 12-13	Planning FY 13-14	
Expenditures								
Planning/Design/Engineering	\$3,640,390	\$1,400,000	\$1,400,000	\$1,399,610	\$0	\$0	\$0	\$7,840,000
Construction	0	24,300,000	20,100,000	11,600,000	0	0	0	56,000,000
Equipment & Furnishings	0	0	0	2,000,000	0	0	0	2,000,000
Total Project Expenditures	\$3,640,390	\$25,700,000	\$21,500,000	\$14,999,610	\$0	\$0	\$0	\$65,840,000
Funding Sources								
Revenue Bonds	\$3,640,390	\$25,700,000	\$21,500,000	\$14,999,610	\$0	\$0	\$0	\$65,840,000
Total Project Funding Sources	\$3,640,390	\$25,700,000	\$21,500,000	\$14,999,610	\$0	\$0	\$0	\$65,840,000

PROJECT TITLE: Nutrient Removal at Wastewater Treatment Plants	DEPARTMENT/DIVISION Utilities / Water and Wastewater Treatment
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PROJECT DESCRIPTION/JUSTIFICATION

This project provides for the facilities necessary for the wastewater treatment plants to meet effluent nutrient limits that are expected to be implemented by the Division of Water Quality at both plants when total maximum daily loads are in place for High Rock Lake and the Yadkin River Watershed. This project was originally scheduled to begin in FY 2009, but it has been postponed until FY 2011-2012 as the Utility Division expects that total maximum daily loads will not be implemented until January 2012. Prior year amounts have been adjusted to reflect inflationary escalation associated with the delay. In addition, costs for odor control facilities at both plants and costs to upgrade aeration blowers at Muddy Creek that were included in other capital plan projects have been moved here. The plan submitted for period FY 2009-2014 also includes funding to cover the cost to install effluent filters at each treatment plant and \$3,500,000 to cover the cost to reconfigure the activated sludge process at the Elledge Plant.

FINANCIAL SUMMARY:

	Prior Years	Planned Appropriations 2009-2014						Grand Total
	Total Approp To Date	Budget FY 08-09	Planning FY 09-10	Planning FY 10-11	Planning FY 11-12	Planning FY 12-13	Planning FY 13-14	
Expenditures								
Planning/Design/Engineering	\$0	\$0	\$0	\$0	\$1,948,600	\$2,598,120	\$1,299,040	\$5,845,760
Construction	0	0	0	0	0	14,939,360	29,878,720	44,818,080
Contingency	0	0	0	0	0	3,247,680	6,495,360	9,743,040
Total Project Expenditures	\$0	\$0	\$0	\$0	\$1,948,600	\$20,785,160	\$37,673,120	\$60,406,880
Funding Sources								
Revenue Bonds	\$0	\$0	\$0	\$0	\$1,948,600	\$20,785,160	\$37,673,120	\$60,406,880
Total Project Funding Sources	\$0	\$0	\$0	\$0	\$1,948,600	\$20,785,160	\$37,673,120	\$60,406,880

PROJECT TITLE: Primary and Preliminary Treatment Upgrade at Wastewater Treatment Plants	DEPARTMENT/DIVISION Utilities / Water and Wastewater Treatment
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PROJECT DESCRIPTION/JUSTIFICATION

This project provides for the replacement of the primary and preliminary treatment facilities at the Elledge Wastewater Treatment Plant, the replacement of 1,600 feet of the Salem Outfall, electrical system and gas compressors. Headworks facilities at the Elledge Plant have been in service since 1956 and the structures are deteriorating due to corrosion. These facilities are also prone to flooding from nearby Salem Creek. The Elledge portion of the project is being accelerated due to recent engineering results indicating imminent structural failure. All upgrades represent "in-kind" replacement of existing facilities, and the Utilities Division does not anticipate any increase in operating costs will be incurred.

FINANCIAL SUMMARY:

	Prior Years	Planned Appropriations 2009-2014						Grand Total
	Total Approp To Date	Budget FY 08-09	Planning FY 09-10	Planning FY 10-11	Planning FY 11-12	Planning FY 12-13	Planning FY 13-14	
Expenditures								
Planning/Design/Engineering	\$3,575,180	\$1,760,000	\$1,464,820	\$200,000	\$0	\$0	\$0	\$7,000,000
Construction	0	23,840,000	24,035,180	2,124,820	0	0	0	50,000,000
Contingency	0	0	0	2,000,000	0	0	0	2,000,000
Total Project Expenditures	\$3,575,180	\$25,600,000	\$25,500,000	\$4,324,820	\$0	\$0	\$0	\$59,000,000
Funding Sources								
Revenue Bonds	\$3,575,180	\$25,600,000	\$25,500,000	\$4,324,820	\$0	\$0	\$0	\$59,000,000
Total Project Funding Sources	\$3,575,180	\$25,600,000	\$25,500,000	\$4,324,820	\$0	\$0	\$0	\$59,000,000

PROJECT TITLE: R.W. Neilson Water Treatment Plant - Phase II Modernization	DEPARTMENT/DIVISION Utilities / Water and Wastewater Treatment
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PROJECT DESCRIPTION/JUSTIFICATION

The Neilson Water Treatment Plant is the largest water treatment plant in the system with a treatment capacity of 48 million-gallon-per-day. Two major expansions have occurred since the construction of the original 24 million-gallon-per-day plant in the 1960s. Despite several small miscellaneous improvements projects, significant capital investment is required to replace aging infrastructure, improve treatment to meet current and future regulatory requirements, and to ensure the continued reliability in the distribution system supplied by this critical facility. This project would evaluate and upgrade the electrical distribution system of the plant, overhaul the filters and washwater system, upgrade the residuals management to utilize and existing National Pollution Discharge Elimination System (NPDES) permit, and modify the treatment trains to optimize the efficiency of the process. The schedule of this project is currently planned for FY 2011-2015 with a total appropriation of \$44,000,000.

FINANCIAL SUMMARY:

	Prior Years	Planned Appropriations 2009-2014						Grand Total
	Total Approp To Date	Budget FY 08-09	Planning FY 09-10	Planning FY 10-11	Planning FY 11-12	Planning FY 12-13	Planning FY 13-14	
Expenditures								
Planning/Design/Engineering	\$0	\$0	\$0	\$500,000	\$2,500,000	\$660,000	\$660,000	\$4,320,000
Construction	0	0	0	0	2,000,000	12,340,000	12,340,000	26,680,000
Contingency	0	0	0	0	0	0	2,000,000	2,000,000
Total Project Expenditures	\$0	\$0	\$0	\$500,000	\$4,500,000	\$13,000,000	\$15,000,000	\$33,000,000
Funding Sources								
Revenue Bonds	\$0	\$0	\$0	\$500,000	\$4,500,000	\$13,000,000	\$15,000,000	\$33,000,000
Total Project Funding Sources	\$0	\$0	\$0	\$500,000	\$4,500,000	\$13,000,000	\$15,000,000	\$33,000,000

PROJECT TITLE: Wastewater Lift Station Rehabilitation	DEPARTMENT/DIVISION Utilities / Water and Wastewater Treatment
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PROJECT DESCRIPTION/JUSTIFICATION

As proposed in previous years, this project included the construction of a 10 million-gallon-per-day pumping station and forced main near the junction of Little and Muddy Creeks for the purpose of transferring flow from the Muddy Creek Wastewater Treatment Plant to the Elledge Plant. This is needed to manage the flow received by the Muddy Creek Wastewater Treatment Plant so that the plant does not exceed 90% of its permitted flow capacity. It is more cost effective to move flow from the Muddy Creek Plant to Elledge than upgrade the Muddy Creek Plant to accommodate higher flows. The scope of this project is also being expanded for FY 2009 to include the cost to upgrade four existing lift stations that have been identified as being susceptible to having wet weather overflow events due to their capacity limitations. Work to increase the pump capacity of these stations will begin in July 2008.

