

**Project Name:** Hydraulic Surge Suppression  
**Project Number:** 210-850-9C34  
**Program Area:** Utilities



<b>Prior Appropriations:</b>	907,500
Add New Appropriations:	-
Add Future Appropriations:	-
<b>Current Project Total:</b>	<u>907,500</u>
Add Unfunded:	-
<b>Current Project Total with Unfunded:</b>	<u>907,500</u>

**Status of Prior Year Appropriations as of 04/01/11:**

<b>Prior Year Appropriations:</b>	907,500
Less Expended:	<u>492,136</u>
<b>Prior Year Funds Carried Over:</b>	415,364
Add New Appropriations:	-
<b>Total FY 2012 Appropriations:</b>	<u>415,364</u>
<b>Percent Expended:</b>	54%

**Description:** This project funds the construction and inspection of a surge suppression system, which is necessary to protect the City's 24-inch water transmission main. Improvements include the installation of hydropneumatic surge tanks at the Water Treatment Plant and the Glen Mill Pump Station and installation of a pressure monitoring system. The surge tanks work in concert with the new air release valves, which were installed through the Air Release Valves (210-850-8B34) project. The need for hydraulic surge suppression was identified during the construction of the Glen Mill Pump Station and confirmed by the recent rupture of the 24-inch transmission main. The surge tank at Glen Mill Pump Station will be installed underground to avoid visual impact on the adjacent residential community. Noise mitigation for the Glen Mill Pump Station will be installed in response to a noise complaint.

Appropriation Schedule	Prior Approps	New Approps	Future Appropriation Schedule					Current Total
			FY 2013	FY 2014	FY 2015	FY 2016	Future Yrs	
Plan/Design/Insp	82,500	-	-	-	-	-	-	82,500
Construction	825,000	-	-	-	-	-	-	825,000
<b>Total</b>	<b>907,500</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>907,500</b>

Funding Schedule	Prior Funding	New Funding	Future Funding Schedule					Current Total
			FY 2013	FY 2014	FY 2015	FY 2016	Future Yrs	
Water Fund	907,500	-	-	-	-	-	-	907,500
<b>Total</b>	<b>907,500</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>907,500</b>

Unfunded Schedule	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	Future Yrs	Total
Unfunded	-	-	-	-	-	-	-

Operating Cost Impact	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	Future Yrs
Water Fund	10,000	-	-	-	-	-

**Explanation of impact:** The completion of this project will add \$10,000 to the FY 2012 operating budget to fund equipment maintenance.

**Schedule:** Prior years work to be completed — Construct surge suppression and noise mitigation equipment at the Glen Mill Pump Station.

**Status:** Construction. This project first appeared in the FY 2009 CIP. Note: The design of the surge suppression and noise mitigation upgrades was provided, at no cost to the City, by the design consultant for the Glen Mill Pump Station.

**Coordination:** Neighborhood Civic Associations and Adjacent Landowners; Maryland Department of the Environment; Water System Facility Improvements project (210-850-1C34); Water Plant Upgrades project (210-850-4A40); Water Plant — ARRA Grant project (210-850-8A84); SCADA Assessment project (210-850-9D34).

**Staff Contact:** Department of Public Works. Dan Kane, Civil Engineer II, 240-314-8523.

**Project Name:** Water Plant — ARRA Grant  
**Project Number:** 210-850-8A84  
**Program Area:** Utilities

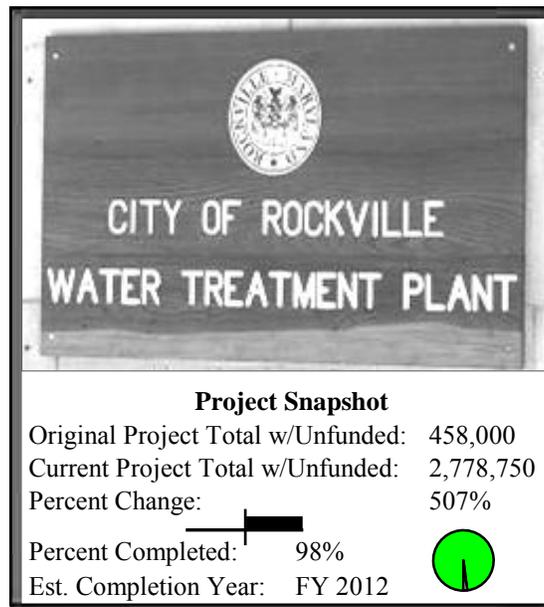
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<b>Prior Appropriations:</b>	2,778,750
Add New Appropriations:	-
Add Future Appropriations:	-
<b>Current Project Total:</b>	<u>2,778,750</u>
Add Unfunded:	-
<b>Current Project Total with Unfunded:</b>	<u>2,778,750</u>

