

Department of Watershed Management Five (5) Year Capital Improvement Projects

Proj. No.	Project	Bond	FY 10	FY 11	FY 12	FY 13	FY 14	Total
	Description		Year 1	Year 2	Year 3	Year 4	Year 5	
1	Hypochlorite Generation	Yes	\$3,000,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$3,000,000.00
2	Henderson Booster Pumping Station	Yes	\$87,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$87,000.00
3	Tucker Ground Storage Repump Station	Yes	\$90,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$90,000.00
4	Midvale Booster Pumping Station	Yes	\$80,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$80,000.00
5	Spare Bowls for Transfer Pumps	Yes	\$200,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$200,000.00
6	Water Tank Painting	Yes	\$1,500,000.00	\$1,000,000.00	\$1,000,000.00	\$500,000.00	\$500,000.00	\$4,500,000.00
7	Cathodic Protection Survey and Design	Yes	\$100,000.00	\$100,000.00	\$100,000.00	\$100,000.00	\$100,000.00	\$500,000.00
8	Cathodic Protection for Water Tanks	Yes	\$1,000,000.00	\$400,000.00	\$0.00	\$0.00	\$0.00	\$1,400,000.00
9	North Shallowford Road Booster Pumping Station Upgrade	Yes	\$1,100,000.00	\$1,000,000.00	\$0.00	\$0.00	\$0.00	\$2,100,000.00
10	Tilly Mill Booster Pumping Station Upgrade	Yes	\$1,000,000.00	\$800,000.00	\$0.00	\$0.00	\$0.00	\$1,800,000.00
11	North DeKalb County Pipe Replacement	Yes	\$1,000,000.00	\$1,000,000.00	\$1,000,000.00	\$1,000,000.00	\$0.00	\$4,000,000.00
12	Water Reuse Projects Planning and Design	Yes	\$1,200,000.00	\$1,400,000.00	\$0.00	\$1,000,000.00	\$2,750,000.00	\$6,350,000.00
13	Water Reuse Projects Implementation	Yes	\$0.00	\$7,815,000.00	\$22,000,000.00	\$33,000,000.00	\$13,000,000.00	\$75,815,000.00
14	Water Meter Installation	No	\$1,400,000.00	\$1,400,000.00	\$1,400,000.00	\$1,400,000.00	\$1,400,000.00	\$7,000,000.00
15	Water Service Line Renewal - Annual	No	\$500,000.00	\$500,000.00	\$500,000.00	\$500,000.00	\$500,000.00	\$2,500,000.00
16	Water Meter Replacement	No	\$1,500,000.00	\$1,500,000.00	\$1,500,000.00	\$1,500,000.00	\$1,500,000.00	\$7,500,000.00
17	Vulnerability Assessment Study - Water	No	\$0.00	\$100,000.00	\$0.00	\$0.00	\$0.00	\$100,000.00
18	Water System Security Design and Implementation	No	\$1,500,000.00	\$1,500,000.00	\$1,500,000.00	\$1,500,000.00	\$1,500,000.00	\$7,500,000.00
19	Annual Water Construction Contract	No	\$2,773,000.00	\$3,050,000.00	\$3,355,000.00	\$3,690,000.00	\$4,060,000.00	\$16,928,000.00
20	Subdivisions & Water Main Extensions	No	\$100,500.00	\$110,500.00	\$121,600.00	\$134,000.00	\$147,000.00	\$613,600.00
21	Fireline Installation Contract	No	\$95,000.00	\$105,000.00	\$115,000.00	\$127,000.00	\$139,000.00	\$581,000.00
22	Annual Engineering Contract	No	\$4,000,000.00	\$4,000,000.00	\$4,000,000.00	\$4,000,000.00	\$4,000,000.00	\$20,000,000.00
23	County Main Renewal, County Forces	No	\$2,602,000.00	\$2,862,000.00	\$3,148,000.00	\$3,463,000.00	\$3,809,000.00	\$15,884,000.00
24	Replace Scott Blvd. Water Main	Yes	\$3,000,000.00	\$2,500,000.00	\$2,000,000.00	\$1,500,000.00	\$1,500,000.00	\$10,500,000.00
25	Replace Candler Road Water Main	Yes	\$3,000,000.00	\$3,000,000.00	\$3,000,000.00	\$3,000,000.00	\$3,000,000.00	\$15,000,000.00
26	Replace Glenwood 36"-42" PCP Water Main	Yes	\$0.00	\$3,500,000.00	\$3,500,000.00	\$3,500,000.00	\$3,500,000.00	\$14,000,000.00
27	Demolish Old Chatt. River Intake and Pumping Station	No	\$1,500,000.00	\$3,500,000.00	\$0.00	\$0.00	\$0.00	\$5,000,000.00
28	Raw Water Transmission Line	No	\$8,000,000.00	\$8,000,000.00	\$0.00	\$0.00	\$0.00	\$16,000,000.00
29	Additional Clear Wells & Pumping Stations	Yes	\$2,000,000.00	\$15,800,000.00	\$17,900,000.00	\$0.00	\$0.00	\$35,700,000.00
30	Replace Steel Drive Booster Station	No	\$0.00	\$200,000.00	\$2,400,000.00	\$0.00	\$0.00	\$2,600,000.00
31	Water Resources Management Plan	No	\$1,000,000.00	\$1,000,000.00	\$1,000,000.00	\$0.00	\$0.00	\$3,000,000.00
32	Vulnerability Assessment Study - Sewer	No	\$0.00	\$200,000.00	\$0.00	\$0.00	\$0.00	\$200,000.00
33	WW System Security Design & Installation	Yes	\$0.00	\$1,000,000.00	\$1,000,000.00	\$0.00	\$0.00	\$2,000,000.00
34	Manhole Raising Contract	Yes	\$2,500,000.00	\$2,500,000.00	\$2,500,000.00	\$2,500,000.00	\$2,500,000.00	\$12,500,000.00

Proj. No.	Project		FY 10	FY 11	FY 12	FY 13	FY 14	Total
	Description	Bond	Year 1	Year 2	Year 3	Year 4	Year 5	
35	Lift Station Radio Upgrade	No	\$750,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$750,000.00
36	W/S Relocation Adjust for Roadway Projects	Yes	\$5,000,000.00	\$5,000,000.00	\$5,000,000.00	\$5,000,000.00	\$5,000,000.00	\$25,000,000.00
37	Pipe Bursting	Yes	\$7,500,000.00	\$10,000,000.00	\$12,500,000.00	\$15,000,000.00	\$20,000,000.00	\$65,000,000.00
38	Manhole Rehabilitation	Yes	\$3,000,000.00	\$5,000,000.00	\$7,500,000.00	\$10,000,000.00	\$12,500,000.00	\$38,000,000.00
39	Pipecams Purchase	No	\$0.00	\$100,000.00	\$0.00	\$0.00	\$0.00	\$100,000.00
40	Smoke Testing	Yes	\$2,000,000.00	\$3,000,000.00	\$3,000,000.00	\$3,000,000.00	\$3,000,000.00	\$14,000,000.00
41	Service Lateral Maintenance and Rehab	Yes	\$3,000,000.00	\$3,500,000.00	\$4,000,000.00	\$4,500,000.00	\$5,000,000.00	\$20,000,000.00
42	Closed-Circuit TV (CCTV) Inspection	Yes	\$10,000,000.00	\$11,000,000.00	\$12,000,000.00	\$13,000,000.00	\$14,000,000.00	\$60,000,000.00
43	Flow Monitoring	Yes	\$2,500,000.00	\$3,000,000.00	\$3,500,000.00	\$4,000,000.00	\$4,500,000.00	\$17,500,000.00
44	Relining	Yes	\$7,000,000.00	\$10,000,000.00	\$12,500,000.00	\$15,000,000.00	\$20,000,000.00	\$64,500,000.00
45	Vegetation Clearing	No	\$4,500,000.00	\$4,500,000.00	\$4,500,000.00	\$5,000,000.00	\$5,000,000.00	\$23,500,000.00
46	Water & Wastewater Hydraulic Modeling Implementation	Yes	\$3,000,000.00	\$4,000,000.00	\$5,000,000.00	\$3,000,000.00	\$3,000,000.00	\$18,000,000.00
47	Lift Station Upgrade/Rehab.	Yes	\$2,000,000.00	\$3,000,000.00	\$3,000,000.00	\$3,000,000.00	\$0.00	\$11,000,000.00
48	Sewer Mapping & Manhole Inspection Study	Yes	\$8,000,000.00	\$8,000,000.00	\$4,000,000.00	\$0.00	\$0.00	\$20,000,000.00
49	City of Atlanta - WW Svcs/Clean Water Atlanta CIP	Yes	\$5,375,000.00	\$25,380,000.00	\$32,200,000.00	\$14,000,000.00	\$14,000,000.00	\$90,955,000.00
50	City of Atlanta Renewal and Extension Expenditures	No	\$1,010,000.00	\$1,010,000.00	\$1,010,000.00	\$1,010,000.00	\$1,010,000.00	\$5,050,000.00
51	Snapfinger WWTP Expansion Const. Management	No	\$576,000.00	\$1,051,000.00	\$1,115,000.00	\$751,000.00	\$0.00	\$3,493,000.00
52	Snapfinger WWTP Expansion Construction	Yes	\$55,840,000.00	\$101,650,000.00	\$107,810,000.00	\$72,810,000.00	\$0.00	\$338,110,000.00
53	Pole Bridge WWTP Expansion - Const. Management	No	\$562,000.00	\$1,284,000.00	\$1,528,758.00	\$822,000.00	\$0.00	\$4,196,758.00
54	Pole Bridge WWTP Expansion - Construction	Yes	\$54,580,000.00	\$124,460,000.00	\$147,820,000.00	\$79,480,000.00	\$0.00	\$406,340,000.00
55	Snapfinger/Pole Bridge Tunnel Design/Bid	No	\$150,000.00	\$150,000.00	\$0.00	\$0.00	\$0.00	\$300,000.00
56	Snapfinger/Pole Bridge Tunnel Const. Management	Yes	\$500,000.00	\$500,000.00	\$500,000.00	\$500,000.00	\$500,000.00	\$2,500,000.00
57	Snapfinger/Pole Bridge Tunnel Construction	Yes	\$50,000,000.00	\$50,000,000.00	\$50,000,000.00	\$25,000,000.00	\$25,000,000.00	\$200,000,000.00
58	CIP Upgrade to Jackson Creek - Gwinnett	Yes	\$1,100,000.00	\$1,000,000.00	\$1,000,000.00	\$0.00	\$0.00	\$3,100,000.00
59	Redirect Flow from Gwinnett to Shoals Creek	Yes	\$5,000,000.00	\$10,000,000.00	\$10,000,000.00	\$2,500,000.00	\$2,500,000.00	\$30,000,000.00
60	Lower Crkd Creek Lift Station Flow Monitoring	No	\$200,000.00	\$400,000.00	\$0.00	\$0.00	\$0.00	\$600,000.00
61	Lower Cr. Creek Pump Station Upgrade	Yes	\$2,000,000.00	\$4,000,000.00	\$3,000,000.00	\$1,600,000.00	\$1,000,000.00	\$11,600,000.00
62	Stone Crest Sanitary Sewer Upgrade - Design	No	\$1,250,000.00	\$1,250,000.00	\$0.00	\$0.00	\$0.00	\$2,500,000.00
63	Stone Crest Sanitary Sewer Upgrade - Const	Yes	\$1,000,000.00	\$10,000,000.00	\$10,000,000.00	\$10,000,000.00	\$1,000,000.00	\$32,000,000.00
64	Snapfinger SCADA - Const Project	No	\$750,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$750,000.00
65	Portable Bypass Pumps	No	\$500,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$500,000.00
66	Honey Creek Lift Station Upgrade - Design	Yes	\$800,000.00	\$500,000.00	\$0.00	\$0.00	\$0.00	\$1,300,000.00
67	Honey Creek Lift Station Upgrade - Construction	Yes	\$5,000,000.00	\$5,000,000.00	\$2,000,000.00	\$1,700,000.00	\$1,000,000.00	\$14,700,000.00
68	Roadhaven Building Fund	Yes	\$500,000.00	\$1,000,000.00	\$5,000,000.00	\$0.00	\$0.00	\$6,500,000.00
69	Water Interconnections	Yes	\$1,000,000.00	\$5,000,000.00	\$10,000,000.00	\$5,000,000.00	\$4,000,000.00	\$25,000,000.00
70	Program Mod./Capital/Fleet Contribution	No	\$1,000,000.00	\$6,600,000.00	\$7,260,000.00	\$7,986,000.00	\$7,846,000.00	\$30,692,000.00
71	Sewer Cleaning Equipment	No	\$1,000,000.00	\$3,000,000.00	\$1,000,000.00	\$0.00	\$0.00	\$5,000,000.00