FINANCIAL SUMMARY:

	Prior Years	Planned Appropriations 2009-2014						Grand Total
	Total Approp To Date	Budget FY 08-09	Planning FY 09-10	Planning FY 10-11	Planning FY 11-12	Planning FY 12-13	Planning FY 13-14	
Expenditures								
Planning/Design/Engineering	\$0	\$55,650	\$29,880	\$508,880	\$190,800	\$63,600	\$0	\$848,810
Construction	0	0	686,960	0	4,389,000	1,463,000	0	6,538,960
Equipment & Furnishings		0	0	0	54,000	0	0	54,000
Contingency	0	0	149,200	0	900,000	318,000	0	1,367,200
Total Project Expenditures	\$0	\$55,650	\$866,040	\$508,880	\$5,533,800	\$1,844,600	\$0	\$8,808,970
Funding Sources								
Revenue Bonds	\$0	\$55,650	\$866,040	\$508,880	\$5,533,800	\$1,844,600	\$0	\$8,808,970
Total Project Funding Sources	\$0	\$55,650	\$866,040	\$508,880	\$5,533,800	\$1,844,600	\$0	\$8,808,970

PROJECT TITLE: Treatment Facilities Reliability	DEPARTMENT/DIVISION Utilities / Water and Wastewater Treatment
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PROJECT DESCRIPTION/JUSTIFICATION

This project provides for the addition of two secondary clarifiers and a gravity thickening facility at the Muddy Creek Wastewater Treatment Plant. The clarifiers are needed to provide additional clarification capacity to decrease the concentration of solids in the plant effluent during periods of peak loading. A future gravity belt thickener will be needed for capacity at the plant once nutrient limits are imposed on the National Pollution Discharge Elimination System (NPDES) permit. New permit limits on nitrogen and phosphorus are expected by 2014 and will require a process change that will create more solids to be removed from the process. A gravity belt thickener facility will be necessary to handle this additional solids load.

FINANCIAL SUMMARY:

	Prior Years	Planned Appropriations 2009-2014						Grand Total
	Total Approp To Date	Budget FY 08-09	Planning FY 09-10	Planning FY 10-11	Planning FY 11-12	Planning FY 12-13	Planning FY 13-14	
Expenditures								
Planning/Design/Engineering	\$320,080	\$0	\$0	\$680,000	\$340,000	\$0	\$0	\$1,340,080
Construction	255,700	0	0	0	6,200,000	0	0	6,455,700
Contingency	38,690	0	0	0	620,000	0	0	658,690
Total Project Expenditures	\$614,470	\$0	\$0	\$680,000	\$7,160,000	\$0	\$0	\$8,454,470
Funding Sources								
Revenue Bonds	\$614,470	\$0	\$0	\$680,000	\$7,160,000	\$0	\$0	\$8,454,470
Total Project Funding Sources	\$614,470	\$0	\$0	\$680,000	\$7,160,000	\$0	\$0	\$8,454,470

PROJECT TITLE Chitty High Service Pumping Station - Standby Power	DEPARTMENT/DIVISION Utilities / Water and Wastewater Treatment
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PROJECT DESCRIPTION/JUSTIFICATION

The Chitty High Service Pumping Station is comprised of two pumping stations. The oldest station, built in 1961, has operated for over 45 years with little capital investment. The equipment has aged beyond its useful life, and the lack of available replacement parts has rendered the equipment difficult to maintain. The 1986 pumping station has been in continuous service for 20 years, and some capital improvement is needed to replace aging equipment and maintain the reliability of the station. Under this project, the existing electrical substation would be replaced. New standby power would be provided for both the 1961 and 1986 stations. New equipment will include 4,160 volt switchgear and generators, 480 volt generators, fuel storage tanks, and transformer. The existing diesel driven pumps would be removed from service, and emergency power would be provided by the new equipment. The 45 year old motor control center would be replaced with a new 4,160 volt motor control center and new starters would be installed. Due to changes in the distribution system since the station was put in service, the pumps have experienced abnormal wear. An evaluation of both pump stations would be performed to determine the cause of the wear, and corrective action would be taken to extend the life of the equipment. It is anticipated that some or all of the pumps would need to be replaced.

FINANCIAL SUMMARY:

	Prior Years	Planned Appropriations 2009-2014						Grand Total
	Total Approp To Date	Budget FY 08-09	Planning FY 09-10	Planning FY 10-11	Planning FY 11-12	Planning FY 12-13	Planning FY 13-14	
Expenditures								
Planning/Design/Engineering	\$0	\$0	\$0	\$0	\$487,500	\$414,370	\$73,120	\$974,990
Construction	0	0	0	0	2,437,500	2,071,880	365,630	4,875,010
Contingency	0	0	0	0	325,000	276,250	48,750	650,000
Total Project Expenditures	\$0	\$0	\$0	\$0	\$3,250,000	\$2,762,500	\$487,500	\$6,500,000
Funding Sources								
Revenue Bonds	\$0	\$0	\$0	\$0	\$3,250,000	\$2,762,500	\$487,500	\$6,500,000
Total Project Funding Sources	\$0	\$0	\$0	\$0	\$3,250,000	\$2,762,500	\$487,500	\$6,500,000

PROJECT TITLE Water Tank Rehabilitation	DEPARTMENT/DIVISION Utilities / Water and Wastewater Treatment
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PROJECT DESCRIPTION/JUSTIFICATION

This project consists of structural repairs, lead paint abatement, and coating replacement for elevated and ground storage tanks. Each of the tanks included in this project has been in service at least 20 years. An engineering firm that specializes in tank maintenance has inspected all of the tanks included, and this repair program is based on its recommendations. The goal of the project is to maximize the service life of these structures and to bring them into compliance with current Occupational Safety and Health Administration (OSHA) and American Water Works Association (AWWA) standards. The work for the Wake Forest Tank is currently scheduled for the spring of FY 2008-2009, and the work for the exterior of the Graves Street and Chitty tanks is scheduled for the fall of FY 2008-2009. Recently a master plan was completed which identified exterior coatings repair needs for the 15th Street and Sides Road ground storage tanks. The work as estimated by the engineering master plan has been included for these two additional tanks with the work scheduled to occur within the FY 2009-2010 and FY 2010-2011. The estimated budget increase to cover this additional rehabilitation work is \$1,381,000, which brings the total estimated expenditures for this project to \$4,208,500.

