

## WATER PROGRAM

The Water Program is administered by the Water division of the Utilities Department. The program is designed to achieve five primary strategic objectives:

- 1) Replace and/or rehabilitate aging infrastructure;
- 2) Maintain or increase system reliability;
- 3) Improve system efficiency;
- 4) Address system growth; and
- 5) Regulatory compliance

The water utility continues to plan and invest in the future of the city by maximizing treatment capacity and ensuring facilities are in place to reliably provide water to current and future city residents. The Water Program is slated to improve and enhance the city's water supply, treatment and distribution systems, and provide for new construction and/or upgrades of the city's infrastructure such as pump stations, tanks, treatment facilities, and transmission and distribution water mains.

### PRIOR YEAR ACCOMPLISHMENTS

#### 24" Transmission Main Replacement (W-042)

Completed construction of another 2,500 feet of new 36" transmission main.

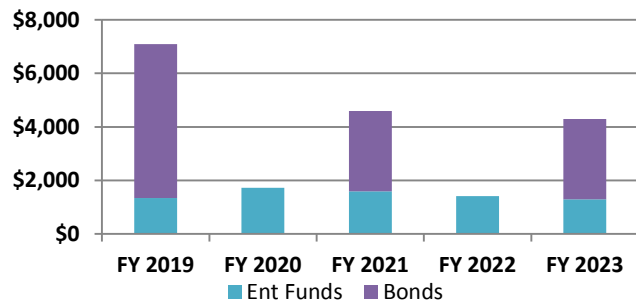
#### Finished Water Capacity Increases (W-047)

Completed a capacity increase study for the water treatment plant in order to increase capacity within the existing infrastructure.

### THE FIVE-YEAR PLAN (FY 2019 – FY 2023)

The FY 2019 Five-Year Capital Improvement Program (CIP) includes \$7,375,000 in Enterprise Funds (Water Fund) and \$11,750,000 in Bonds.

In FY 2019 funding consists of a \$1,340,000 transfer from the Water Fund and \$5,750,000 in Bonds.



(Dollars in Thousands)

### FY 2019 CAPITAL PROJECTS

#### 24" Transmission Main Replacement (W-042)

Additional funding is programmed for the 24" Transmission Main Replacement. This project is estimated to be completed in FY 2025.



#### Finished Water Capacity Increases (W-047)

Continue improvements allowing the Water Treatment Plant to increase permitted capacity rating to 18 million gallons per day.

#### Main Replacement/Looping (W-050)

Replace undersized and aging/failing water mains and loop existing dead-ends on Peabody Street (Stonewall Road to Hazel Drive) and Hazel Drive (Peabody Street to Peabody Street)

### FY 2019 MAINTENANCE CAPITAL PROJECTS

There are no maintenance capital projects proposed for the Water Program.

### NEW CAPITAL PROJECTS

There are no new projects proposed for the Water Program.

## SUMMARY OF WATER CAPITAL PROJECTS

(\$ in Thousands)

<b>Cost Estimates:</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>Future</b>	<b>Total Project</b>	<b>5-Year CIP</b>
Planning	2,255	50	55	60	280	60	665	3,425	505
Land	-	-	-	-	-	-	-	-	-
Construction	16,034	7,040	1,670	4,535	1,135	4,240	6,235	40,889	18,620
<b>Total Cost</b>	<b>18,289</b>	<b>7,090</b>	<b>1,725</b>	<b>4,595</b>	<b>1,415</b>	<b>4,300</b>	<b>6,900</b>	<b>44,314</b>	<b>19,125</b>

