



**Capital Improvement Program  
FY2014 thru FY2018  
Project Request Form**

**Project Title:** WESTERN RAW WATERLINE (910161-48621)

**Project Priority:** Priority 2

**Project Code:** proj202

**Project Type:** REPLACEMENT

**Start Date (FYE):** 1995

**Department:** 2011

**Status:** Active

**Completion Date (FYE):** Future

**Description:**

Raw water planning for replacements and upgrades of system assets that deliver raw water from North River, Silver Lake (inactive) and Dry River. Projects address issues pertaining to  
 1) Asset Management and Lifecycle Retirement  
 2) System Risk Reduction  
 3) Power/Energy Management

**Justifications:**

- Mandated
- Remove hazards
- Maintains service
- Increase efficiency
- Increase revenues
- Improves service
- New service
- Convenience
- Other

**Explanation:**

- North River Pump Station (#435): Estimated at \$780,000 in 2014 and 50,000/yr; study completion DEC 2012
- Dry River Risk Management (#461): Estimated at \$60,000 in 2014; study completion DEC 2012
- North River Risk Management (#462): No estimate; study completion DEC 2012
- Dry River 30" Raw Water Master plan: No estimate; study completion DEC 2012
- Waterline Relocations (#444): No estimate; study completion DEC 2012

**Alternative:**

Limited opportunity to change project scope but schedule can be altered with acceptance of risk.

Expenditures:	Prior	2014	2015	2016	2017	2018	Future	Total
Planning								
Land								
Construction	\$4,487,880	\$840,000	\$50,000	\$50,000	\$50,000	\$50,000		\$5,527,880
Equipment								
Other Expenses								
<b>Total</b>	<b>\$4,487,880</b>	<b>\$840,000</b>	<b>\$50,000</b>	<b>\$50,000</b>	<b>\$50,000</b>	<b>\$50,000</b>		<b>\$5,527,880</b>
Funding Sources:	Prior	2014	2015	2016	2017	2018	Future	Total
General Revenue								
Enterprise Revenue	\$5,212,880	\$115,000	\$50,000	\$50,000	\$50,000	\$50,000		\$5,527,880
Bond Proceeds								
Grants								
Capital Project Fund								
Other Revenue								
<b>Total</b>	<b>\$5,212,880</b>	<b>\$115,000</b>	<b>\$50,000</b>	<b>\$50,000</b>	<b>\$50,000</b>	<b>\$50,000</b>		<b>\$5,527,880</b>
Operating Impacts:	Prior	2014	2015	2016	2017	2018	Future	Total
Personnel								
Operating								
Capital								
Offsets								
<b>Total</b>								



**Capital Improvement Program  
FY2014 thru FY2018  
Project Request Form**

**Project Title:** Western Potable System (910161-48670)

**Project Priority:** Priority 2

**Project Code:** proj213

**Project Type:** REPLACEMENT

**Start Date (FYE):** 2008

**Department:** 2011

**Status:** Active

**Completion Date (FYE):** 2017

**Description:**

The City's rural customer base along Route 33 West is supplied from a 10" diameter cast iron (unlined) pipe that has been installed in the late 1890's. This program begins to address funding for lifecycle replacement of the pipeline.

**Explanation:**

Total projected cost is not known at this time. The existing 16" raw waterline will be converted to potable status between the WTP and Cooper's Mountain Tank; then discarding the existing 10" pipe in that area. Beyond Cooper's Mountain, the 12" will be replaced with new smaller pipe. Planning is incomplete at this time.  
Joint project with Rockingham County to place satellite WTP expansion at Rawley Springs, use the 16" pipe for potable water. Conceptual at this time.