**Status of Prior Year Appropriations as of 04/01/11:**

<b>Prior Year Appropriations:</b>	2,778,750
Less Expended:	<u>2,491,759</u>
<b>Prior Year Funds Carried Over:</b>	286,991
Add New Appropriations:	-
<b>Total FY 2012 Appropriations:</b>	<u>286,991</u>

**Percent Expended:** 90%



**Description:** This project is funded by an American Reinvestment and Recovery Act (ARRA) grant and provides for the total construction and consultant inspection costs of energy-efficiency improvements to the Water Treatment Plant (WTP). Motion sensor lights will be installed at the WTP to automatically turn lights on and off based on usage. Variable Frequency Drives (VFDs) will be installed to control the pump speeds allowing the WTP to consume less energy when water is in low demand. The low service pumps at the intake will be rebuilt to reduce energy loss due to friction. The water-cooled air conditioning (A/C) units will be replaced with higher-efficiency, air-cooled A/C units. Improvements will be made to the press process to allow the plant to transfer and process more solids per run, reducing the total number of runs at the WTP. Finally, power monitors and Programmable Logic Controllers (PLCs) will be installed to monitor and record electricity usage, so plant operations can be adjusted for optimum efficiency.

Appropriation Schedule	Prior Approps	New Approps	Future Appropriation Schedule					Current Total
			FY 2013	FY 2014	FY 2015	FY 2016	Future Yrs	
Plan/Design/Insp	162,000	-	-	-	-	-	-	162,000
Construction	2,616,750	-	-	-	-	-	-	2,616,750
<b>Total</b>	<b>2,778,750</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2,778,750</b>

Funding Schedule	Prior Funding	New Funding	Future Funding Schedule					Current Total
			FY 2013	FY 2014	FY 2015	FY 2016	Future Yrs	
Water Fund	1,033,750	-	-	-	-	-	-	1,033,750
Federal Grant (Water)	1,745,000	-	-	-	-	-	-	1,745,000
<b>Total</b>	<b>2,778,750</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2,778,750</b>

Unfunded Schedule	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	Future Yrs	Total
Unfunded	-	-	-	-	-	-	-

Operating Cost Impact	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	Future Yrs
Water Fund	-	-	-	-	-	-

**Explanation of impact:** Completion of this project will have no measurable impact on the operating budget.

**Schedule:** Prior years work to be completed — Repairs to paving and entrance gate sensor.

**Status:** Construction and grant administration. This project, formerly called Water Plant Maintenance and Repair, first appeared in the FY 2008 CIP.

**Coordination:** Maryland Department of the Environment; Water Plant Upgrades project (210-850-4A40).

**Staff contact:** Department of Public Works. Becky Andrus, Civil Engineer I, 240-314-8519.

**Project Name:** Water Main Rehabilitation  
**Project Number:** 210-850-5C34  
**Program Area:** Utilities

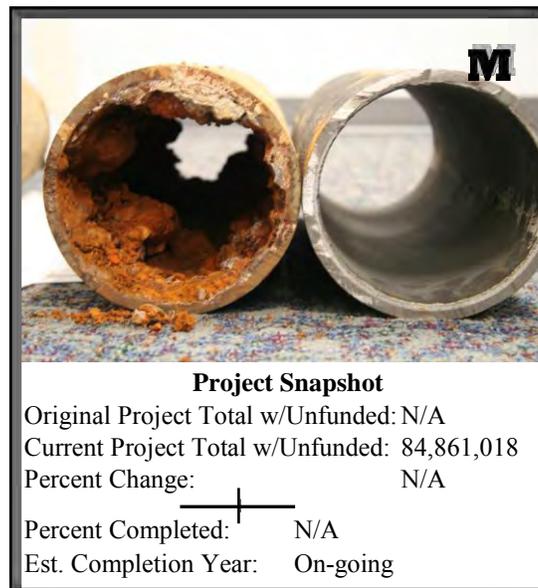
**Prior Appropriations:** 11,472,585  
 Add New Appropriations: 3,204,500  
 Add Future Appropriations: 70,183,933  
**Current Project Total:** 84,861,018  
 Add Unfunded: -  
**Current Project Total with Unfunded:** 84,861,018