FINANCIAL SUMMARY:

	Prior Years	Planned Appropriations 2009-2014						Grand Total
	Total Approp To Date	Budget FY 08-09	Planning FY 09-10	Planning FY 10-11	Planning FY 11-12	Planning FY 12-13	Planning FY 13-14	
Expenditures								
Planning/Design/Engineering	\$150,000	\$150,000	\$69,050	\$69,050	\$0	\$0	\$0	\$438,100
Construction	1,250,000	1,100,000	552,400	552,400	0	0	0	3,454,800
Contingency	88,750	88,750	69,050	69,050	0	0	0	315,600
Total Project Expenditures	\$1,488,750	\$1,338,750	\$690,500	\$690,500	\$0	\$0	\$0	\$4,208,500
Funding Sources								
Revenue Bonds	\$1,488,750	\$1,338,750	\$690,500	\$690,500	\$0	\$0	\$0	\$4,208,500
Total Project Funding Sources	\$1,488,750	\$1,338,750	\$690,500	\$690,500	\$0	\$0	\$0	\$4,208,500

PROJECT TITLE Miscellaneous Water and Wastewater Treatment Capital Projects	DEPARTMENT/DIVISION Utilities / Water and Wastewater Treatment
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PROJECT DESCRIPTION/JUSTIFICATION

This project provides for general building, grounds, and equipment maintenance at the various utility plants. The project also provides for the purchase of costly replacement parts and repairs that are needed for the continuous operation and maintenance of the utility plants. The scope of these improvements or equipment purchases allows them to be completed within the fiscal year.

FINANCIAL SUMMARY:

	Prior Years	Planned Appropriations 2009-2014						Grand Total
	Total Approp To Date	Budget FY 08-09	Planning FY 09-10	Planning FY 10-11	Planning FY 11-12	Planning FY 12-13	Planning FY 13-14	
Expenditures								
Construction	\$0	\$1,980,960	\$0	\$0	\$0	\$0	\$0	\$1,980,960
Total Project Expenditures	\$0	\$1,980,960	\$0	\$0	\$0	\$0	\$0	\$1,980,960
Funding Sources								
Water and Sewer Fund Balance	\$0	\$1,980,960	\$0	\$0	\$0	\$0	\$0	\$1,980,960
Total Project Funding Sources	\$0	\$1,980,960	\$0	\$0	\$0	\$0	\$0	\$1,980,960

PROJECT TITLE Idol's Pump Station Rehabilitation	DEPARTMENT/DIVISION Utilities / Water and Wastewater Treatment
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PROJECT DESCRIPTION/JUSTIFICATION

The Idol's Pump Station plays a vital part in the Winston-Salem/Forsyth County water system by supplying water to two of our three water plants. Although the infrastructure of the building is sound, the pumping and electrical equipment in this building is approaching 30 years in age. This project proposes to install updated, energy efficient electrical motors on each pump. This project also proposes upgrading the electrical motor control centers (MCC's) for each pumping unit and incorporating soft starters. Under this project, a diesel emergency generator system would be installed of sufficient size to operate two pumps simultaneously at the station. This project also would incorporate new control instrumentation and communications equipment to operate the station remotely from the Neilson Plant.

FINANCIAL SUMMARY:

	Prior Years	Planned Appropriations 2009-2014						Grand Total
	Total Approp To Date	Budget FY 08-09	Planning FY 09-10	Planning FY 10-11	Planning FY 11-12	Planning FY 12-13	Planning FY 13-14	
Expenditures								
Planning/Design/Engineering	\$388,950	\$100,000	\$0	\$0	\$0	\$0	\$350,000	\$838,950
Construction	0	500,000	0	0	0	0	0	500,000
Equipment & Furnishings	0	1,500,000	0	0	0	0	0	1,500,000
Contingency	0	50,000	0	0	0	0	0	50,000
Total Project Expenditures	\$388,950	\$2,150,000	\$0	\$0	\$0	\$0	\$350,000	\$2,888,950
Funding Sources								
Revenue Bonds	\$388,950	\$2,150,000	\$0	\$0	\$0	\$0	\$350,000	\$2,888,950
Total Project Funding Sources	\$388,950	\$2,150,000	\$0	\$0	\$0	\$0	\$350,000	\$2,888,950

PROJECT TITLE Lift Station Supervisory Control and Data Acquisition, Flowmetering and Telemetry System Upgrade	DEPARTMENT/DIVISION Utilities / Water and Wastewater Treatment
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PROJECT DESCRIPTION/JUSTIFICATION

This project would involve upgrading the power line communications at the Utilities Division's 51 wastewater lift stations, providing for flow metering at six strategically located lift stations, and replacing unreliable telephone land line telemetry system with a state-of-the-art low frequency radio system. State regulations require that the Utilities Division develop flow information relative to its collections system so that it can manage the capacity of all the components that comprise this system. State regulations also require that the division maintain remote telemetry on lift stations as part of an overall environmental focus aimed at eliminating overflows of raw sewage from sanitary sewer systems. This project would provide staff the flow metering capability needed to develop a long-term management plan. The low frequency radio system would replace the current system that relies on telephone land lines for communication between the central computer and the field power line communications. This system frequently fails, and the division's ability to adequately transmit data over Bell South's network is inadequate.

FINANCIAL SUMMARY:

	Prior Years	Planned Appropriations 2009-2014						Grand Total
	Total Approp To Date	Budget FY 08-09	Planning FY 09-10	Planning FY 10-11	Planning FY 11-12	Planning FY 12-13	Planning FY 13-14	
Expenditures								
Planning/Design/Engineering	\$92,480	\$49,950	\$0	\$0	\$0	\$0	\$0	\$142,430
Construction	796,420	202,280	0	0	0	0	0	998,700
Contingency	199,100	50,590	0	0	0	0	0	249,690
Total Project Expenditures	\$1,088,000	\$302,820	\$0	\$0	\$0	\$0	\$0	\$1,390,820
Funding Sources								
Revenue Bonds	\$1,088,000	\$302,820	\$0	\$0	\$0	\$0	\$0	\$1,390,820
Total Project Funding Sources	\$1,088,000	\$302,820	\$0	\$0	\$0	\$0	\$0	\$1,390,820

PROJECT TITLE 2006 Annexation - Potential Petition Projects	DEPARTMENT/DIVISION Utilities / Water Distribution and Wastewater Collection
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PROJECT DESCRIPTION/JUSTIFICATION

This project involves the construction of water and sewer mains to serve new residential and commercial customers in the areas annexed by the city of Winston-Salem in 2006, in accordance with state law. This project includes both the City of Winston-Salem's and the property owner's share of line extensions (operating revenue).