**Justifications:**

- Mandated
- Remove hazards
- Maintains service
- Increase efficiency
- Increase revenues
- Improves service
- New service
- Convenience
- Other

**Alternative:**

<b>Expenditures:</b>	Prior	2014	2015	2016	2017	2018	Future	Total
Planning								
Land								
Construction	\$300,000						\$250,000	\$550,000
Equipment								
Other Expenses								
<b>Total</b>	\$300,000						\$250,000	\$550,000
<b>Funding Sources:</b>	Prior	2014	2015	2016	2017	2018	Future	Total
General Revenue								
Enterprise Revenue	\$300,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000		\$550,000
Bond Proceeds								
Grants								
Capital Project Fund								
Other Revenue								
<b>Total</b>	\$300,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000		\$550,000
<b>Operating Impacts:</b>	Prior	2014	2015	2016	2017	2018	Future	Total
Personnel								
Operating								
Capital								
Offsets								
<b>Total</b>								



**Capital Improvement Program  
FY2014 thru FY2018  
Project Request Form**

**Project Title:** EASTERN SOURCE DEVELOPMENT (910161-48654)

**Project Priority:** Priority 2

**Project Code:** proj203

**Project Type:** NEW

**Start Date (FYE):** 1999

**Department:** 2011

**Status:** Active

**Completion Date (FYE):** 2016

**Description:**

Surface Water Intake on South fork of Shenandoah River and waterline to the existing water treatment plant as outlined in the Wiley & Wilson "Waterline Route Study-Shenandoah River", November 18, 1999.

**Explanation:**

\$32,404,000 Expected Completion Cost  
 \$10,489,800 Expended as of 7/9/2012  
 \$ 3,286,100 Available Capital Project Balance  
 \$18,628,100 Unfunded Balance

**Alternative:**

1. Western source reservoirs
2. Western source groundwater
3. Eastern source groundwater
4. Joint Plan with Rockingham County
5. Limit growth.

**Justifications:**

- Mandated
- Remove hazards
- Maintains service
- Increase efficiency
- Increase revenues
- Improves service
- New service
- Convenience
- Other

<b>Expenditures:</b>	Prior	2014	2015	2016	2017	2018	Future	Total
Planning	\$1,134,278	\$303,178						\$1,437,456
Land	\$478,808	\$206,202						\$685,010
Construction	\$8,314,750	\$2,400,568	\$9,314,100	\$9,314,000				\$29,343,418
Equipment								\$938,085
Other Expenses	\$561,937	\$376,148						
<b>Total</b>	<b>\$10,489,773</b>	<b>\$3,286,096</b>	<b>\$9,314,100</b>	<b>\$9,314,000</b>				<b>\$32,403,969</b>
<b>Funding Sources:</b>	Prior	2014	2015	2016	2017	2018	Future	Total
General Revenue								\$11,173,409
Enterprise Revenue	\$11,173,409							\$11,173,409
Bond Proceeds	\$2,602,460		\$18,628,100					\$21,230,560
Grants								
Capital Project Fund								
Other Revenue								
<b>Total</b>	<b>\$13,775,869</b>		<b>\$18,628,100</b>					<b>\$32,403,969</b>
<b>Operating Impacts:</b>	Prior	2014	2015	2016	2017	2018	Future	Total
Personnel								
Operating								
Capital								
Offsets								
<b>Total</b>								



## Capital Improvement Program FY2014 thru FY2018 Project Request Form

**Project Title:** Management of Water Treatment Assets (910161 48733)  
**Project Priority:** Priority 2  
**Project Code:** proj218      **Project Type:** Not Set      **Start Date (FYE):** 2013  
**Department:** 2011      **Status:** Active      **Completion Date (FYE):** Future

**Description:**

This "Capital Sub-Program" provides funding to manage assets that are integral to the City of Harrisonburg water system. These specific assets are operated and maintained under the organization and budget division for water treatment functions.

**Explanation:**

Existing systems will be upgraded, enhanced, expanded, and revitalized through planned management of component assets as treatment processes, control, and testing. Parameters and strategies include useful life projections, condition assessments, and life cycle analyses of assets. This subprogram makes resources available to allow the Department of Public Utilities to maintain current with new technology and new products and to also preplan the retirement of assets at the optimum replacement stage in their lifecycle. Requested funds are estimated; replacement schedules generated by age and condition assessment are projected to be available by next CIP.