Proj. No.	Project	Bond	FY 10	FY 11	FY 12	FY 13	FY 14	Total
	Description		Year 1	Year 2	Year 3	Year 4	Year 5	
72	DWM Business Plan	No	\$0.00	\$500,000.00	\$0.00	\$0.00	\$0.00	\$500,000.00
73	Septic Tank Elimination Program	Yes	\$500,000.00	\$750,000.00	\$1,200,000.00	\$1,500,000.00	\$1,500,000.00	\$5,450,000.00
74	Fire Hydrant Repair/Replacement - Annual	No	\$1,500,000.00	\$1,500,000.00	\$1,500,000.00	\$1,500,000.00	\$1,500,000.00	\$7,500,000.00
75	Sanitary Sewer Extension - Annual	No	\$1,500,000.00	\$1,500,000.00	\$1,500,000.00	\$1,500,000.00	\$1,500,000.00	\$7,500,000.00
76	Fill Valves - Dunwoody and Tucker Tank Systems	No	\$0.00	\$600,000.00	\$0.00	\$0.00	\$0.00	\$600,000.00
77	72" Water Trans. Main Eng. Design Feasibility Study	Yes	\$1,000,000.00	\$500,000.00	\$0.00	\$0.00	\$0.00	\$1,500,000.00
78	Snapfinger Lime Pumping System Upgrade	Yes	\$250,000.00	\$500,000.00	\$0.00	\$0.00	\$0.00	\$750,000.00
79	Snapfinger Alum Tank Addition	Yes	\$250,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$250,000.00
80	Water Loss Audit Implementation	Yes	\$200,000.00	\$50,000.00	\$50,000.00	\$50,000.00	\$50,000.00	\$400,000.00
81	Oracle Billing System	No	\$0.00	\$3,000,000.00	\$0.00	\$0.00	\$0.00	\$3,000,000.00
82	Asbestos Cement (A/C) Line Replacement	Yes	\$1,000,000.00	\$1,000,000.00	\$1,000,000.00	\$1,000,000.00	\$1,000,000.00	\$5,000,000.00
83	Watershed Improvement Projects W/S Funded	Yes	\$660,000.00	\$2,400,000.00	\$3,000,000.00	\$3,000,000.00	\$3,600,000.00	\$12,660,000.00
	TOTAL		\$300,630,500.00	\$505,477,500.00	\$549,033,358.00	\$374,623,000.00	\$202,911,000.00	\$1,932,675,358.00

Proposed Bond Projects	\$1,730,737,000.00
Proposed "Other Funds" Projects	\$201,938,358.00

1: Hypochlorite Generation

Background

Sodium hypochlorite is a chemical used to maintain disinfection residuals in the drinking water produced at the Scott Candler Water Treatment Plant. Over the past few years, raising transportation costs coupled with increased demand for sodium hypochlorite and reduced overall production have nearly doubled the cost of bulk delivered sodium hypochlorite. At the same time technological advancements in hypochlorite generation equipment have increased the reliability, safety, and efficiency of on-site generation.

Studies conducted by the Department of Watershed Management (DWM) indicate that the Plant's "spare" chemical storage area is of sufficient size and is an ideal location for the generation of sodium hypochlorite, providing easy access for the delivery of raw materials and the electrical demands required to operate the generation equipment.

Project Description

The DWM proposes to install 3 on-site redundant low concentration hypochlorite generation units and sufficient on-site storage units providing enough storage for approximately 30 days supply of the product.

Estimated Costs

Design:	\$250,000.00
Construction:	<u>\$2,750,000.00</u>
Total:	<u>\$3,000,000.00</u>

Schedule

Design: Start June 2010 and End December 2010.

Construction: Start as soon as design is complete.

2: Henderson Booster Pumping Station

Background

The Henderson Booster Pumping Station consists of 3 In-line vertical pumps mounted horizontally. The station is more than 25 years old. The Tucker distribution system is a closed system unto itself. The Tucker distribution system consist of four key stations; Henderson, Midvale, Steel Drive, and the Tucker Standpipe. All these stations are critical, especially during the high demands of the summer season. It takes almost all stations to maintain pressure during peak demand. These requirements leave very little room for equipment down time.

Project Description

The DWM proposes to install 3 new Allen Bradley motor control centers (MCC's). The station has an emergency standby generator with a manual transfer switch. The switch needs to be replaced with an automatic transfer switch.

Estimated Cost

Construction: **\$87,000.00**

Schedule

Start March 2010 and End December 2010.

3: Tucker Ground Storage Repump Station

Background

The Tucker standpipe consists of 1 vertical pump. It is more than 35 years old. The Tucker distribution system is a closed system unto itself. The Tucker distribution system consist of 4 key stations; Henderson, Midvale, Steel Drive, and the Tucker Standpipe. All these stations are critical, especially during the high demands of the summer season. It takes almost all the stations to maintain pressure during peak demand. These requirements leave very little room for equipment down time.

Project Description

The DWM proposes to install 1 new Allen Bradley motor control center (MCC). The station also has an emergency standby generator with a manual transfer switch. The switch needs to be replaced with an automatic transfer switch.

Estimated Cost

Construction: **\$90,000.00**

Schedule

Start March 2010 and End December 2010.

4: Midvale Booster Pumping Station

Background

The Midvale station consists of 2 split case pumps mounted horizontally. The Midvale station is more than 30 years old. The Tucker distribution system is a closed system unto itself. The Tucker distribution system consist of 4 key stations; Henderson, Midvale, Steel Drive, and the Tucker Standpipe. All these stations are critical, especially during the high demands of the summer. It takes almost all the stations to maintain pressure during peak demand. These requirements leave very little room for equipment down time.

Project Description

The DWM proposes to install 2 new Allen Bradley motor control centers (MCC's).

Estimated Cost

Construction: **\$80,000.00**

Schedule

Start March 2010 and End December 2010.

5: Spare Bowls for Transfer Pumps

Background

The Scott Candler Water Treatment Plant has a rated capacity of 150 MGD. All finished water must be processed through the clearwell transfer pumps. Over the past few decades, the lime has collected at the bottom of the clearwell. It acts as sand paper on pumps. On average, 3 pumps are rebuilt each year. The delivery time for a pump-bowl is between 9 months to 1 year.

Project Description

The DWM proposed to purchase and stock several spare bowl assemblies.

Estimated Cost

Construction: **\$200,000.00**

Schedule

Start March 2010 and End December 2010.

6: Water Tank Painting

Background

McAfee Elevated Tank: This tank is located between Candler Road and Normal Road, behind fire station No. 6. The existing 500,000-gallon tank was constructed in 1953 and in 1996 it was repainted. An inspection report, dated 2002, indicates evidence of corrosion attacks and coating degradation.

Clairmont Elevated Tank: This tank is located at 1901 Mason Mill Road, east of Clairmont Road, overlooking the Veterans Administration Hospital. This 1 million gallon elevated tank was built in 1941 and repainted in 1996. An inspection report, dated 2002, indicates evidence of corrosion attacks, coating degradation, and cracks in concrete footing.

Tucker Elevated and Tucker Grounding Storage Tank: The two tanks are located at 1750 Stone Ridge Road and 4226 Lawrenceville Highway, respectively. Tucker Ground Tank has a capacity of 1 million gallons. The elevated tank has a 500,000 gallons capacity. Both tanks were repainted in 1996. Engineering assessments, completed in 2002, show evidence of corrosion and pitting. There is also evidence of cracks in the concrete pavement. The report recommends cleaning and re-coating areas of corrosion and pitting.

Decatur Elevated Tank: This tank is located at 1129 W. Howard Avenue and holds 500,000 gallons of water. The tank was repainted in 1996. An inspection report, dated 2002, indicates evidence of corrosion attacks and coating degradation.

Whites Mill Ground Storage Tank: This tank is located at 2346 Jenay Ct and Whites Mill Road. Whites Mill Tank has a 5 million gallon capacity. The existing tank foundation has cracks. There is also a sign of potential gasket failure which is causing wetness.

Redan Steel and Concrete Ground Storage Tank: The tanks are located at 1300 Panola Road. Both tanks have a storage capacity of 5 million gallons each. These tanks were cleaned and painted in 1996. Based on a 2003 report, there is significant corrosion, coating degradation and pitting in the tanks. Therefore, it warrants immediate rehabilitation. The 2003 report also suggests the possibility of exposed reinforcement on the exterior.