**Status of Prior Year Appropriations as of 04/01/11:**

**Prior Year Appropriations:** 11,472,585  
 Less Expended: 10,730,423  
**Prior Year Funds Carried Over:** 742,162  
 Add New Appropriations: 3,204,500  
**Total FY 2012 Appropriations:** 3,946,662

**Percent Expended:** 13%

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**Description:** This sustainable project funds the design and construction of water system improvements as part of the plan to upgrade the City's aging water system. Pipe assessment and emergency repairs to the 24-inch prestressed concrete cylinder pipe (PCCP) water transmission main and valves will delay the 20-year, 34-mile plan by approximately 1 to 2 years. Improvement projects include rehabilitating existing pipes; installing new mains to replace older pipes and pipes made of spiral-welded steel (prone to leaks); increasing the diameter of undersized pipes; connecting dead-end pipe segments; and replacing pipes, which have a history of frequent water main breaks. The goals are to: increase fireflows, especially in 65 of the City's 1,375 hydrants providing less than 500 gallons-per-minute; improve water quality; reduce frequency of water main breaks; and replace pipes with excessive tuberculation. These improvements have been recommended in the 2008 *Water Distribution Master Plan* or by City staff. This project also includes the inspection, assessment, and repair of the 24-inch transmission main and 24-inch valves.

Appropriation Schedule	Prior Approps	New Approps	Future Appropriation Schedule					Current Total
			FY 2013	FY 2014	FY 2015	FY 2016	Future Yrs	
Plan/Design/Insp	1,635,880	516,920	553,080	481,080	490,360	390,840	7,519,112	11,587,272
Construction	9,836,705	2,687,580	3,685,920	3,087,920	2,642,640	2,866,160	48,466,821	73,273,746
<b>Total</b>	<b>11,472,585</b>	<b>3,204,500</b>	<b>4,239,000</b>	<b>3,569,000</b>	<b>3,133,000</b>	<b>3,257,000</b>	<b>55,985,933</b>	<b>84,861,018</b>

Funding Schedule	Prior Funding	New Funding	Future Funding Schedule					Current Total
			FY 2013	FY 2014	FY 2015	FY 2016	Future Yrs	
Water Fund	1,786,785	-	4,239,000	3,569,000	3,133,000	3,257,000	55,985,933	71,970,718
Bond Proceeds (Water)	9,685,800	3,083,000	-	-	-	-	-	12,768,800
Developer	-	121,500	-	-	-	-	-	121,500
<b>Total</b>	<b>11,472,585</b>	<b>3,204,500</b>	<b>4,239,000</b>	<b>3,569,000</b>	<b>3,133,000</b>	<b>3,257,000</b>	<b>55,985,933</b>	<b>84,861,018</b>

Unfunded Schedule	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	Future Yrs	Total
Unfunded	-	-	-	-	-	-	-

Operating Cost Impact	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	Future Yrs
Water Fund	-	-	-	-	-	-

**Explanation of impact:** The completion of this project will have no measurable impact on the budget.

**Schedule:** FY 2012 — Pipe upgrades in Twinbrook and East Rockville; 24-inch isolation valve replacements; Victory Housing water main rehabilitation (developer funded). FY 2013 — Pipe upgrades in Lincoln Park, East Rockville, and Southlawn Office/Industrial Center. FY 2014 — Pipe upgrades in Hungerford and Twinbrook. FY 2015 — Pipe upgrades in East Rockville, Lincoln Park, and Montrose. FY 2016 — Pipe upgrades in Twinbrook and East Rockville. Future Years — Pipe upgrades in Twinbrook, West End, East Rockville, Lincoln Park, and Hungerford.

**Status:** Implementation. This project first appeared in the FY 2005 CIP.

**Coordination:** Neighborhood Civic Associations and Adjacent Landowners; Montgomery County Fire and Rescue Service; Asphalt Repair and Replacement project (420-850-0A11) and Bridge Rehabilitation project (380/420-850-8L11) in the Transportation Program Area.

**Staff contact:** Department of Public Works. John W. Hollida, Civil Engineer III, 240-314-8526.