FINANCIAL SUMMARY:

	Prior Years	Planned Appropriations 2009-2014						Grand Total
	Total Approp To Date	Budget FY 08-09	Planning FY 09-10	Planning FY 10-11	Planning FY 11-12	Planning FY 12-13	Planning FY 13-14	
Expenditures								
Planning/Design/Engineering	\$0	\$364,090	\$364,090	\$728,180	\$728,180	\$728,180	\$728,180	\$3,640,900
Land/Right-of-Way Acquisition	0	72,740	72,740	145,480	145,480	145,480	145,480	727,400
Construction	0	1,856,850	1,856,850	3,713,710	3,713,710	3,713,710	3,713,710	18,568,540
Contingency	0	206,320	206,320	412,630	412,630	412,630	412,630	2,063,160
Total Project Expenditures	\$0	\$2,500,000	\$2,500,000	\$5,000,000	\$5,000,000	\$5,000,000	\$5,000,000	\$25,000,000
Funding Sources								
Revenue Bonds	\$0	\$2,500,000	\$2,500,000	\$5,000,000	\$5,000,000	\$5,000,000	\$5,000,000	\$25,000,000
Total Project Funding Sources	\$0	\$2,500,000	\$2,500,000	\$5,000,000	\$5,000,000	\$5,000,000	\$5,000,000	\$25,000,000

PROJECT TITLE Wastewater Collection System Improvements	DEPARTMENT/DIVISION Utilities / Water Distribution and Wastewater Collection
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PROJECT DESCRIPTION/JUSTIFICATION

This project provides multi-year funding for inspection, evaluation, design, and construction of sanitary sewer rehabilitation projects throughout the system. In many areas of the sewer system, the pipes and manholes have reached ages that exceed 60, 70, and 80 years and have exceeded their life design. Manholes have deteriorated and pipes have cracked and broken. These problems cause backups, cavities/voids underground, flow problems, and allow water to infiltrate/inflow into the sewer system causing sanitary sewer overflows (SSOs) and extra cost at the plants to treat.

FINANCIAL SUMMARY:

	Prior Years	Planned Appropriations 2009-2014						Grand Total
	Total Approp To Date	Budget FY 08-09	Planning FY 09-10	Planning FY 10-11	Planning FY 11-12	Planning FY 12-13	Planning FY 13-14	
Expenditures								
Planning/Design/Engineering	\$450,000	\$450,000	\$450,000	\$450,000	\$450,000	\$450,000	\$450,000	\$3,150,000
Construction	2,250,000	2,250,000	2,250,000	2,250,000	2,250,000	2,250,000	2,250,000	15,750,000
Contingency	300,000	300,000	300,000	300,000	300,000	300,000	300,000	2,100,000
Total Project Expenditures	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$21,000,000
Funding Sources								
Water and Sewer Fund Balance	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$21,000,000
Total Project Funding Sources	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$21,000,000

PROJECT TITLE Ardmore Area Water and Sewer Rehabilitation	DEPARTMENT/DIVISION Utilities / Water Distribution and Wastewater Collection
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PROJECT DESCRIPTION/JUSTIFICATION

This project provides for the evaluation and rehabilitation of the Ardmore neighborhood water and sewer systems. Due to the large size of the Ardmore neighborhood, the age of the water and sewer systems, and the historical aspects of the area, a master plan approach is being pursued in developing an overall project approach for the rehabilitation of these systems.

FINANCIAL SUMMARY:

	Prior Years	Planned Appropriations 2009-2014						Grand Total
	Total Approp To Date	Budget FY 08-09	Planning FY 09-10	Planning FY 10-11	Planning FY 11-12	Planning FY 12-13	Planning FY 13-14	
Expenditures								
Planning/Design/Engineering	\$653,730	\$200,000	\$200,000	\$200,000	\$0	\$0	\$0	\$1,253,730
Construction	0	4,000,000	4,000,000	4,000,000	0	0	0	12,000,000
Contingency	0	200,000	200,000	200,000	0	0	0	600,000
Total Project Expenditures	\$653,730	\$4,400,000	\$4,400,000	\$4,400,000	\$0	\$0	\$0	\$13,853,730
Funding Sources								
Revenue Bonds	\$653,730	\$4,400,000	\$4,400,000	\$4,400,000	\$0	\$0	\$0	\$13,853,730
Total Project Funding Sources	\$653,730	\$4,400,000	\$4,400,000	\$4,400,000	\$0	\$0	\$0	\$13,853,730

PROJECT TITLE 2" Water Main Replacement	DEPARTMENT/DIVISION Utilities / Water Distribution and Wastewater Collection
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PROJECT DESCRIPTION/JUSTIFICATION

This project has been updated to include areas where 2" water mains exist at approximately 30 locations within city limits as well as multiple locations in Rural Hall and Kernersville. These lines are undersized and no longer provide adequate domestic flow or fire flow to the areas they serve. The project consists of replacing the 2" water mains with 6" or 8" water mains so that adequate domestic flow and fire flow would be provided.

FINANCIAL SUMMARY:

	Prior Years	Planned Appropriations 2009-2014						Grand Total
	Total Approp To Date	Budget FY 08-09	Planning FY 09-10	Planning FY 10-11	Planning FY 11-12	Planning FY 12-13	Planning FY 13-14	
Expenditures								
Planning/Design/Engineering	\$226,820	\$160,100	\$160,100	\$160,100	\$160,100	\$160,100	\$160,100	\$1,187,420
Construction	1,134,180	886,510	886,510	886,510	886,510	886,510	886,510	6,453,240
Contingency	37,500	88,650	88,650	88,650	88,650	88,650	88,650	569,400
Total Project Expenditures	\$1,398,500	\$1,135,260	\$1,135,260	\$1,135,260	\$1,135,260	\$1,135,260	\$1,135,260	\$8,210,060
Funding Sources								
Water and Sewer Fund Balance	\$1,398,500	\$1,135,260	\$1,135,260	\$1,135,260	\$1,135,260	\$1,135,260	\$1,135,260	\$8,210,060
Total Project Funding Sources	\$1,398,500	\$1,135,260	\$1,135,260	\$1,135,260	\$1,135,260	\$1,135,260	\$1,135,260	\$8,210,060

PROJECT TITLE Water Distribution System Improvements	DEPARTMENT/DIVISION Utilities / Water Distribution and Wastewater Collection
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PROJECT DESCRIPTION/JUSTIFICATION

This project provides multi-year funding for water distribution improvements throughout the city and county. This project would fund some planned work such as valve exercising as well as unanticipated miscellaneous projects that arise throughout the fiscal year, such as projects for rehabilitating portions of the water system, chlorination booster projects, structure adjustments, system-wide asset replacement planning, and other miscellaneous water system improvements.