**Justifications:**

- Mandated
- Remove hazards
- Maintains service
- Increase efficiency
- Increase revenues
- Improves service
- New service
- Convenience
- Other

**Alternative:**

Expenditures:	Prior	2014	2015	2016	2017	2018	Future	Total
Planning								
Land								
Construction								
Equipment	\$44,392	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000		\$294,392
Other Expenses								
<b>Total</b>	\$44,392	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000		\$294,392
Funding Sources:	Prior	2014	2015	2016	2017	2018	Future	Total
General Revenue								
Enterprise Revenue	\$44,392	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000		\$294,392
Bond Proceeds								
Grants								
Capital Project Fund								
Other Revenue								
<b>Total</b>	\$44,392	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000		\$294,392
Operating Impacts:	Prior	2014	2015	2016	2017	2018	Future	Total
Personnel								
Operating								
Capital								
Offsets								
<b>Total</b>								



## Capital Improvement Program FY2014 thru FY2018 Project Request Form

**Project Title:** Management of Metering System (910161 48734)  
**Project Priority:** Priority 2  
**Project Code:** proj217      **Project Type:** Not Set      **Start Date (FYE):** 2013  
**Department:** 2011      **Status:** Active      **Completion Date (FYE):** Future

**Description:**

This "Capital Sub-Program" provides funding to manage assets that are integral to the City of Harrisonburg water system. These specific assets are operated and maintained under the organization and budget division for Utility Billing.

**Explanation:**

Existing systems will be upgraded, enhanced, expanded, and revitalized through planned management of component assets as meters, registers, and communication media. Parameters and strategies include useful life projections, condition assessments, and life cycle analyses of assets. This subprogram makes resources available to allow the Department of Public Utilities to maintain current with new technology and new products and to also preplan the retirement of assets at the optimum replacement stage in their lifecycle.

Requested funds are estimated; replacement schedules generated by age and condition assessment are projected to be available by next CIP.

Small meter replacement schedule  
 Large meter replacement schedule  
 Fix net radio read system

**Justifications:**

- Mandated
- Remove hazards
- Maintains service
- Increase efficiency
- Increase revenues
- Improves service
- New service
- Convenience
- Other

**Alternative:**

Expenditures:	Prior	2014	2015	2016	2017	2018	Future	Total
Planning								
Land								
Construction								
Equipment	\$44,393	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000		\$294,393
Other Expenses								
<b>Total</b>	<b>\$44,393</b>	<b>\$50,000</b>	<b>\$50,000</b>	<b>\$50,000</b>	<b>\$50,000</b>	<b>\$50,000</b>		<b>\$294,393</b>
Funding Sources:	Prior	2014	2015	2016	2017	2018	Future	Total
General Revenue								
Enterprise Revenue	\$44,393	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000		\$294,393
Bond Proceeds								
Grants								
Capital Project Fund								
Other Revenue								
<b>Total</b>	<b>\$44,393</b>	<b>\$50,000</b>	<b>\$50,000</b>	<b>\$50,000</b>	<b>\$50,000</b>	<b>\$50,000</b>		<b>\$294,393</b>
Operating Impacts:	Prior	2014	2015	2016	2017	2018	Future	Total
Personnel								
Operating								
Capital								
Offsets								
<b>Total</b>								



## Capital Improvement Program FY2014 thru FY2018 Project Request Form

**Project Title:** Management of Transmission & Distribution of Assets (48732)  
**Project Priority:** Priority 2  
**Project Code:** proj215      **Project Type:** Not Set      **Start Date (FYE):** 2013  
**Department:** 2011      **Status:** Active      **Completion Date (FYE):** Future

**Description:**

This "Capital Sub-Program" provides funding to manage assets that are integral to the City of Harrisonburg water system. These specific assets are operated and maintained under the organization and budget division for transmission & distribution functions.