Wesley Chapel Ground Storage Tank: The tank has 5 million gallons of storage. The tank is located at 3337 Wesley Chapel Road, in Decatur. In 1996 significant renovation was done to prepare for the Olympics. The engineering inspection report from 2003 recommends that corrective action be taken on the corroded metallic fixtures to preserve the service life of the tank.

Columbia Concrete and Steel Ground Tanks: The steel tank has a capacity of 4 million gallons. The concrete tank has 3 million gallons of capacity and was constructed in 1971. The tanks are located at 1770 Columbia Drive, in Decatur. The tanks were last painted in 1996. A 2003 inspection report recommends pressure cleaning of the concrete tank interior and repainting

6: Water Tank Painting Continued

the steel tanks to maximize the service life of these tanks. The reports on the steel tanks suggest the appearance of significant corrosion, pitting, and coating degradation in the tank.

Project Description

In order to preserve the integrity of coating as well as the serviceability of the water storage tanks at the various tank locations, the DWM proposes to implement an effective water storage tank repainting program. This program will include sand blasting both the interior and exterior of the above-mentioned tanks to the metal, repairing pitting, repairing miscellaneous aging parts/fixtures, and repainting tanks in order to enhance the service life of these tanks. This operation will ensure that the County is able to supply DeKalb County citizens with clean and safe drinking water while maintaining adequate water pressure in the distribution system.

Estimated Costs

Construction:	\$4,000,000.00
Construction Management:	<u>\$500,000.00</u>
Total:	<u>\$4,500,000.00</u>

Schedule

Construction: Start June 2010 and End December 2014.

7: Cathodic Protection Survey and Design

Background

Metal waterlines in the ground can deteriorate for various reasons. One of the reasons stems from stray electrical current that uses the water line as a grounding source that removes the metal in the line and causes leaks. Lines located near MARTA lines, Georgia Power underground power lines, and areas where electrical systems are grounded to water lines are a primary concern.

Project Description

The DWM has identified potential areas that fit these scenarios and needs to address them and conduct additional surveys and take corrective actions when issues are found. This program will provide a specified number of days for analysis, provide materials for corrosion control, and establish test stations to monitor identified areas on an ongoing basis for proactive maintenance. The first year includes more analysis to determine the extent of the need and locations.

Estimated Cost

Survey, Design, and Implementation: **\$500,000.00**

Schedule

Start in March 2010 and End December 2014.

Note: This project will continue beyond the year 2014.

8: Cathodic Protection for Water Tanks

Background

Currently, there are a total of 8 existing steel elevated water storage tanks and 7 existing steel above-ground storage tanks in the DeKalb County Water Distribution System. The tanks were built between 1953 and 1983. On average, the steel tanks are painted once every 10 years. Currently, the steel tanks are not equipped with cathodic protection, a process that prevents accelerated corrosion attack to the interior of the tank and extends the useful life of a coating by almost two to three times.

Project Description

The DWM proposes to provide cathodic protection to protect and extend the useful life of the existing steel water storage tanks. Innovative cathodic protection is comprised of installing ceramic-coated wire anodes and a flotation and support system, thereby continuously protecting the tank from further corrosive damage. However, the cathodic protection program must be implemented prior to application of coating in dry conditions.

Estimated Costs

Design:	\$300,000.00
Construction Management:	<u>\$100,000.00</u>
Subtotal:	<u>\$400,000.00</u>
Construction:	\$1,000,000.00
Total:	<u>\$1,400,000.00</u>

Schedule

Design: Start 2010 and End 2010.

Construction: Start 2011 and End 2011.

9: North Shallowford Road Booster Pumping Station Upgrade

Background

The DWM has embarked on a plan to convert the North Shallowford Road Booster Pumping Station facility to an above-ground booster pumping station. The current booster pumping station is located below ground, in the middle of the intersection of North Shallowford Road and Peeler Road. The new location is proposed to be on a 2-acre property currently owned by the Parks and Recreation Department; in the vicinity of Chamblee-Dunwoody Road and Vermack Road.

Because of the current location of the booster pumping station, it presents considerable danger and risks to staff with respect to on-going operation and maintenance. Also, to improve the operational efficiency and adequately satisfy water supply needs for the Dunwoody distribution area, it is proposed that the new above-ground water booster pumping station be located on the 2-acre property owned by the Parks and Recreation Department at the Chamblee-Dunwoody Road and Vermack Road intersection.

Jordan Jones and Goulding, Inc. (JJG) is currently working on the design documents for the new booster pumping station.

Project Description

Decommission the existing North Shallowford Road Booster Pumping Station and install a new booster pumping station in the vicinity of the intersection of Chamblee-Dunwoody Road and Vermack Road to adequately service the northern portion of DeKalb County's water distribution area.

Estimated Costs

Design:	\$300,000.00
Construction Management:	<u>\$100,000.00</u>
Subtotal:	<u>\$400,000.00</u>
Construction:	\$1,700,000.00
Total:	<u>\$2,100,000.00</u>

Schedule

Design: To be completed by June 2010.

Construction: Start January 2011 and End December 2011.

10: Tilly Mill Booster Pumping Station Upgrade

Background

The DWM proposes to implement a plan to upgrade the existing Tilly Mill Booster Pumping Station facility to an above-ground booster pumping station. The current 1 MGD, below-ground, booster pumping station is located at 5207 Tilly Mill Road.

Due to the limiting capabilities of operating the existing booster pumping station and addressing the current and future water supply needs of the Dunwoody area, the DWM is proposing to upgrade the Tilly Mill Booster Pumping Station. The new booster pumping station is anticipated to be installed adjacent to the existing facility. Following commissioning of the new booster pumping station, the existing system will be demolished.

Jordan Jones and Goulding, Inc. (JJG) has completed design services required for the new above-ground Tilly Mill Booster Pumping Station Facility.

Project Description

The DWM is proposing completion of design and installation of new above-ground Tilly Mill Booster Pumping Station Facility to accommodate water supply needs for the Dunwoody water distribution area.

Estimated Costs

Design:	\$200,000.00
Construction Management:	<u>\$100,000.00</u>
Subtotal:	<u>\$300,000.00</u>
Construction:	\$1,500,000.00
Total:	<u>\$1,800,000.00</u>

Schedule

Construction: Start June 2010 and End December 2011.

11: North DeKalb County Pipe Replacement

Background

Due to the anticipated population growth in north DeKalb County over the next 30 years, modifications and improvements to the water distribution system are required. The DWM is currently working with Jordan Jones & Goulding, Inc. (JJG) to conduct water system modeling activities for the north part of the County, in an effort to satisfy existing and future water demand for the area. The water system modeling and recommendations are expected to be completed in 2010.

Project Description

The DWM purposes to design and install primary water pipeline infrastructure to accommodate current and future water supply needs for the north part of the County.

Estimated Costs

Design:	\$600,000.00
Construction:	<u>\$3,400,000.00</u>
Total:	<u>\$4,000,000.00</u>

Schedule

Construction: Start June 2010 and End December 2013.

12: Water Reuse Projects Planning and Design

Background

DeKalb County is faced with either returning treated wastewater generated in the South River Basin beyond current permitted discharge of 56 MGD back to the Chattahoochee River, developing a second water supply source in the Ocmulgee basin, or developing water reuse that will limit discharges to 56 MGD. A Water Reuse Feasibility Study has been undertaken by the DWM in order to develop an understanding of the feasibility of implementing water reuse within DeKalb County and to evaluate alternatives that would:

- Provide alternative sources of drinking water.
- Reduce interbasin transfer as demand increases.
- Increase available water resources within the County.
- Provide redundant water supply source for the County.
- Promote sustainable water resources management for future generations.

Project Description

The DWM purposes to further evaluate the water reuse option in the Water Reuse Feasibility Study, develop a Water Reuse Master Plan, and develop the design for Water Reuse Projects.

Estimated Costs

Planning:	\$500,000.00
Design:	<u>\$5,850,000.00</u>
Total:	<u>\$6,350,000.00</u>

Schedule

Planning: Start March 2010 and End September 2010.

Design: Start September 2010 and End December 2014.

13: Water Reuse Projects Implementation

Background

The DWM proposes to initiate construction of priority Water Reuse Projects during the final phase of the Water Reuse Projects Planning and Design Project. It is anticipated that the design of priority Water Reuse Projects will be completed first while completion of the design of the lower priority projects is underway.

Based on the results of the Water Reuse Feasibility Study, the construction of a water reuse pipeline from the Snapfinger or Pole Bridge Creek Wastewater Treatment Plants was found to be the highest ranked alternative. It is anticipated that the construction of this project will be initiated before the completion of the Water Reuse Planning and Design Project is completed.

Project Description

The DWM purposes to initiate construction of a water reuse pipeline from the Snapfinger or Pole Bridge Wastewater Treatment Plants before completion of the Water Reuse Projects Planning and Design. This project will advance sustainable water resources management in DeKalb County and reduce interbasin transfer.

Estimated Costs

Construction Management:	\$4,548,900.00
Construction:	<u>\$71,266,100.00</u>
Total:	<u>\$75,815,000.00</u>

Schedule

Start March 2011 and End December 2014.

Note: This project may continue beyond the year 2014.

14: Water Meter Installation

Background

The Water Meter Installation Contract is an ongoing contract to service all new residential and commercial developments in the County. The DWM receives an average of 75 new water meter installation requests every week. Due to the increased demand in the recent past, an on-demand construction services contract was initiated to be able to service customers in a timely fashion with respect to new water meter installation, and at the same time, be able to catch up with current outstanding requests.

Project Description

The DWM proposes a water meter installation contract to fully address the outstanding water meter installation requests within a reasonable and satisfactory time frame.

Estimated Cost

Construction: **\$7,000,000.00**

Schedule

Construction: Start January 2010 and End December 2014.

Note: This project will continue beyond the 2014.

15: Water Service Line Renewal - Annual

Background

The Water Service Line Renewal Contract is an annual contract awarded to a contractor to renew existing water service lines, from the water main to the customer's water meter. The old water meters are also replaced in the process. DeKalb County has approximately 30 miles of old service lines that need replacement to prevent loss of water due to old and leaking pipelines. Existing galvanized iron pipelines tend to clog up and cause reduced cross section/lower pressure. Plastic pipes crystallize causing splits on the surface resulting in water leaks.

Project Description

The DWM proposes to fund Annual Contract services to perform water service line renewals County-wide.

Estimated Cost

Construction: **\$2,500,000.00**

Schedule

Construction: Start January 2010 and End December 2014.

Note: This project will continue beyond the 2014.