FINANCIAL SUMMARY:

	Prior Years	Planned Appropriations 2009-2014						Grand Total
	Total Approp To Date	Budget FY 08-09	Planning FY 09-10	Planning FY 10-11	Planning FY 11-12	Planning FY 12-13	Planning FY 13-14	
Expenditures								
Planning/Design/Engineering	\$150,000	\$250,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$1,150,000
Construction	800,000	1,100,000	800,000	800,000	800,000	800,000	800,000	5,900,000
Contingency	50,000	80,000	50,000	50,000	50,000	50,000	50,000	380,000
Total Project Expenditures	\$1,000,000	\$1,430,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$7,430,000
Funding Sources								
Water and Sewer Fund Balance	\$1,000,000	\$1,430,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$7,430,000
Total Project Funding Sources	\$1,000,000	\$1,430,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$7,430,000

PROJECT TITLE New Elevated Water Tanks	DEPARTMENT/DIVISION Utilities / Water Distribution and Wastewater Collection
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PROJECT DESCRIPTION/JUSTIFICATION

This project would fund the construction of two new elevated storage tanks in the system. Recent recommendations from private consultants indicate the need for additional storage in the Clemmons and Kernersville service areas to meet demand projections for 2015. A new 1.5 million gallon storage tank would be needed in Clemmons, and an additional 1.0 million gallon storage tank would be needed in Kernersville.

FINANCIAL SUMMARY:

	Prior Years	Planned Appropriations 2009-2014						Grand Total
	Total Approp To Date	Budget FY 08-09	Planning FY 09-10	Planning FY 10-11	Planning FY 11-12	Planning FY 12-13	Planning FY 13-14	
Expenditures								
Planning/Design/Engineering	\$0	\$0	\$0	\$0	\$250,000	\$250,000	\$0	\$500,000
Land/Right-of-Way Acquisition	156,400	0	0	0	0	0	0	156,400
Construction	0	0	0	0	2,250,000	2,250,000	0	4,500,000
Contingency	0	0	0	0	100,000	100,000	0	200,000
Total Project Expenditures	\$156,400	\$0	\$0	\$0	\$2,600,000	\$2,600,000	\$0	\$5,356,400
Funding Sources								
Revenue Bonds	\$156,400	\$0	\$0	\$0	\$2,600,000	\$2,600,000	\$0	\$5,356,400
Total Project Funding Sources	\$156,400	\$0	\$0	\$0	\$2,600,000	\$2,600,000	\$0	\$5,356,400

PROJECT TITLE Salem Creek Outfall Extension	DEPARTMENT/DIVISION Utilities / Water Distribution and Wastewater Collection
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PROJECT DESCRIPTION/JUSTIFICATION

This project involves the construction of approximately 2.5 miles of 30" ductile iron pipe between Clemmonsville Road and the existing Muddy Creek outfall. The project would allow wastewater treatment plant operating flexibility by providing the capability to divert flow from the Elledge Plant to the Muddy Creek plant as operating conditions dictate. The project also would allow expansion of the sewer service area by approximately 2,600 acres by extending the outfall into the lower Salem Creek sub-basin.

FINANCIAL SUMMARY:

	Prior Years	Planned Appropriations 2009-2014						Grand Total
	Total Approp To Date	Budget FY 08-09	Planning FY 09-10	Planning FY 10-11	Planning FY 11-12	Planning FY 12-13	Planning FY 13-14	
Expenditures								
Planning/Design/Engineering	\$0	\$474,840	\$316,550	\$0	\$0	\$0	\$0	\$791,390
Construction	0	0	3,165,510	0	0	0	0	3,165,510
Contingency	0	0	316,550	0	0	0	0	316,550
Total Project Expenditures	\$0	\$474,840	\$3,798,610	\$0	\$0	\$0	\$0	\$4,273,450
Funding Sources								
Revenue Bonds	\$0	\$474,840	\$3,798,610	\$0	\$0	\$0	\$0	\$4,273,450
Total Project Funding Sources	\$0	\$474,840	\$3,798,610	\$0	\$0	\$0	\$0	\$4,273,450

PROJECT TITLE 2006 Annexation - Major Mains and Five-Day Petitions	DEPARTMENT/DIVISION Utilities / Water Distribution and Wastewater Collection
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PROJECT DESCRIPTION/JUSTIFICATION

This project involves the construction of major water transmission mains and sewer outfalls to serve new residential and commercial customers in the areas annexed by the City of Winston-Salem in 2006, in accordance with State law. This project includes both the City of Winston-Salem's and the property owner's share of line extensions (operating revenue). This project also includes the costs associated with all five-day petitions received for service.

FINANCIAL SUMMARY:

	Prior Years	Planned Appropriations 2009-2014						Grand Total
	Total Approp To Date	Budget FY 08-09	Planning FY 09-10	Planning FY 10-11	Planning FY 11-12	Planning FY 12-13	Planning FY 13-14	
Expenditures								
Planning/Design/Engineering	\$722,280	\$413,030	\$0	\$0	\$0	\$0	\$0	\$1,135,310
Land/Right-of-Way Acquisition	120,160	120,160	0	0	0	0	0	240,320
Construction	2,548,770	3,241,310	0	0	0	0	0	5,790,080
Contingency	254,880	324,130	64,340	0	0	0	0	643,350
Total Project Expenditures	\$3,646,090	\$4,098,630	\$64,340	\$0	\$0	\$0	\$0	\$7,809,060
Funding Sources								
Revenue Bonds	\$3,646,090	\$4,098,630	\$64,340	\$0	\$0	\$0	\$0	\$7,809,060
Total Project Funding Sources	\$3,646,090	\$4,098,630	\$64,340	\$0	\$0	\$0	\$0	\$7,809,060

PROJECT TITLE Muddy Creek Find and Fix Project	DEPARTMENT/DIVISION Utilities / Water Distribution and Wastewater Collection
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PROJECT DESCRIPTION/JUSTIFICATION

This project provides for inflow and infiltration investigations, flow monitoring, planning, and construction for sewer rehabilitation projects in the Muddy Creek drainage basin sewer system. The project should decrease the amount of inflow and infiltration entering the system and increase its long-term capacity.