**Explanation:**

Existing systems will be upgraded, enhanced, expanded, and revitalized through planned management of component assets as mains, hydrants, and valves. Parameters and strategies include useful life projections, condition assessments, and life cycle analyses of assets. This subprogram makes resources available to allow the Department of Public Utilities to maintain current with new technology and new products and to also preplan the retirement of assets at the optimum replacement stage in their lifecycle.

Requested funds are estimated; replacement schedules generated by age and condition assessment are projected to be available by next CIP.

**Justifications:**

- Mandated
- Remove hazards
- Maintains service
- Increase efficiency
- Increase revenues
- Improves service
- New service
- Convenience
- Other

**Alternative:**

Expenditures:	Prior	2014	2015	2016	2017	2018	Future	Total
Planning								
Land								
Construction	\$44,392	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000		\$544,392
Equipment								
Other Expenses								
<b>Total</b>	\$44,392	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000		\$544,392
Funding Sources:	Prior	2014	2015	2016	2017	2018	Future	Total
General Revenue								
Enterprise Revenue	\$44,392	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000		\$544,392
Bond Proceeds								
Grants								
Capital Project Fund								
Other Revenue								
<b>Total</b>	\$44,392	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000		\$544,392
Operating Impacts:	Prior	2014	2015	2016	2017	2018	Future	Total
Personnel								
Operating								
Capital								
Offsets								
<b>Total</b>								



**Capital Improvement Program  
FY2014 thru FY2018  
Project Request Form**

**Project Title:** Management of Pumping, Storage & Transfer Assets (48688)  
**Project Priority:** Priority 2  
**Project Code:** proj216      **Project Type:** Not Set      **Start Date (FYE):** 2012  
**Department:** 2011      **Status:** Active      **Completion Date (FYE):** Future

**Description:**

This "Capital Sub-Program" provides funding to manage water system assets that are integral to the City of Harrisonburg water system. These specific assets are operated and maintained under the organization and budget division for pumping storage & transfer functions. (322061)

**Justifications:**

- Mandated
- Remove hazards
- Maintains service
- Increase efficiency
- Increase revenues
- Improves service
- New service
- Convenience
- Other

**Explanation:**

Existing system assets will be retired, upgraded or added through planned management of components (pumps, tanks, control valves, and instrumentation). Parameters and strategies include useful life projections, condition assessments, and life cycle analyses of assets. This subprogram makes resources available to allow the Department of Public Utilities to maintain current with new technology and new products and to also preplan the retirement of assets at the optimum replacement stage in their lifecycle.

Equipment replacement funds are estimated, replacement schedules generated by age and condition assessment are projected to be available by next CIP.

**EXPENSES:**

- \$20,000/YR for annual inspection and plan update
- 2014: \$ 62,000 safety and sanitary  
    \$153,000 full rehab Cooper's Mountain Tank
- 2015: \$ 34,000 safety and sanitary at Ramblewood, JMU and Washington
- 2016: \$317,000 full rehab at Ridgeville

**Alternative:**

Expenditures:	Prior	2014	2015	2016	2017	2018	Future	Total
Planning		\$20,000	\$20,000	\$20,000	\$20,000	\$20,000		\$100,000
Land								
Construction		\$215,000	\$34,000	\$317,000			\$652,126	\$1,218,126
Equipment		\$20,000	\$20,000	\$20,000	\$20,000	\$20,000		\$100,000
Other Expenses								
<b>Total</b>		\$255,000	\$74,000	\$357,000	\$40,000	\$40,000	\$652,126	\$1,418,126
Funding Sources:	Prior	2014	2015	2016	2017	2018	Future	Total
General Revenue								
Enterprise Revenue	\$1,168,126	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000		\$1,418,126
Bond Proceeds								
Grants								
Capital Project Fund								
Other Revenue								
<b>Total</b>	\$1,168,126	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000		\$1,418,126
Operating Impacts:	Prior	2014	2015	2016	2017	2018	Future	Total
Personnel								
Operating								
Capital								
Offsets								
<b>Total</b>								