16: Water Meter Replacement

Background

The Water Meter Replacement Program is administered through an Annual Contract. The DWM utilizes annual contractors to perform water meter replacement. Adequate funding is required to maintain the level of service to DeKalb County customers.

Project Description

The DWM needs adequate funding to continue implementation of the Water Meter Replacement Program.

Estimated Cost

Construction: **\$7,500,000.00**

Schedule

Construction: Start January 2010 and End December 2014.

Note: This project will continue beyond 2014.

17: Vulnerability Assessment Study-Water

Background

The water distribution system in DeKalb County requires various programs to prevent it from being compromised by any terrorist or accidental contamination.

Project Description

The DWM proposes to conduct a full vulnerability assessment on the water distribution system. Details regarding the specifics of this project are confidential due to the nature of this project.

Estimated Cost

Security Consultant: **\$100,000.00**

Schedule

Start January 2011 and End September 2011.

18: Water System Security Design and Implementation

Background

The water distribution system in DeKalb County requires various programs to prevent it from being compromised by any terrorist or accidental problems.

Project Description

Details regarding the specifics of this project are confidential due to the nature of this project. The project will occur over a multi-year period with adjustments being made annually about which areas to address as priority.

Estimated Costs

Design and Implementation: **\$7,500,000.00**

Schedule

Start March 2011 and End December 2014.

Note: This project may continue beyond the year 2014.

19: Annual Water Construction Contract

Background

A significant portion of the current water distribution piping system is more than 50 years old. Adequate funding is required to investigate and replace the old water main piping in order to maintain the level of service in the County.

Project Description

The DWM proposes to award an Annual contract to inspect and replace existing old water main piping that are beyond their useful life.

Estimated Cost

Construction: **\$16,928,000.00**

Schedule

Start January 2010 and End December 2014.

Note: This project will continue beyond the year 2014.

20: Subdivisions & Water Main Extensions

Background

Due to growth and development within the County, existing water mains need to be extended to accommodate such development. Also, the DWM has identified homes and subdivisions that are still using well water as their primary water supply. During weather changes and increased water demand, well water can become unavailable. Water mains need to be extended in order to provide adequate water supply to the customers. Also, if development is in the vicinity of a County line, developers may agree to purchase water from the adjacent county temporarily. In such case(s), the DWM may provide assistance to the developer to extend the water main, since the County would benefit from the work.

The funding is required to continue with the Subdivision and Water Main Extension Projects.

Project Description

The DWM needs adequate funding to continue the work related to the Subdivision and Water Main Extension Program.

Estimated Cost

Construction: **\$613,600.00**

Schedule

Start January 2010 and End December 2014

Note: This project will continue beyond the year 2014.

21: Fireline Installation Contract

Background

The DWM proposes a Fireline Installation Contract to complete water piping systems in the County dedicated to fighting fire operations. The program will start in existing high density commercial and residential areas.

Project Description

The DWM proposes to enter into a contract for the installation of firelines in key areas of the County to support fire fighting operations.

Estimated Cost

Construction: **\$581,000.00**

Schedule

Start January 2010 and End December 2014

Note: This project will continue beyond the year 2014.

22: Annual Engineering Contract

Background

The DWM utilizes outside engineering consultants to perform services that the DWM is unable to complete due to time and staffing constraints. The DWM has managed and maintained annual engineering contracts over the past 12 years to ensure that the required engineering services are fully satisfied.

Project Description

The DWM proposes to enter into contracts with 3 or 4 engineering firms to provide various engineering services as required by the DWM to satisfactorily maintain daily operations and service customers and stakeholders.

Estimated Cost

Design: **\$20,000,000.00**

Schedule

Construction: Start January 2010 and End December 2014.

Note: This project will continue beyond the year 2014.

23: County Main Renewal, County Forces

Background

This is an ongoing replacement program for smaller water and sewer lines that is based on line age, material of construction, and repair frequency.

Project Description

DWM forces need funding to replace smaller sections and emergency sections of water mains. Larger projects are assigned to contractors. These lines are typically problematic because of age, material of construction, or size. Replacement provides better water service to the customers.

Estimated Cost

Construction: **\$15,844,000.00**

Schedule

Start January 2010 and End December 2014.

Note: This project will continue beyond the year 2014.

24: Replace Scott Blvd. Water Main

Background

The existing Scott Blvd. water main is located in the vicinity of North Druid Hills Road/Lawrenceville Hwy. and Lawrenceville Hwy/DeKalb Industrial Way.

The water main is 30 inches (diameter), steel material, and is estimated to be more than 5 miles long. The water main serves an established residential and business community.

The Scott Blvd. water main was installed in 1968. As a result of the main being more than 40 years old, there have been numerous repairs and frequent maintenance, resulting from corrosion and increased structural stress. After conducting a condition assessment on the water main, the DWM determined that 3 miles of the main need to undergo rehabilitation or be completely replaced.

Project Description

The DWM proposes to replace approximately 3 miles of the existing 30-inch Scott Blvd. water main. The main will be replaced with a 36-inch ductile iron pipe which will provide increased flow capacity. Removal and replacement is more cost-effective than re-routing the main due to the highly populated area and cost associated with easement acquisitions.

This project will allow the water distribution system to operate more effectively, reduce cost associated with service repairs, and minimize potential disruption to traffic and the community in the long run.

Estimated Costs

Design:	\$1,000,000.00
Construction Management:	<u>\$500,000.00</u>
Subtotal:	<u>\$1,500,000.00</u>
Construction:	\$9,000,000.00
Total:	<u>\$10,500,000.00</u>

Schedule

Design: Start March 2010 and End March 2011.

Construction: Start June 2011 and End December 2014.

25: Replace Candler Road Water Main

Background

The Candler Road water main is located on Candler Road, between Whites Mill Road and Glenwood Road. The existing water main piping system is 12 inches (diameter), cast iron material, and estimated at about 1 mile in length. The water main provides water supply to residential and business customers in the vicinity of Candler Road.

The Candler Road Water Main was installed in 1948. As a result of the main being more than 60 years old, there have been numerous documented breaks, leaks, and repairs, requiring frequent maintenance activities. After conducting a condition assessment on the piping system, the DWM determined that the entire water main must undergo rehabilitation or be completely replaced.

Project Description

The DWM proposes to replace approximately 1 mile of the existing Candler Road water main. After reviewing rehabilitation options, removal and replacement of the water main was determined as having several potential advantages. The existing water main will be replaced with a 12-inch ductile iron pipe, which will accommodate higher stress from external service loads and internal water pressure. Removal and replacement is more cost effective than rerouting the water main due to the highly populated area and cost associated with easement acquisitions.

This project will allow the water distribution system to operate more effectively, reduce cost associated with service repairs, and minimize potential disruption to traffic and the community in the long run.

Estimated Costs

Design:	\$1,400,000.00
Construction Management:	<u>\$600,000.00</u>
Subtotal:	<u>\$2,000,000.00</u>
Construction:	\$13,000,000.00
Total:	<u>\$15,000,000.00</u>

Schedule

Design: Start March 2010 and End June 2011.

Construction: Start September 2011 and End December 2014.

26: Replace Glenwood 36" – 42" PCP Water Main

Background

The existing Glenwood Road 36-inch (diameter) water main originates at the intersection of Glenwood Road and McAfee Road and transitions to a 42-inch (diameter) water main at North Clarendon Avenue. The main is prestressed concrete pipe (PCP) material and is estimated at approximately 4 miles in length. The water main serves an established residential and business community.

The Glenwood Road water main was installed in 1970. As a result of the piping system being over 35 years old and having inherent structural defects, there have been numerous documented breaks, leaks, and repairs requiring frequent maintenance work. After conducting a condition assessment on the water main, the DWM determined that the entire PCP piping system must undergo rehabilitation or be completely replaced.

Project Description

The DWM proposes to replace or rehabilitate approximately 4 miles of existing PCP piping system along Glenwood Road. The DWM is currently reviewing the following two options:

- Rehabilitation method by relining the main using high density polyethylene pipe as a tight-fit liner.
- Remove and replace the entire main. The main will be replaced with a 36-inch ductile iron water main.

Estimated Costs

Design:	\$1,500,000.00
Construction Management:	<u>\$800,000.00</u>
Subtotal:	<u>\$2,300,000.00</u>
Construction:	\$11,700,000.00
Total:	<u>\$14,000,000.00</u>

Schedule

Design: Start March 2011 and End March 2012.

Construction: Start June 2012 and End December 2014.

27: Demolish Old Chattahoochee River Intake and Pumping Station

Background

The DWM proposes to demolish the old 150 MGD raw water intake and pumping station on the Chattahoochee River, following commissioning of the new 200 MGD raw water intake and pumping station. The original pumping station was commissioned in 1942, and the equipment is aging and almost beyond repair. The new 200 MGD Chattahoochee Raw Water Intake and Pumping Station facility will be fully commissioned in March 2010.

Project Description

Remove old raw water intake and pumping station after the new facility is fully commissioned.

Estimated Cost

Construction: **\$5,000,000.00**

Schedule

Construction: Start June 2010 and End December 2011.

28: Raw Water Transmission Line

Background

Following completion, the new 200 MGD Chattahoochee Raw Water Intake and Pumping Station facility will transport raw water to the approximately 1 billion gallon reservoirs located at the Scott Candler Water Treatment Plant.

The existing raw water transmission system is almost beyond its useful life and requires upgrade to accommodate the growing population in DeKalb County.

Project Description

The DWM proposes to construct a new raw water transmission line from the new John A. Walker pumping station to the Scott Candler Water Treatment Plant.

Estimated Costs

Construction and Construction Management: **\$16,000,000.00**

Schedule

Construction: Start January 2010 and End December 2011.

29: Additional Clearwells and Pumping Stations

Background

With the completion of the new Scott Candler Water Treatment Plant, several construction programs are needed to finalize the plant. These items could not be undertaken until the existing plant is decommissioned.

Project Description

Phase II projects include the addition of clearwells to increase regulatory compliance and add redundancy to the existing clearwell, pump stations to move the water between the clearwells and storage tanks, improvements to the existing pump stations, addition of onsite chemical generation for efficiency and cost savings from technological advances, modification of existing clearwell for regulatory compliance, demolition of some existing structures and some smaller efficiency and redundancy improvements.

Initial Design Development Report was completed in 2005 and will be updated in 2009.

Estimated Costs

Design:	\$2,000,000.00
Construction Management:	<u>\$1,000,000.00</u>
Subtotal:	<u>\$3,000,000.00</u>
Construction:	\$32,700,000.00
Total:	<u>\$35,700,000.00</u>

Schedule

Design: Start March 2010 and End December 2010.

Construction: Start March 2011 and End December 2012.