FINANCIAL SUMMARY:

	Prior Years	Planned Appropriations 2009-2014						Grand Total
	Total Approp To Date	Budget FY 08-09	Planning FY 09-10	Planning FY 10-11	Planning FY 11-12	Planning FY 12-13	Planning FY 13-14	
Expenditures								
Planning/Design/Engineering	\$280,000	\$183,400	\$183,400	\$0	\$0	\$0	\$0	\$646,800
Construction	228,000	1,167,000	1,167,000	0	0	0	0	2,562,000
Contingency	50,000	66,700	66,700	0	0	0	0	183,400
Total Project Expenditures	\$558,000	\$1,417,100	\$1,417,100	\$0	\$0	\$0	\$0	\$3,392,200
Funding Sources								
Revenue Bonds	\$558,000	\$1,417,100	\$1,417,100	\$0	\$0	\$0	\$0	\$3,392,200
Total Project Funding Sources	\$558,000	\$1,417,100	\$1,417,100	\$0	\$0	\$0	\$0	\$3,392,200

PROJECT TITLE Construction and Maintenance Facilities Improvements	DEPARTMENT/DIVISION Utilities / Water Distribution and Wastewater Collection
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PROJECT DESCRIPTION/JUSTIFICATION

This project addresses space limitations currently facing the Construction and Maintenance operation. Due to changes in responsibility and a shift to more technical personnel, more office space is needed to accommodate this staff. With the move of the Meter Shop to its own building, recent renovations to the main construction and maintenance building provided additional office space, more meeting space, and cubicle spaces. Some work is still needed at the Meter Shop building to better utilize space that formerly housed backflow prevention staff and to reestablish meter testing operation. This project also would address the planning and construction of an additional facility elsewhere to provide for better service coverage and response times.

FINANCIAL SUMMARY:

	Prior Years	Planned Appropriations 2009-2014						Grand Total
	Total Approp To Date	Budget FY 08-09	Planning FY 09-10	Planning FY 10-11	Planning FY 11-12	Planning FY 12-13	Planning FY 13-14	
Expenditures								
Planning/Design/Engineering	\$0	\$25,000	\$100,000	\$200,000	\$0	\$0	\$0	\$325,000
Construction	1,116,900	100,000	0	2,000,000	0	0	0	3,216,900
Contingency	0	12,500	0	200,000	0	0	0	212,500
Total Project Expenditures	\$1,116,900	\$137,500	\$100,000	\$2,400,000	\$0	\$0	\$0	\$3,754,400
Funding Sources								
Revenue Bonds	\$1,116,900	\$137,500	\$100,000	\$2,400,000	\$0	\$0	\$0	\$3,754,400
Total Project Funding Sources	\$1,116,900	\$137,500	\$100,000	\$2,400,000	\$0	\$0	\$0	\$3,754,400

PROJECT TITLE Winston-Salem State University Campus Distribution System Improvements	DEPARTMENT/DIVISION Utilities / Water Distribution and Wastewater Collection
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PROJECT DESCRIPTION/JUSTIFICATION

This project would eliminate the encroachment of a 24" water main easement located on Winston-Salem State University's (WSSU) campus and would ensure the quality of service provided by the Thomas Water Treatment Plant's transmission mains. This project is phased as follows: Phase I: Place ~720' of 30" water main from Thomas Water Plant and relocate ~4500' of 24" water main around WSSU campus. Phase II: Place ~750' of 30" water main from Thomas Water Plant and replace two separate water mains (20" and 24") that parallel across the WSSU practice field with ~2600' of 24" water main. Phase III: Place ~1000' of 30" water main in order to create a loop system just North of the Martin Luther King, Jr. bridge and replace two separate water mains (12" and 16") that parallel along Martin Luther King, Jr. Drive south bound with ~1100' of 16" water main. In the future, a 30" main from the Thomas Plant to Ridgewood Drive may be needed in response to system demand.

FINANCIAL SUMMARY:

	Prior Years	Planned Appropriations 2009-2014						Grand Total
	Total Approp To Date	Budget FY 08-09	Planning FY 09-10	Planning FY 10-11	Planning FY 11-12	Planning FY 12-13	Planning FY 13-14	
Expenditures								
Planning/Design/Engineering	\$0	\$125,000	\$83,000	\$45,000	\$0	\$0	\$0	\$253,000
Construction	0	846,000	556,000	297,000	0	0	0	1,699,000
Contingency	0	194,200	127,800	68,400	0	0	0	390,400
Total Project Expenditures	\$0	\$1,165,200	\$766,800	\$410,400	\$0	\$0	\$0	\$2,342,400
Funding Sources								
Revenue Bonds	\$0	\$1,165,200	\$766,800	\$410,400	\$0	\$0	\$0	\$2,342,400
Total Project Funding Sources	\$0	\$1,165,200	\$766,800	\$410,400	\$0	\$0	\$0	\$2,342,400

PROJECT TITLE Polo Road Outfall Sewer Rehabilitation	DEPARTMENT/DIVISION Utilities / Water Distribution and Wastewater Collection
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PROJECT DESCRIPTION/JUSTIFICATION

This project would include inspection and rehabilitation of approximately 8,300 feet of 8-inch sanitary sewer line. In addition, easement clearing and/or acquisition would be a significant part of this project. It is unknown how much of the sewer line is inside of an existing sewer easement, but it is clear that much of the property around it has developed and limited or blocked access. Construction of new houses near the line and fences across the line have contributed to access issues making it very difficult in some areas and impossible in other areas to access the main. To further complicate matters, the line borders multiple small lakes in the area, potentially allowing a situation that could be damaging to the environment if a major overflow were to occur. Work would include an unspecified type of rehabilitation to the main, connections and manholes, as a comprehensive improvement. Also, this project would most likely include acquisition of easements for future access. Staff recognizes that public education in the form of providing information to property owners along the project limits will be critical to the success of this project.

FINANCIAL SUMMARY:

	Prior Years	Planned Appropriations 2009-2014						Grand Total
	Total Approp To Date	Budget FY 08-09	Planning FY 09-10	Planning FY 10-11	Planning FY 11-12	Planning FY 12-13	Planning FY 13-14	
Expenditures								
Planning/Design/Engineering	\$125,000	\$75,000	\$0	\$0	\$0	\$0	\$0	\$200,000
Construction	0	1,000,000	0	0	0	0	0	1,000,000
Contingency	0	50,000	0	0	0	0	0	50,000
Total Project Expenditures	\$125,000	\$1,125,000	\$0	\$0	\$0	\$0	\$0	\$1,250,000
Funding Sources								
Water and Sewer Fund Balance	\$125,000	\$1,125,000	\$0	\$0	\$0	\$0	\$0	\$1,250,000
Total Project Funding Sources	\$125,000	\$1,125,000	\$0	\$0	\$0	\$0	\$0	\$1,250,000

PROJECT TITLE Water and Sewer GIS/Work Order Management System	DEPARTMENT/DIVISION Utilities / Water Distribution and Wastewater Collection
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PROJECT DESCRIPTION/JUSTIFICATION

This project would create a new Geographical Information System (GIS) mapping and database of the water and sewer system. The GIS mapping would utilize Global Positioning System (GPS) technology to tie existing mains and manholes to a current GIS datum. Phase 1 of this project would involve charges by the Information Systems Department for the following services: functional design, detailed and database design, hardware/software applications, integration with other systems (i.e., Work Order Management System), documentation of maintenance procedures and functionality, and training/support. Phase 2 of the project would include the cost to collect data on the water and sewer system. Request for proposals would be solicited from firms that would collect geographic coordinates on the major appurtenances of the water and sewer systems. Once completed, the database would be used for capital improvement planning, maintenance planning and scheduling, and storing information on existing systems. The systems would combine data from other agencies (e.g., Tax Office, Planning, Engineering, etc.), which would allow maps to overlay other various facets of information on top of the water and/or sewer system.