### Funding Sources:

General Fund	-	-	-	-	-	-	-	-	-
Sewer Fund	-	-	-	-	-	-	-	-	-
Water Fund	12,789	1,340	1,725	1,595	1,415	1,300	5,000	25,164	7,375
Electric Fund	-	-	-	-	-	-	-	-	-
Stormwater Fund	-	-	-	-	-	-	-	-	-
Airport Fund	-	-	-	-	-	-	-	-	-
School Fund	-	-	-	-	-	-	-	-	-
Bonds	5,500	5,750	-	3,000	-	3,000	1,900	19,150	11,750
State	-	-	-	-	-	-	-	-	-
Federal	-	-	-	-	-	-	-	-	-
NVTA	-	-	-	-	-	-	-	-	-
Other Sources	-	-	-	-	-	-	-	-	-
<b>Total Funding</b>	<b>18,289</b>	<b>7,090</b>	<b>1,725</b>	<b>4,595</b>	<b>1,415</b>	<b>4,300</b>	<b>6,900</b>	<b>44,314</b>	<b>19,125</b>

### Operating Impacts:

Revenue	-	-	-	-	-	-	-	-	-
Staffing (Costs) Savings	-	-	-	-	-	-	-	-	-
Facility (Costs) Savings	-	-	-	-	-	-	-	-	-
Program (Costs) Saving	-	-	-	-	-	-	-	-	-
Debt Service	-	-	(445)	(445)	(677)	(677)	(26,234)	(28,478)	(2,244)
<b>Net Revenue</b>	<b>-</b>	<b>-</b>	<b>(445)</b>	<b>(445)</b>	<b>(677)</b>	<b>(677)</b>	<b>(26,234)</b>	<b>(28,478)</b>	<b>(2,244)</b>

**WATER CAPITAL PROJECT LISTING**

(\$ in Thousands)

<b>Project Name</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>Future</b>	<b>Total Project</b>	<b>5-Year CIP</b>
24" Transmission Main	12,770	4,400	1,000	3,900	900	3,900	2,800	29,670	14,100
Finished Water Capacity	750	2,250	-	-	-	-	-	3,000	2,250
Main Replacement / Loo	2,094	440	475	495	515	400	2,900	7,319	2,325
Clear-Well Addition and	2,400	-	-	-	-	-	-	2,400	-
Nokesville Road Upgrad	-	-	-	-	-	-	1,000	1,000	-
Interconnecting Meter V	30	-	50	-	-	-	200	280	50
Water Plant Improvemen	245	-	200	200	-	-	-	645	400
<b>Total</b>	<b>18,289</b>	<b>7,090</b>	<b>1,725</b>	<b>4,595</b>	<b>1,415</b>	<b>4,300</b>	<b>6,900</b>	<b>44,314</b>	<b>19,125</b>

# W-042 24" Transmission Main Replacement

**Year Introduced:** 2007  
**Change:** Increased Estimate  
**Associated Proj:** T-042  
**Program Area:** Water  
**Managing Dept:** Utilities  
**Manager:** T. Dawood  
**Plan Conformance:**  
 Comprehensive Plan 7.7

**Est. Start:** 7/1/2012  
**Est. Complete:** 6/30/2025



## Description:

Replace the existing 45-year old water transmission main with a 36" water transmission main in order to increase reliability and water transmission capacity from the Water Treatment Plant to the City. The main is approaching the ends of its useful life and experiences unacceptable hydraulic conditions during peak demand periods. Two phases have already been completed, one phase is in construction and half completed, three more phases are in design, and the last is being planned out. The project will be coordinated with both City roadway improvements and Prince William County roadway improvements.

<b>Cost Estimate:</b> (\$ in 1,000s)	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>Future</b>	<b>Total Project</b>
Planning	1,225	-	-	-	220	-	125	1,570
Land	-	-	-	-	-	-	-	-
Construction	7,636	4,400	1,000	3,900	680	3,900	2,675	24,191
<b>Total Cost</b>	<b>8,861</b>	<b>4,400</b>	<b>1,000</b>	<b>3,900</b>	<b>900</b>	<b>3,900</b>	<b>2,800</b>	<b>25,761</b>