30: Replace Steel Drive Booster Station

Background

The Steel Drive booster pump station consists of 2 In-line vertical pumps mounted horizontally. The pumps used are not designed to be used horizontally. The pumps have to be replaced on a regular basis. Also, the station is located underground next to Highway 29. The station location is very dangerous to access. Because it is located underground, additional hazards exist from vehicles exhaust, flooding, and falls. The station continues to be challenging to the Department. All Tucker booster stations are critical, especially during the high demands of the summer. It takes almost all the stations to maintain pressure during peak demand. The additional hazards create longer repair times for even the simple jobs.

Project Description

The DWM proposes to perform an engineering study to find a new location for the booster pump station and build a new above ground station with 2 or 3 horizontal split case pumps.

Estimated Costs

Design:	\$200,000.00
Construction:	<u>\$2,400,000.00</u>
Total:	\$2,600,000.00

Schedule

Design: Start April 2011 and End October 2011.

Construction: Start February 2012 and End December 2012.

31: Water Resources Management Plan

Background

The DWM is responsible for ensuring adequate supplies of clean drinking water and the collection, transmission, treatment, and disposal of wastewater reliably and consistently. This responsibility involves construction, maintenance, repair, rehabilitation, and replacement of water and wastewater infrastructure throughout the County. Capital improvement projects are identified periodically based on the condition of existing infrastructure and projected population growth and development. In order to assure adequacy of needed infrastructure, the DWM needs a comprehensive master plan to guide the DWM's operations for a reasonable period of time.

Project Description

The DWM proposes to develop a 25-year Water Resources Management Plan starting in 2010 and completing in 2012. The master planning process will include the following tasks:

- Making population and flow projections for the next 25 years.
- Evaluating development trends.
- Assessing development potential for various regions/areas of the County.
- Assessing the water distribution and wastewater collection infrastructure needs for various regions/areas of the County.
- Assessing the maintenance/repair/rehabilitation/replacement needs of various water and wastewater infrastructure.
- Estimating the CIPs construction and O&M costs.
- Preparing a Water Resources Management Plan document.

The Water Resources Management Plan will contain the following information:

- Description of the master planning process.
- List and maps of CIPs and estimated design and construction costs and schedules.
- Estimated O&M annual cost estimates.
- Maintenance/repair/rehabilitation/replacement cost estimates and schedule.
- Record of projected activities and estimated costs for the Department.

The Water Resources Management Plan will be reviewed and updated at 5-year intervals.

Estimated Cost

Plan: **\$3,000,000.00**

Schedule

Feasibility Study: Start March 2010 and End December 2012.

32: Vulnerability Assessment Study-Sewer

Background

The sewer collection system in DeKalb County requires various programs to prevent it from being compromised by terrorist or accidental occurrences.

Project Description

The DWM proposes to conduct a full vulnerability assessment of the sewer collection system. Details regarding the specifics of this project are confidential due to the nature of this project.

The project will occur over a multi-year period with adjustments being made annually about which areas to address as priority.

Estimated Cost

Vulnerability Assessment: **\$200,000.00**

Schedule

Start January 2011 and End December 2011.

33: WW System Security Design and Installation

Background

The sewer collection system in DeKalb County requires various programs to prevent it from being compromised by any terrorist or accidental occurrences.

Project Description

Details regarding the specifics of this project are confidential due to the nature of this project.

The project will occur over a multi-year period with adjustments being made annually about which areas to address as priority.

Estimated Cost

Construction: **\$2,000,000.00**

Schedule

Start March 2011 and End December 2012.

34: Manhole Raising Contract

Background

The Manhole Raising Contract is associated with an annual contract to raise existing manholes and water valve chambers to grade to accommodate roadway improvements by the GDOT, Department of Public Works, and private contractors.

The Manhole Raising Contract is required to accommodate the high demand for roadway improvements in the County.

Project Description

The DWM proposes additional funding to continue implementing the Manhole Raising Program within DeKalb County. The work is directly related to County roadway improvements.

Estimated Cost

Construction: **\$12,500,000.00**

Schedule

Start January 2010 and End December 2014.

Note: This project will continue beyond the year 2014.

35: Lift Station Radio Upgrade

Background

The DWM must upgrade the current radio system because the County Communication Department is in the process of upgrading the Motorola Communication System from analog to digital. The collection system's existing communication systems will not function once the County has completed digital upgrade.

Project Description

The DWM proposes to purchase a new digital radio communication system and upgrade all lift stations, repeater sties, and the master radio system located at the plant control room.

Failure to purchase this system will result in loss of communication with all lift stations which in turn may potentially result in spills of raw wastewater into State waters.

Estimated Cost

Lift Station Radio Upgrade	\$750,000.00
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Schedule

Start January 2010 and End June 2010.

36: Water and Sewer Relocation Adjustment for Roadway Projects

Background

The DeKalb County Department of Public Works-Transportation Division, in partnership with the Georgia Department of Transportation (GDOT), continuously plan and implement roadway projects to improve traffic conditions for DeKalb County's residential and business communities. Planning among the stakeholders includes approximately 100 projects to be completed over the next 4 years. An essential aspect of the work related to each project includes existing water and sewer infrastructure modifications/relocations within the proposed roadway improvements.

If sufficient funding is not provided in a timely manner, the schedule for the roadway improvement projects, requiring water and sewer modification/relocation work, will be delayed.

Project Description

In an effort to satisfy scheduled completion requirements for roadway related projects, the DWM, in partnership with the DeKalb County Department of Public Works-Transportation Division and GDOT, must perform existing water and sewer utility relocations as necessary to accommodate the work.

Estimated Costs

Design:	\$3,500,000.00
Construction Management:	<u>\$1,500,000.00</u>
Subtotal:	<u>\$5,000,000.00</u>
Construction:	\$20,000,000.00
Total:	<u>\$25,000,000.00</u>

Schedule

Design: Start January 2010 and End December 2014.

Construction: Start January 2010 and End December 2014.

Note: This project will continue beyond the year 2014.

37: Pipe Bursting

Background

The DeKalb County Wastewater Collection System is aging. Degraded and defective sewer pipes allow inflow and infiltration (I/I), especially during periods of wet weather and under high groundwater conditions. Thus, the surcharged sewer flow conditions accelerate deterioration of the system and in certain cases cause overflows and spills.

Project Description

The goal of pipe bursting is to be in compliance with all regulatory requirements and mandates placed upon the County by Federal and State agencies. The repairs to the collection system will be made to eliminate sanitary sewer overflows (SSOs), spills, and Inflow/Infiltration.

The DWM proposes to maintain adequate funding for pipe bursting projects needed to repair or rehabilitate aging sewers.

Estimated Cost

Construction: **\$65,000,000.00**

Schedule

Start January 2010 and End December 2014.

Note: This project will continue beyond the year 2014.

38: Manhole Rehabilitation

Background

Manhole rehabilitation is necessary to correct manhole defects that allow inflow/infiltration (I/I), sanitary sewer overflows (SSO), and spills. The ultimate goal of manhole rehabilitation is to be in compliance with all regulatory requirements and mandates placed upon the County by Federal and State agencies.

Project Description

The DWM proposes to continue funding the manhole rehabilitation program at adequate levels to reduce I/I into the sewer system and to extend the life span of manholes.

Estimated Cost

Construction: **\$38,000,000.00**

Schedule

Start January 2010 and End December 2014.

Note: This project and will continue beyond the year 2014.

39: Pipecams Purchase

Background

Pipe cameras (pipecam) are used as a tool to inspect manholes and up to 20 feet inside the sewer lines. Pipecams are everyday use tools for the DWM crew workers. Due to the corrosive environment that the pipecams are used in, it is imperative that they be replaced every 3 years. Pipecams are a necessary tool and the crew workers can not accomplish their tasks without them.

Project Description

The DWM proposes to maintain adequate funding for the purchase and replacement of pipecams.

Estimated Cost

Pipecams: **\$100,000.00**

Schedule

Start January 2011 and End December 2011.

40: Smoke Testing

Background

Smoke testing is intended to detect specific inflow points such as storm sewer cross-connections and point source inflow leaks in drainage paths or ponding areas. Smoke testing will be performed in conjunction with a sewer system evaluation survey (SSES).

Project Description

The DWM proposes to maintain adequate funding to perform smoke testing to identify sources of I/I and to repair defects allowing I/I into the sewer system.

Estimated Cost

Smoke Testing: **\$14,000,000.00**

Schedule

Start January 2010 and End December 2014.

Note: This project will continue beyond the year 2014.

41: Service Lateral Maintenance and Rehabilitation

Background

Service laterals connect buildings wastewater drainage systems (plumbing) to the County-owned sewer main. The sewer main may begin immediately outside the building or some distance away from the building. Service lateral rehabilitation is necessary to correct defects within the County-owned service laterals which ultimately will reduce inflow/infiltration (I/I), sanitary sewer overflows (SSOs), and spills.

Project Description

The DWM proposes to maintain adequate funding for service lateral maintenance and rehabilitation to reduce I/I into the sewer system and for additional work needed to repair and rehabilitate aging sewers.

Estimated Cost

Construction: **\$20,000,000.00**

Schedule

Start June 2010 and End December 2014.

Note: This project will continue beyond the year 2014.

42: Closed-Circuit TV (CCTV) Inspection

Background

DeKalb County sewers continue to deteriorate due to age and other environmental conditions. Without proper and timely inspection and rehabilitation of the sewer system, sewers may deteriorate and collapse causing sanitary sewer overflows (SSOs) and spills into the environment. Internal inspection using closed circuit TV (CCTV) is conducted to verify the existence and precise locations of defects found by other inspection methods and to analyze the nature and extent of the problem. The DWM uses CCTV to identify defects caused by structural problems, infiltration, lateral connections, the conditions of the sewer, and operational problems caused by roots, grease, and debris.

Project Description

The DWM proposes to initiate a comprehensive sewer CCTV program in 2010. The CCTV Program will help the DWM with identifying defects allowing I/I into the system and in establishing a comprehensive sewer system rehabilitation program. In addition, the CCTV program will help the DWM with its asset management program, master planning efforts, and business planning efforts.

Estimated Cost

CCTV Inspection: **\$60,000,000.00**

Schedule

Start March 2010 and End December 2014.

Note: This project will continue beyond the year 2014.

43: Flow Monitoring

Background

Flow monitoring is used to determine the flow conditions, capacity, and relative amounts of inflow/infiltration (I/I) entering the sewer system. By using flow monitors, the DWM can identify the sewer lines that need to be upgraded in order to provide services to new development. The flow monitoring data will be used in developing a model of the sewer system. The DWM also uses flow monitoring to identify the general locations of defects that allow I/I to enter the system.