FINANCIAL SUMMARY:

	Prior Years	Planned Appropriations 2009-2014						Grand Total
	Total Approp To Date	Budget FY 08-09	Planning FY 09-10	Planning FY 10-11	Planning FY 11-12	Planning FY 12-13	Planning FY 13-14	
Expenditures								
Planning/Design/Engineering	\$1,566,610	\$300,000	\$304,390	\$0	\$0	\$0	\$0	\$2,171,000
Contingency	150,000	100,000	179,000	0	0	0	0	429,000
Total Project Expenditures	\$1,716,610	\$400,000	\$483,390	\$0	\$0	\$0	\$0	\$2,600,000
Funding Sources								
Revenue Bonds	\$1,716,610	\$400,000	\$483,390	\$0	\$0	\$0	\$0	\$2,600,000
Total Project Funding Sources	\$1,716,610	\$400,000	\$483,390	\$0	\$0	\$0	\$0	\$2,600,000

PROJECT TITLE Permanent Flow Monitoring	DEPARTMENT/DIVISION Utilities / Water Distribution and Wastewater Collection
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PROJECT DESCRIPTION/JUSTIFICATION

This project provides for the purchase of permanent flow monitors and for their installation at or near existing wastewater pumping stations. Installation at these locations would allow utilization of existing telemetry and Supervisory Control and Data Acquisition System (SCADA) information gathering capabilities at the pump stations in the operation of the flow monitors. Permanent flow monitoring would assist in gaining system performance knowledge and help determine capacity related issues as prescribed in the most recent update to the Flow Acceptance and Tracking portion of the Sewer Extension permit.

FINANCIAL SUMMARY:

	Prior Years	Planned Appropriations 2009-2014						Grand Total
	Total Approp To Date	Budget FY 08-09	Planning FY 09-10	Planning FY 10-11	Planning FY 11-12	Planning FY 12-13	Planning FY 13-14	
Expenditures								
Planning/Design/Engineering	\$100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$100,000
Construction	250,000	250,000	0	0	0	0	0	500,000
Contingency	35,000	35,000	0	0	0	0	0	70,000
Total Project Expenditures	\$385,000	\$285,000	\$0	\$0	\$0	\$0	\$0	\$670,000
Funding Sources								
Revenue Bonds	\$385,000	\$285,000	\$0	\$0	\$0	\$0	\$0	\$670,000
Total Project Funding Sources	\$385,000	\$285,000	\$0	\$0	\$0	\$0	\$0	\$670,000

PROJECT TITLE Bath Branch Regional Stormwater Control Project	DEPARTMENT/DIVISION Stormwater Management
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PROJECT DESCRIPTION/JUSTIFICATION

The Piedmont Triad Research Park (PTRP) and the City of Winston-Salem have contracted to complete an engineering design to install three regional stormwater management controls and restore 2,100 linear feet of Bath Branch in downtown Winston-Salem. Stormwater ponds will be located at the northwest corner of I-40 Business and Highway 52, behind the City Employees Credit Union, and at the southeastern portion of the City Yard. Bath Branch will be restored south of I-40 Business to the confluence with Salem Creek. Construction of the final engineering design plans will address the quality of stormwater runoff for 600 acres of drainage area within downtown Winston-Salem. This project is intended to be carried out in two phases. Phase I of the project will construct the ponds to be located at the northwest corner of I-40 Business and Hwy 52 and the City Employees Credit Union, along with all of the storm drainage system piping to route runoff into the ponds. Phase II of the project will construct the pond to be located at City Yard as well as the 2,100 linear feet of restoration at Bath Branch. A memorandum of understanding is being developed whereas the city would pay for two-thirds of the cost of construction and PTRP will pay for one-third of the cost of construction.

FINANCIAL SUMMARY:

	Prior Years	Planned Appropriations 2009-2014						Grand Total
	Total Approp To Date	Budget FY 08-09	Planning FY 09-10	Planning FY 10-11	Planning FY 11-12	Planning FY 12-13	Planning FY 13-14	
Expenditures								
Planning/Design/Engineering	\$210,750	\$82,800	\$0	\$0	\$0	\$0	\$0	\$293,550
Land/Right-of-Way Acquisition	4,000,000	0	0	0	0	0	0	4,000,000
Construction	2,000,000	0	0	10,492,680	0	0	0	12,492,680
Environmental Studies/NEPA	0	97,240	0	0	0	0	0	97,240
Total Project Expenditures	\$6,210,750	\$180,040	\$0	\$10,492,680	\$0	\$0	\$0	\$16,883,470
Funding Sources								
Revenue Bonds	\$0	\$0	\$0	\$10,492,680	\$0	\$0	\$0	\$10,492,680
Clean Water Trust Fund	3,000,000	0	0	0	0	0	0	3,000,000
Federal and State Tribal Assistance Grant	3,000,000	0	0	0	0	0	0	3,000,000
Stormwater Management Fund	210,750	180,040	0	0	0	0	0	390,790
Total Project Funding Sources	\$6,210,750	\$180,040	\$0	\$10,492,680	\$0	\$0	\$0	\$16,883,470

PROJECT TITLE Stormwater Infrastructure Improvements	DEPARTMENT/DIVISION Stormwater Management
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PROJECT DESCRIPTION/JUSTIFICATION

Through stormwater basin studies and city inspections, the stormwater staff has identified over 30 locations throughout the city where public stormwater infrastructure is deficient. The drainage system in these locations are aging or inadequate in size to handle current stormwater volumes. The estimated cost of improvements to these locations totals over \$24 million. The stormwater staff has assigned each project a priority ranking and created a 15-year plan for constructing these improvements. The 2009-2014 capital plan provides funding for the first six years of the stormwater capital plan, which would construct improvements at approximately half of the locations. The city would fund these improvements using both stormwater management fund reserves and revenue bonds. The debt service on revenue bonds represents a new cost to the Stormwater Management Program, as noted below in the operating impact section.