## Funding Sources: (\$ in 1,000s)

General Fund	-	-	-	-	-	-	-	-
Sewer Fund	-	-	-	-	-	-	-	-
Water Fund	6,861	900	1,000	900	900	900	900	12,361
Electric Fund	-	-	-	-	-	-	-	-
Stormwater Fund	-	-	-	-	-	-	-	-
Airport Fund	-	-	-	-	-	-	-	-
School Fund	-	-	-	-	-	-	-	-
Bonds	2,000	3,500	-	3,000	-	3,000	1,900	13,400
State	-	-	-	-	-	-	-	-
Federal	-	-	-	-	-	-	-	-
NVTA	-	-	-	-	-	-	-	-
Other Sources	-	-	-	-	-	-	-	-
<b>Total Funding</b>	<b>8,861</b>	<b>4,400</b>	<b>1,000</b>	<b>3,900</b>	<b>900</b>	<b>3,900</b>	<b>2,800</b>	<b>25,761</b>

## Operating Impacts: (\$ in 1,000s)

Revenue	-	-	-	-	-	-	-	-
Staffing (Costs) Savings	-	-	-	-	-	-	-	-
Facility (Costs) Savings	-	-	-	-	-	-	-	-
Program (Costs) Savings	-	-	-	-	-	-	-	-
Debt Service	-	-	(271)	(271)	(503)	(503)	(23,450)	(24,998)
<b>Net Revenue</b>	<b>-</b>	<b>-</b>	<b>(271)</b>	<b>(271)</b>	<b>(503)</b>	<b>(503)</b>	<b>(23,450)</b>	<b>(24,998)</b>

## W-047 Finished Water Capacity Increases

**Year Introduced:** 2009  
**Change:** No change  
**Associated Proj:** W-065  
**Program Area:** Water  
**Managing Dept:** Utilities  
**Manager:** T. Dawood

**Plan Conformance:**  
 Comprehensive Plan 7.7

**Est. Start:** 7/1/2013  
**Est. Complete:** 6/30/2021



### Description:

Due to growth in the City and increased water demands during the summer months, it is anticipated that additional capacity will be required in the future. The first phase will enable the Water Treatment Plant to increase permitted capacity rating from 14 million gallons per day (mgd) to 15 mgd. The second phase will be to increase to 18 mgd. The project will reduce reliance on Prince William County Service Authority interconnects.

<b>Cost Estimate:</b> (\$ in 1,000s)	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>Future</b>	<b>Total Project</b>
Planning	750	-	-	-	-	-	-	750
Land	-	-	-	-	-	-	-	-
Construction	-	2,250	-	-	-	-	-	2,250
<b>Total Cost</b>	<b>750</b>	<b>2,250</b>	-	-	-	-	-	<b>3,000</b>

<b>Funding Sources:</b> (\$ in 1,000s)	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>Future</b>	<b>Total Project</b>
General Fund	-	-	-	-	-	-	-	-
Sewer Fund	-	-	-	-	-	-	-	-
Water Fund	750	-	-	-	-	-	-	750
Electric Fund	-	-	-	-	-	-	-	-
Stormwater Fund	-	-	-	-	-	-	-	-
Airport Fund	-	-	-	-	-	-	-	-
School Fund	-	-	-	-	-	-	-	-
Bonds	-	2,250	-	-	-	-	-	2,250
State	-	-	-	-	-	-	-	-
Federal	-	-	-	-	-	-	-	-
NVTA	-	-	-	-	-	-	-	-
Other Sources	-	-	-	-	-	-	-	-
<b>Total Funding</b>	<b>750</b>	<b>2,250</b>	-	-	-	-	-	<b>3,000</b>

<b>Operating Impacts:</b> (\$ in 1,000s)	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>Future</b>	<b>Total Project</b>
Revenue	-	-	-	-	-	-	-	-
Staffing (Costs) Savings	-	-	-	-	-	-	-	-
Facility (Costs) Savings	-	-	-	-	-	-	-	-
Program (Costs) Savings	-	-	-	-	-	-	-	-
Debt Service	-	-	(174)	(174)	(174)	(174)	(2,784)	(3,480)
<b>Net Revenue</b>	<b>-</b>	<b>-</b>	<b>(174)</b>	<b>(174)</b>	<b>(174)</b>	<b>(174)</b>	<b>(2,784)</b>	<b>(3,480)</b>