Project Description

The DWM proposes to maintain adequate funding for flow monitoring.

Estimated Cost

Flow Monitoring: **\$17,500,000.00**

Schedule

Start January 2010 and End December 2014.

Note: This project will continue beyond the year 2014.

44: Sewer Relining

Background

The DeKalb County wastewater collection system is aging and continuous assessment and rehabilitation is needed to reduce I/I and eliminate sanitary sewer overflows. One of the sewer rehabilitation techniques used by the DWM is sewer lining which involves the insertion of a resin impregnated tube into the sewer and curing it in place to form a pipe within a pipe.

Project Description

The goal of sewer relining is to be in compliance with all regulatory requirements and mandates placed upon the County by Federal and State agencies. The repairs to the collection system will be made to eliminate sanitary sewer overflows (SSOs), spills, and I/I.

The DWM proposes to maintain adequate funding for relining projects needed to repair and rehabilitate aging sewers.

Estimated Cost

Construction: **\$64,500,000.00**

Schedule

Start January 2010 and End December 2014.

Note: This project will continue beyond the year 2014.

45: Vegetation Clearing

Background

This project is for purposes of keeping the sanitary sewer easements clear and accessible for maintenance and repair and to minimize the potential for root intrusion into sewer lines. During times of emergency (such as sanitary sewer overflows, SSOs) maintenance, crews need quick access to sewers to perform repair work. Trees that have grown on top of the sewer lines need to be removed. If they are not removed, the tree roots can penetrate the sewer line and become a source inflow/infiltration (I/I). Tree roots can also weaken the sewer line structurally.

Project Description

The DWM proposes to maintain adequate funding for sanitary sewer easement clearing.

Estimated Cost

Vegetation Clearing: **\$23,500,000.00**

Schedule

Start in January 2010 and End in December 2014.

Note: This project will continue beyond the year 2014.

46: Water and Wastewater Hydraulic Model Implementation

Background

The DWM is currently under a 5-year contract with an engineering firm to inventory and map its sewer collection system. The inventory and mapping of buried assets work activities are anticipated to be completed by December 2012. The DWM proposes to start developing a sewer model (hydraulic model) and a capacity assurance plan with the data gathered during the inventory and mapping of the sewer system.

Project Description

The modeling of the water and wastewater system will allow the DWM to predict the system's behavior under different flow conditions. Once the system is inventoried and mapped, the data will be entered into the modeling software and with the use of flow monitoring and rain gauge data, the model will be calibrated. The model will allow the DWM to prevent SSOs and spills by knowing ahead of time where inflow/infiltration, SSOs, and spills may likely occur. The model will also allow the DWM to develop a capacity assurance program.

Estimated Cost

Implementation: **\$18,000,000.00**

Schedule

Start January 2010 and End December 2014.

Note: This project may continue beyond the year 2014.

47: Lift Station Upgrade/Rehabilitation

Background

The original wastewater collection system in DeKalb County is over 60 years old in some areas. Some lift stations need to be upgraded to maintain adequate level of service and prolong the serviceable life. In addition to the projected increases in wastewater flows, electrical and mechanical systems at the stations are aging and the stations are not operating at optimum efficiency.

Project Description

The DWM proposes to institute a lift station evaluation and upgrade and rehabilitation program to ensure compliance with Federal and State regulations as well to ensure the health and safety of DeKalb County citizens. Part of this program will replace underground and aboveground stations with submersible pumping systems with state-of-the-art controls and communication equipment.

Estimated Costs

Design:	\$1,000,000.00
Construction:	<u>\$10,000,000.00</u>
Total:	<u>\$11,000,000.00</u>

Schedule

Design: Start May 2010 and End December 2010.

Construction: Start September 2010 and End December 2013.

48: Sewer Mapping and Manhole Inspection Study

Background

The DWM is under contract with an engineering firm to inventory, map, and assess the condition of manholes throughout the County. This project will help the DWM with its asset management program, sewer system rehabilitation program, and the development of a sewer model and capacity assurance program.

Project Description

This project involves locating and assessing the conditions of manholes in the wastewater collection system. It will provide a comprehensive map of the sewer system including GIS information and allow the DWM to prioritize the rehabilitation of manholes to eliminate sanitary sewer overflows and spills.

Estimated Cost

Inspection Study: **\$20,000,000.00**

Schedule

This project is in progress and approximately 25% is complete. Project needs additional funding to be complete by December 2012.

49: City of Atlanta – Wastewater Services/Clean Water Atlanta - CIP

Background

In response to the City of Atlanta consent decrees and to meet the requirements of EPD and EPA, the City of Atlanta has undertaken a major investment in its infrastructure improvement. This includes the water distribution and wastewater collection infrastructure and its facilities. DeKalb County, as a partner in an intergovernmental agreement, utilizes this infrastructure and facilities to provide for wastewater services to our citizenry. The intergovernmental agreement provides DeKalb County with wastewater capacity and our investment in these facilities insures that we can provide wastewater services. These facilities include the South River, Intrenchment Creek, and the RM Clayton wastewater treatment plant. Other improvements include replacement and/or upgrading the wastewater treatment facilities and pumping stations, maintenance management systems, master plan, and system-wide laboratories. Also included is upgrading the bio-solids handling and grit removal systems, improvements in energy efficiency and solids handling and disposal, clarifier replacement, expansion of facilities, and purchase of major equipment. Below are the noted capacities and ratios of cost allocation for this major investment:

Facility	Capacity (MGD)	DeKalb	Allocation
South River	45	2.62	5.82%
Intrenchment Creek	21	2.60	12.48%
RM Clayton	103	50.00	48.54%
Totals	169	55.12	

Project Description

DeKalb County plans to continue its investment in the City of Atlanta facilities as it continues to evaluate alternatives in providing wastewater services to its citizens.

Estimated Cost

Construction: **\$90,955,000.00**

Schedule

Start January 2010 and End December 2014.

50: City of Atlanta Renewal and Extension Expenditures

Background

The City of Atlanta provides wastewater services to the citizens of DeKalb County in accordance with an intergovernmental agreement that provides for (1) reimbursement of operating costs based on a prescribed methodology of allocation and (2) reimbursement for major maintenance and renovations at these same facilities. These facilities include the South River plant (0.8842% of the population served by this plant), the Intrenchment Creek facility (25.99% of the population served by this plant), and the RM Clayton facility (a two year high and low ratio of 57.6% and 44.5% respectively, representing the ratio of wastewater flows to the plant). Any major capital improvements, those greater than \$5,000, can be capitalized, which minimizes the annual operating expenses of for wastewater services.

Project Description

DeKalb County plans to continue its investment in these facilities as it continues to evaluate alternatives in providing wastewater services to its citizenry.

Estimated Costs

South River	\$75,000.00
Intrenchment Creek	\$2,475,000.00
RM Clayton	<u>\$2,500,000.00</u>
Total:	<u>\$5,050,000.00</u>

Schedule

Start January 2010 and End December 2014.

Note: This project will continue beyond the year 2014.

51 and 52: Snapfinger Wastewater Treatment Plant Expansion and Upgrade

Background

The Snapfinger Creek Wastewater Treatment Plant is located at 4121 Flakes Mill Road, Decatur, Georgia. The original plant was constructed in the early 1960's and expanded in four (4) separate occasions over the subsequent twenty (20) years. The plant has a Georgia Environmental Protection Division (EPD) permitted capacity of thirty-six (36) million gallons per day (MGD). The average annual daily average flow in 2008 was approximately 22 MGD. Based on population and flow projections performed during the design of this project, the flows at the plant are projected to be 53 MGD in 2035 and 69 MGD in 2060.

In addition to the projected increases in wastewater flows, the mechanical systems at the plant are aging; the plant is not operating at optimum efficiency; and the limits of pollutant concentrations in the effluent will probably be lowered in the foreseeable future.

Project Description

The DWM proposes to expand and upgrade the plant and increase its current maximum permitted treatment capacity from 36 MGD to 54 MGD. The expansion will be done utilizing new state-of-the-art technology that will realize greater levels of efficiency, assure compliance with current and future effluent limits, and realize lower operating and maintenance costs.

Estimated Costs

Construction Management:	\$3,493,000.00
Construction Cost Estimate:	<u>\$338,110,000.00</u>
Total:	<u>\$341,603,000.00</u>

Schedule

Design: To be completed by December 2009.

Construction: Start June 2010 and End December 2013.

53 and 54: Pole Bridge Wastewater Treatment Plant Expansion and Upgrade

Background

The Pole Bridge Wastewater Treatment Plant is located at 4664 Flat Bridge Road, Lithonia, Georgia. The original plant was constructed in 1973 with an original capacity of 3 MGD. The plant underwent major expansion in the early 1990's. The plant has an EPD permitted capacity of 20 MGD. The average annual daily average flow in 2008 was approximately 10.9 MGD. Based on population and flow projection performed during the design of this project, the flows at the plant are projected to be 33 MGD in 2035 and 42 MGD in 2060.

In addition to the projected increases in wastewater flows, the mechanical systems at the plant are aging; the plant is not operating at optimum efficiency; and the limits of pollutant concentrations in the effluent will probably be lowered in the foreseeable future.

Project Description

The DWM proposes to expand the plant and upgrade the treatment capacity from the current maximum permitted treatment capacity of 20 MGD to a new maximum capacity of approximately 39 MGD. The expansion will be done utilizing new state-of-the-art technology that will realize greater levels of treatment efficiency, assure compliance with current and future effluent limits, and realize lower operating and maintenance costs.

Estimated Costs

Construction Management:	\$4,196,758.00
Construction:	<u>\$406,340,000.00</u>
Total:	<u>\$410,536,758.00</u>

Schedule

Design: To be completed in December 2009.

Construction: Start June 2010 and End December 2013.

55, 56 & 57: Snapfinger and Pole Bridge Creek Wastewater Treatment Plants Interplant Tunnel Storage and Conveyance System

Background

The DWM proposes to construct a tunnel (Interplant Tunnel) connecting the Snapfinger and the Pole Bridge Creek Wastewater Treatment Plants to allow the transfer of untreated wastewater, treated wastewater, and solids between both plants to provide redundancy, increase efficiency, and assure reliability. Once completed, the Interplant Tunnel will allow for diversion of untreated wastewater into the tunnel for storage in the event of a biological, chemical, or nuclear threat to the wastewater treatment plants. In addition, the Interplant Tunnel will provide storage capacity for wastewater flows exceeding the treatment plants' capacities and, therefore, reduce or eliminate the potential for wastewater overflows and/or spills at the treatment plants and the interceptor sewers immediately upstream of the plants.