FINANCIAL SUMMARY:

	Prior Years	Planned Appropriations 2009-2014						Grand Total
	Total Approp To Date	Budget FY 08-09	Planning FY 09-10	Planning FY 10-11	Planning FY 11-12	Planning FY 12-13	Planning FY 13-14	
Expenditures								
Planning/Design/Engineering	\$680,000	\$0	\$0	\$0	\$0	\$0	\$0	\$680,000
Construction	2,720,000	0	0	4,285,850	0	1,389,200	1,324,950	9,720,000
Total Project Expenditures	\$3,400,000	\$0	\$0	\$4,285,850	\$0	\$1,389,200	\$1,324,950	\$10,400,000
Funding Sources								
Revenue Bonds	\$1,426,000	\$0	\$0	\$4,285,850	\$0	\$0	\$0	\$5,711,850
Stormwater Management Fund	1,974,000	0	0	0	0	1,389,200	1,324,950	4,688,150
Total Project Funding Sources	\$3,400,000	\$0	\$0	\$4,285,850	\$0	\$1,389,200	\$1,324,950	\$10,400,000
OPERATING IMPACT:								
Debt Service		\$0	\$0	\$0	\$362,220	\$362,220	\$362,220	\$1,086,660
Total Net Expenditures		\$0	\$0	\$0	\$362,220	\$362,220	\$362,220	\$1,086,660

PROJECT TITLE Drainage Improvements on Private Property	DEPARTMENT/DIVISION Stormwater Management
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PROJECT DESCRIPTION/JUSTIFICATION

City ordinances authorize the city to participate in the correction of storm drainage problems that occur on private residential property. The cap on project cost is \$50,000, with the city's participation in eligible projects limited to 70%. Each project request will be reviewed by city staff and presented to the City Council for final approval.

FINANCIAL SUMMARY:

	Prior Years	Planned Appropriations 2009-2014						Grand Total
	Total Approp To Date	Budget FY 08-09	Planning FY 09-10	Planning FY 10-11	Planning FY 11-12	Planning FY 12-13	Planning FY 13-14	
Expenditures								
Construction	\$900,000	\$250,000	\$250,000	\$250,000	\$500,000	\$500,000	\$500,000	\$3,150,000
Total Project Expenditures	\$900,000	\$250,000	\$250,000	\$250,000	\$500,000	\$500,000	\$500,000	\$3,150,000
Funding Sources								
Stormwater Management Fund	\$900,000	\$250,000	\$250,000	\$250,000	\$500,000	\$500,000	\$500,000	\$3,150,000
Total Project Funding Sources	\$900,000	\$250,000	\$250,000	\$250,000	\$500,000	\$500,000	\$500,000	\$3,150,000

PROJECT TITLE Hutton Street Rehabilitation	DEPARTMENT/DIVISION Public Works/Streets
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PROJECT DESCRIPTION/JUSTIFICATION

The City of Winston-Salem Streets Division (Drainage Section) discovered severe erosion along a fill section of Hutton Street. City crews anticipate being able to excavate the street and reconstructing it to city standards.

FINANCIAL SUMMARY:

	Prior Years	Planned Appropriations 2009-2014						Grand Total
	Total Approp To Date	Budget FY 08-09	Planning FY 09-10	Planning FY 10-11	Planning FY 11-12	Planning FY 12-13	Planning FY 13-14	
Expenditures								
Land/Right-of-Way Acquisition	\$0	\$20,000	\$0	\$0	\$0	\$0	\$0	\$20,000
Construction	0	208,500	0	0	0	0	0	208,500
Contingency	0	16,500	0	0	0	0	0	16,500
Total Project Expenditures	\$0	\$245,000	\$0	\$0	\$0	\$0	\$0	\$245,000
Funding Sources								
Stormwater Management Fund	\$0	\$245,000	\$0	\$0	\$0	\$0	\$0	\$245,000
Total Project Funding Sources	\$0	\$245,000	\$0	\$0	\$0	\$0	\$0	\$245,000

PROJECT TITLE Municipal Stormwater Pollution Prevention Plans	DEPARTMENT/DIVISION Stormwater Management
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PROJECT DESCRIPTION/JUSTIFICATION

This project involves the development of stormwater pollution prevention plans for all municipally owned and operated facilities that have the potential to contribute pollution to surface waters. Departments and locations for which plans would be developed include: Fleet Services, Department of Transportation, Streets, Sanitation, Utilities Construction and Maintenance, water and wastewater treatment plants, Winston-Salem Entertainment and Sports Complex, landfills, Division of Vegetation Management, and Recreation and Parks Department. Development of these plans is a requirement of the United States Environmental Protection Agency (USEPA) and the city's National Pollution Discharge Elimination System Phase I permit. The USEPA requires that the city complete these plans within three years. Current pollution prevention plans that are under contract review are Fleet Services and Archie Elledge Wastewater Treatment Plant. Muddy Creek Wastewater Treatment Plant contract draft is under construction. The Sanitation Department and Streets Division pollution prevention plans are currently in the mapping process phase.

FINANCIAL SUMMARY:

	Prior Years	Planned Appropriations 2009-2014						Grand Total
	Total Approp To Date	Budget FY 08-09	Planning FY 09-10	Planning FY 10-11	Planning FY 11-12	Planning FY 12-13	Planning FY 13-14	
Expenditures								
Planning/Design/Engineering	\$108,800	\$108,800	\$108,800	\$0	\$0	\$0	\$0	\$326,400
Total Project Expenditures	\$108,800	\$108,800	\$108,800	\$0	\$0	\$0	\$0	\$326,400
Funding Sources								
Stormwater Management Fund	\$108,800	\$108,800	\$108,800	\$0	\$0	\$0	\$0	\$326,400
Total Project Funding Sources	\$108,800	\$108,800	\$108,800	\$0	\$0	\$0	\$0	\$326,400

PROJECT TITLE Federal Emergency Management Agency Severe Repetitive Loss Grant Assistance	DEPARTMENT/DIVISION Stormwater Management
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PROJECT DESCRIPTION/JUSTIFICATION

Per the special meeting of the Public Works Committee in February 2007, the City Council has indicated an interest to assist citizens with flood ravaged properties. In doing so, they have ordained cost share percentages at 70/30 for assistance in drainage issues across private property. They have also approved assistance for citizens who wish to participate in FEMA grant funding programs such as severe repetitive loss, which removes properties from the 100 year floodplain. A property owner at 3339 Linda Circle has expressed interest in participation in this program. Scope of work for this project includes payment for the dwelling and property, demolition of the property, and disposal of debris, legal fees associated with placing deed restrictions on the property and recording a conservation easement on the property. Any grant awarded by FEMA must be carried out by the local government. Grant assistance is expected from the FEMA in the amount of 75% of the total cost of the project, with the remaining 25% being part of the City's 70/30 cost share. However, FEMA will only reimburse the city when the project has been completed; therefore, the full amount of the project has to be encumbered.

FINANCIAL SUMMARY:

	Prior Years	Planned Appropriations 2009-2014						Grand Total
	Total Approp To Date	Budget FY 08-09	Planning FY 09-10	Planning FY 10-11	Planning FY 11-12	Planning FY 12-13	Planning FY 13-14	
Expenditures								
Removal of Flood Ravaged Property	\$0	\$187,550	\$0	\$0	\$0	\$0	\$0	\$187,550
Total Project Expenditures	\$0	\$187,550	\$0	\$0	\$0	\$0	\$0	\$187,550
Funding Sources								
Stormwater Management Fund	\$0	\$187,550	\$0	\$0	\$0	\$0	\$0	\$187,550
Total Project Funding Sources	\$0	\$187,550	\$0	\$0	\$0	\$0	\$0	\$187,550