Project Description

The project includes estimating the tunnel capacity and dimensions, performing geotechnical investigations, determining the vertical and horizontal alignments, identifying the locations of construction and maintenance shafts locations, designing the tunnel and pump station, developing construction documents and assisting the DWM with the bid process, providing construction management services, and constructing the tunnel.

Estimated Costs

Design Bid:	\$300,000.00
Construction Management:	<u>\$2,500,000.00</u>
Subtotal:	<u>\$2,800,000.00</u>
Construction:	\$200,000,000.00
Total:	<u>\$202,800,000.00</u>

Schedule

Design: To be completed in December 2009.

Construction: Start June 2010 and End December 2014.

Note: This project may continue beyond the year 2014.

58: CIP Upgrade to Jackson Creek – Gwinnett County

Background

DeKalb County currently has an agreement with Gwinnett County to send 1 to 2 MGD of wastewater to the Jackson Creek Wastewater Treatment facility.

Project Description

Gwinnett County is in the process of upgrading the Jackson Creek facility. Under the agreement between DeKalb and Gwinnett Counties, DeKalb County is required to pay its proportionate share of the construction costs for the Jackson Creek facility.

Estimated Cost

Construction: **\$3,100,000.00**

Schedule

Start January 2010 and End March 2012.

59: Redirect Sewer Flow from Gwinnett County to Shoals Creek

Background

Presently, sanitary sewer flows are collected and conveyed from Lucky Shoals & Camp Creek Drainage Basins to Gwinnett County for treatment and disposal. Discussions with Gwinnett County have indicated that current and future wastewater treatment costs are expected to be higher than what DeKalb County is currently paying. Therefore, the Department is considering a plan to collect and convey the wastewater flows, currently going to Gwinnett County Jackson Creek Wastewater Treatment facility, via a series of pumping stations and forcemain system, to the City of Atlanta R.M. Clayton WRC for treatment and disposal. A preliminary study indicated that the wastewater flow redirect to Shoals Creek and the City of Atlanta R.M. Clayton WRC facility for processing may be cost-effective in the long run, because DeKalb County currently has treatment capacity at RM Clayton Plant.

Project Description

The Department has embarked on a plan to redirect wastewater flows from Gwinnett County and transport same to the City of Atlanta R.M. Clayton WRC for treatment and disposal. Preliminary indication is that if the plan is implemented, it may be more cost-effective to DeKalb County to process the wastewater flows at the City of Atlanta R.M. Clayton WRC.

Estimated Costs

Design:	\$1,500,000.00
Construction Management:	<u>\$1,500,000.00</u>
Subtotal:	<u>\$3,000,000.00</u>
Construction:	\$27,000,000.00
Total:	<u>\$30,000,000.00</u>

Schedule

Design: Start March 2010 and End June 2011.

Construction: Start September 2011 and End December 2014.

60 and 61: Lower Crooked Creek Lift Station Upgrade

Background

Rapid development in DeKalb County's Lower Crooked Creek Basin has increased the wastewater flows into the Lower Crooked Creek lift stations. As a result, the three major pumping stations, namely Lower Crooked Creek Lift Station Nos. 1, 2, and 3, and the transmission system, require design upgrade improvements to provide transmission capacity for future development. In accordance with an existing Inter-Governmental Agreement, the Lower Crooked Creek Lift Station and transmission facilities accepts a total of 5 MGD from Gwinnett County for conveyance, treatment, and disposal at the Pole Bridge Creek Wastewater Treatment Plant.

Project Description:

The DWM completed a design development report (DDR) for the project on September 19, 2005. The DDR constitutes approximately 20 percent of the design. Subsequently, based on BOC approval, the DWM is in the process of finalizing the design package required for the Lower Crooked Creek Lift Station and Flow Monitoring Improvements.

Estimated Costs

Design:	\$900,000.00
Construction Management:	<u>\$600,000.00</u>
Subtotal:	<u>\$1,500,000.00</u>
Construction:	\$10,700,000.00
Total:	<u>\$12,200,000.00</u>

Schedule

Design: To complete in September 2010.

Construction: Start January 2011 and End December 2014.

62 and 63: Stonecrest Sanitary Sewer Upgrade

Background

In 2005, the DWM completed Stonecrest Sanitary Sewer System Design Development Report (DDR) to address sanitary sewer capacity concerns, in the vicinity above the Stonecrest Mall area. Growth and development in that area continue to increase.

In July 2007, the DWM started design for the Stonecrest Sanitary Sewer Upgrade.

Project Description

- Harmony Hills Lift Station: Abandon lift station and 4-inch force main and replace with a 24-inch gravity sewer.
- Johnson Creek Lift Station: Replace existing lift station located within the 100-Yr Flood Plain. Replace the first half of the existing 10-inch force main with a 16-inch force main. Replace the second half of the existing 10-inch force main with a 30-inch gravity sewer following a different route.
- Lithonia #1 and #2 Lift Stations: Replace existing Lithonia #1, abandon Lithonia #2, and install a new 20-inch force main starting from Lithonia #1 to the existing outfall of Lithonia #2 force main.
- Honey Creek Basin: Install a new 24-inch gravity sewer parallel to the existing 18-inch gravity sewer.
- Install a new 30-inch gravity sewer parallel to the existing 30 and 36-inch gravity sewers.

Estimated Costs

Design:	\$1,500,000.00
Construction Management:	<u>\$1,000,000.00</u>
Subtotal:	<u>\$2,500,000.00</u>
Construction	\$32,000,000.00
Total:	<u>\$34,500,000.00</u>

Schedule

Design: To be completed by May 2010.

Construction: Start January 2011 and End December 2014.

64: Snapfinger Wastewater Treatment Plant SCADA System

Background

The Snapfinger Creek Wastewater Treatment Plant is located at 4124 Flakes Mill Road, Decatur. The original plant was constructed in the early 1960's and expanded in 4 separate occasions over the subsequent 20 years. The plant has an EPD permitted capacity of 36 MGD. The average annual daily average flow in 2008 was approximately 22 MGD. Currently the Plant has no automated monitoring system and all checks must be performed by plant personnel, resulting in higher personnel costs.

In addition to the projected increases in wastewater flows, the mechanical systems at the plant are aging; the plant is not operating at optimum efficiency; and the limits of pollutant concentrations in the effluent will probably be lowered in the foreseeable future.

Project Description

The DWM desires to install a computerized supervisory control and data acquisition (SCADA) system to improve the operation of the current Snapfinger Wastewater Treatment Plant. This project should lower the personnel requirements and allow for plant management to make better process decisions and avoid noncompliance. The computerized system will allow staff and management to monitor and control the plant in real time resulting in fewer operational problems.

Estimated Cost

Construction: **\$750,000.00**

Schedule

This project is in progress and will be completed by December 2010.

65: Portable Bypass Pumps

Background

The sanitary sewer collection and conveyance system periodically experiences sanitary sewer overflows and spills. The nature and quantity of spills require the DWM staff to respond quickly and effectively, in order to prevent sewerage from reaching the “Waters of the State”. The DWM is proposing to purchase new portable bypass pumps and appurtenances to assist with responding to potential spills.

Project Description

The DWM proposes to purchase new Portable Bypass Pumps to effectively and efficiently respond to spills.

Estimated Cost

Construction: **\$500,000.00**

Schedule

Construction: Start March 2010 and End June 2010.

66 and 67: Honey Creek Lift Station Upgrade

Background

Growth and development around the Stonecrest Mall area has triggered the need to upgrade the capacity of the Honey Creek lift station and associated sewers. The existing lift station and sewer conveyance infrastructure needs to be upgraded to support current and future capacity demand for the area.

Project Description

The DWM proposes to plan and design sanitary sewer capacity upgrades for the existing Honey Creek Lift Station and appurtenances to efficiently and effectively transport wastewater to the Pole Bridge Creek Wastewater Treatment Plant.

Estimated Costs

Design:	\$800,000.00
Construction Management:	<u>\$500,000.00</u>
Subtotal:	<u>\$1,300,000.00</u>
Construction:	\$14,700,000.00
Total:	<u>\$16,000,000.00</u>

Schedule

Design: Start March 2010 and End September 2011.

Construction: Start January 2012 and End December 2014.

68: Roadhaven Building Fund

Background

The DWM continuously assesses the sufficiency of the building, parking, storage, and maintenance facilities at its Roadhaven campus to ensure that these facilities support the current and future need of the DWM. During the next five years, the DWM anticipates the need to add an additional building and to increase parking and storage facilities at Roadhaven.

Project Description

The DWM proposes to add a new building and to increase parking, storage, and maintenance facilities at its Roadhaven campus.

Estimated Costs

Building, Parking, Storage, and Maintenance Facilities: **\$6,500,000.00**

Schedule

Start June 2010 and End December 2012.

69: Water Systems Interconnections

Background

The Metropolitan North Georgia Water Planning District Water Supply and Conservation Management Plan requires its member counties to study, identify, and implement interconnections of their water systems to allow water sharing during times of emergency. In its efforts to avoid interruptions to its water supply system, the DWM has embarked on an effort to identify, design, and implement strategic water interconnection points with neighboring jurisdictions.

Project Descriptions

The DWM is in the process of locating its existing interconnections and potential locations of new interconnection points with neighboring jurisdictions. This project will evaluate critical needs during an emergency, flow requirements, pressure differential, and distribution strategy.

Estimated Cost

Water Systems Interconnections: **\$25,000,000.00**

Schedule

Design: Start March 2010 and End December 2010.

Construction: Start January 2010 and End December 2014.

Note: This project will continue beyond the year 2014.

70: Program Mod./Capital/Fleet Contribution

Background

The DWM maintains a fleet of equipment and vehicles to support the work of construction and maintenance of water and wastewater infrastructure.

Project Description

This project encompasses the acquisition of a variety of small to medium sized vehicles, equipment, and tools that are typically included in the annual budget for review and consideration by the BOC.

Estimated Cost

Program Modifications/Capital/Fleet Contribution: **\$30,692,000.00**

Schedule

Start January 2010 and End December 2014

Note: This project will continue beyond the year 2014.

71: Sewer Cleaning Equipment

Background

As part of the ongoing capacity, management, operations, and maintenance (CMOM) programs improvement, the DWM is focusing more on proactive cleaning and sewer system maintenance. Currently the DWM functions in a more reactive mode than proactive mode with respect to sewer system cleaning. Efficiency dictates a change in operations which will help reduce spills.

Project Description

The DWM will acquire an assortment of vacuum/jet trucks, CCTV vehicles, and support equipment to allow a proactive program to start on a larger scale. These equipment will be dedicated to planned system cleaning, more intense investigation of spill areas, and continual evaluation of ongoing planned maintenance areas to determine the proper activity frequency. This will become a key part of the CMOM program.

Estimated Costs

Equipment/Staffing, 2010:	\$1,000,000.00
Equipment/Staffing, 2011:	\$3,000,000.00
Equipment/Staffing, 2012:	<u>\$1,000,000.00</u>
Total:	<u>\$5,000,000.00</u>

Schedule

Start January 2010 and End December 2012.

72: Department of Watershed Management Business Plan

Background

The DWM recognizes that running the DWM is similar to running a business from both process and financial perspectives. The DWM has developed a Strategic Plan that is aimed at defining the mission, vision, values, and goals and objectives of the DWM. The DWM proposes to develop a 5-year business plan that focuses the DWM operations and decision-making practices around predetermined levels of service goals. The business plan will include a value-driven approach to capital improvement projects planning, repair, rehabilitation, and replacement funding.

Project Description

The Business Plan will involve the following tasks:

- Refining the Strategic Plan.
- Defining the level of service for each Division of the Department.
- Developing an Asset Management Plan.
- Developing a Financial Plan.

The Business Plan will be reviewed and updated annually before the annual budgets are prepared.

Estimated Cost

Developing the Business Plan: **\$500,000.00**

Schedule

Start January 2011 and End December 2011.

73: Septic Tank Elimination Program (STEP)

Background

DeKalb County has an estimated 23,000 septic tank systems. Malfunctioning and failing septic systems can cause various health and environmental concerns such as, surfacing raw sewage, untreated wastewater discharged into surface waters, and unpleasant odors. Currently the County uses a petition process to provide sewer services to those who would like to connect to sanitary sewer. Recently the DeKalb County Health Department deemed several areas within the County as critical areas that need to be connected to public sewer.

Project Description

The DWM proposes to institute a Septic Tank Elimination Program (STEP) to eliminate failing septic systems. This program will target several areas which have been deemed by the Health Department as critical. The STEP will provide a low interest revolving loan to aid the residents with the construction costs of installing public sewer lines. This revolving loan will last no more than 3 years for each resident and all income levels are permitted to participate. The STEP will also provide assistance to seniors and low-income citizens.

The ultimate goal of this program is to be in compliance with all regulatory requirements and mandates placed upon the County by Federal and State agencies.

Estimated Cost

STEP Development and Implementation: **\$5,450,000.00**

Schedule

Start March 2010 and End 2014.

Note: This project will continue beyond the year 2014.

74: Fire Hydrant Repair and Replacement - Annual

Background

The Fire Hydrant Repair and Replacement Program is being conducted under an annual contract awarded to a contractor to repair and/or replace fire hydrants within the County's water distribution system. The program is required to upgrade and maintain useful fire hydrants in the water distribution system to assist with putting out fires and protecting the public.

Project Description

The DWM proposes to fund the Annual Contract services for the DeKalb County's on-going Fire Hydrant Repair and Replacement Program.

Estimated Cost

Construction: **\$7,500,000.00**

Schedule

Construction: Start January 2010 and End December 2014.

Note: This project will continue beyond the year 2014.

75: Sanitary Sewer Extension - Annual

Background

Continued growth and development within DeKalb County has prompted the DWM to propose the development of an annual sanitary sewer extension contract. The work to be accomplished includes extension of the sanitary sewer system in unsewered areas of the County. The work under the annual contract will also include removal and replacement of existing sanitary sewer pipelines that are defective and undersized to resolve flow capacity concerns within the sewer system.

Project Description

The DWM needs adequate funding to continue the work related to extension of the sanitary sewer system.

Estimated Cost

Construction: **\$7,500,000.00**

Schedule

Construction: Start January 2010 and End December 2014.

Note: This project will continue beyond the year 2014.

76: Fill Valves – Dunwoody and Tucker Tank Systems

Background

The Dunwoody and Tucker distribution systems are closed loops and operates independently from the rest of the County. The Dunwoody and Tucker elevated tanks do not have any type of flow control valves. The tanks have to be operated within a very small range (plus or minus 3 feet). If the tanks are not kept near full, the DWM receives “low pressure complaint calls.” However, keeping the tanks near full makes it easy to overflow. Thus, the DWM receives complaint calls about the overflow condition.

By adding fill valves and related accessories, the DWM would reduce complaint calls and insure that Dunwoody is kept within State regulatory guideline (20 psi).

Project Description:

The DWM proposes to install fill valves and other accessories in the Dunwoody and Tucker Tank system.

Estimated Cost

Installation: **\$600,000.00**

Schedule

Start June 2011 and End December 2011.

77: 72-inch Water Transmission Main Engineering Design Feasibility Study

Background

Approximately 5 years ago, DeKalb County commissioned a study to examine the efficiency and effectiveness of supplying potable water to customers located on the north side of the County. One of the recommended system improvements was to consider the installation of a new 72-inch potable water transmission main from the Scott Candler Water Treatment Plant to the City of Decatur. The water transmission main is required to satisfy water supply and system pressure concerns for the growing customer base in Decatur and surrounding areas of the County.

The objective of this project is to continue the evolution of the previous study recommendation by embarking on an engineering design feasibility study for a new 72-inch water transmission main.

Project Description

Conduct an engineering design feasibility study for the installation of a new 72-inch water transmission main between the Scott Candler Water Treatment Plant and the City of Decatur for adequate potable water service within the City of Decatur and surrounding areas.

Estimated Cost

Engineering Design Feasibility Study: **\$1,500,000.00**

Schedule

Start March 2010 and End March 2011.

78: Snapfinger Lime Pumping System Upgrade

Background

The current lime diaphragm pumps are old and are the DWM's second biggest source of equipment breakdowns. The DWM would like to replace these pumps with Venderflex hose pumps. The DWM is using a Venderflex pump on one lime pumping station and it is working well.

Project Description

The DWM proposes to replace 6 diaphragm pumps at the Snapfinger Wastewater Treatment Plant with Venderflex hose pumps.

Estimated Cost

Construction: **\$90,000.00**

Schedule

Start February 2010 and End June 2010.

79: Snapfinger Alum Tank Addition

Background

The DWM proposes to install a separate Alum tank to allow the plant operations staff to switch between Ferric Sulfate and Alum depending on price. This option will provide substantial cost savings to the DWM.

Project Description

Install Alum Tanks and Containment for feeding alum to the secondary clarifiers. This project will include the installation of a 10,000 gallon tank with heat tracing and associated spill containment around the tank and a dual 0-5 gpm chemical resistant pumps with flow measurement.

Estimated Costs

Installation: **\$250,000.00**

Schedule

Start July 2010 and End September 2010.

80: Water Loss Audit Implementation

Background

The Water Loss Audit completed by the DWM in 2008 provided a list of recommendations and detailed analysis tailored to the DeKalb County water system. The DWM proposes to implement the Water Loss Audit to reduce non-revenue water losses and other system losses.

Project Description

A firm capable of continuing the Water Loss Audit Program will be selected to provide an annual review and technical assistance in implementation of the program. The initial period will provide an adjusted analysis in a non-drought year to assure that all recommendations and programs are correctly identified for a normal water use year.

Estimated Cost

Implementation: **\$400,000.00**

Schedule

Start January 2010 and End December 2014.

81: Oracle Billing System

Background

DeKalb County presently utilizes C-Pak and its Customer Care & Billing System. The software presently bills roughly 400,000 accounts, with water and sewer bills constituting almost 230,000 accounts. More than 8,000 bills are distributed per day, and more than 100,000 meters are read each month. The C-Pak, even with its many upgrades and evolutions, relies on various interfaces and actions of staff to “transmit” information in “flat files”. Its reporting functions are cumbersome and time-consuming. Its present capacity does not include the latest technology or the industry standards and prerequisites regarding customer account management, consumption reporting, financial management, and integration with the workflow of the operational elements of utility management in the 21st century.

The County and the DWM have made and continue to make significant technology investments regarding financial systems, field services, maintenance and repair services, warehousing and inventory, job costing, modeling, and meter reading. The C-Pak Customer Care & Billing System is no longer efficient or robust as we advance with the peers in our industry.

Project Description

The DWM proposes to acquire and implement a system that can be readily integrated with its other technology for work order/field management, inventory, financial reporting and planning, flow monitoring, and customer services. This technology, coupled with the DWM’s other investments would prepare the DWM to manage all of important resources in the most efficient manner of a utility that leads its industry.

Estimated Cost

Purchase and Implementation: **\$3,000,000.00**

Schedule

Start March 2011 and End December 2011.

82: Asbestos Cement (A/C) Line Replacement

Background

Asbestos Cement (A/C) waterlines have been in use for many years. DeKalb currently has more than 600 miles of A/C lines. A/C lines are reaching the end of their useful lives and must be replaced. As they near the end of their useful lives A/C lines leak more frequently resulting in water loss and emergency replacement costs.

Project Description

The DWM proposes to identify areas in need of replacement based on maintenance problems and direct a contractor to add new lines in the area so that the other lines can be abandoned.

Estimated Cost

Construction: **\$5,000,000.00**

Schedule

Start March 2010 and End December 2014.

Note: This project will continue beyond the year 2014.

83: Watershed Improvement Projects W/S Funded

Background

The County is required to meet Federal, State, and regional regulatory and planning requirements found in multiple and sometime overlapping programs including NPDES and Stormwater Management Programs, Total Maximum Daily Loads (TMDLs), Watershed Protection Plans (WPP), MNGWPD Watershed Management Plan, Countywide water quality and biological monitoring, Floodplain Management, stream protection and preservation, and public education and outreach. In order to achieve substantial progress in reducing pollutant loads to 303(d) listed streams, improvement to ecological systems, flood protection, and prevention of non-point source pollution, the focus must turn to real projects based on sound analysis that can achieve measurable results.

The DWM's array of watershed management programs and activities (i.e. stormwater management program, development of ordinances, public education and outreach, etc.) provides an effective foundation for managing our water resources and restoring water quality in impaired streams. The DWM is now taking the next step towards realizing measurable improvements.

Project Description

The DWM has performed the first level analysis to prioritize the County's watersheds. Beyond the necessary management measures required in each of the watersheds, a deeper level of analysis is required before improvements can be conceptualized. The resultant list of concepts will be further analyzed and modeled to determine the cost-effectiveness of each. The highest ranked concepts will then, be designed and constructed. These Watershed Improvement Projects will be measured for performance in improving water quality, providing flood protection, enhancing habitat, and other desired results.

Estimated Cost

Design and Implementation: **\$12,660,000.00**

Schedule

Start March 2010 and End December 2014.

Note: This project will continue beyond the year 2014.