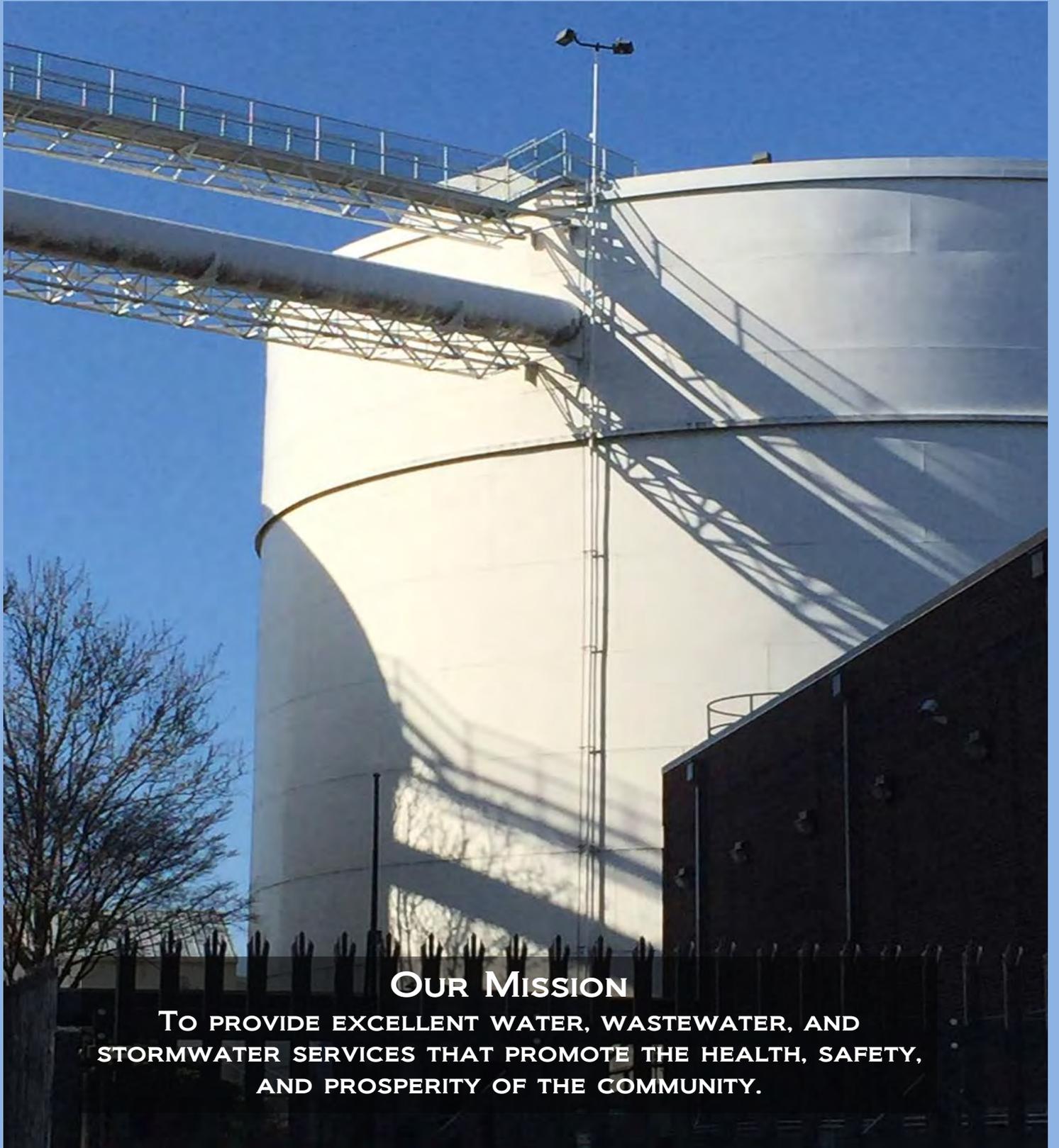




DEPARTMENT OF WATER RESOURCES  
FY 2016 RATE STUDY AND ANNUAL REPORT



## **OUR MISSION**

**TO PROVIDE EXCELLENT WATER, WASTEWATER, AND  
STORMWATER SERVICES THAT PROMOTE THE HEALTH, SAFETY,  
AND PROSPERITY OF THE COMMUNITY.**



Taylor Street Pervious Parking Lot

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# DIRECTOR'S MESSAGE



The past year for the Water Resources Department has been one marked by significant challenges and even greater accomplishments. This report provides an overview of these as well as our operations, projects, budgets, recommended rates and rate comparisons. As you will see, to put it simply, we have a lot going on and this report only scratches the surface. Behind each program or effort described herein are countless hours of work and planning. The CSO Long Term Control Plan (LTCP) is a prime example of that effort. Many times in the past the question has been asked by the City Manager and City Council “When can we declare victory and say we are done with CSO?” Until recently that was a question that could not be answered other than to say that it will be complete when all the remaining combined sewers are separated at a remaining cost of nearly \$300 million, likely decades. To say anything different meant convincing the Department of Environmental Quality (DEQ) that an alternative plan would still be in compliance with the Environmental Protection Agency’s (EPA’s) Federal CSO Policy as well as meeting all local water quality requirements, meaning that any remaining CSOs do not cause or contribute to exceedances in water quality standards. This was not an easy task. After six years of effort involving extensive data collection, sewer system modeling, water quality modeling of streams, and analysis of over 70 alternatives, we finally obtained approval of the revised CSO LTCP on September 5<sup>th</sup>, 2014. The effort does not end there; we are still negotiating a revised Consent Order as well as completely redoing the James River Bacteria TMDL.

As with CSO, developing a Stormwater Program that meets the requirements of our Municipal Separate Storm Sewer System (MS4) Permit including compliance with the Chesapeake Bay TMDL requirements is challenging. The Department of Water Resources has undertaken a massive master planning effort that includes elements such as storm system mapping and condition assessment, best management practices (BMPs) condition assessments, stream bank evaluations, project evaluation and cost analysis for TMDL compliance, and development of nutrient management plans, just to name a few. As a result of our evaluation and planning, we were successful in obtaining a \$1.7 million Stormwater Local Assistance Fund (SLAF) grant for five water quality projects. These grants are only awarded to localities that could demonstrate that they had projects ready to go that meet the goals of the Chesapeake Bay TMDL and comply with certain financial criteria. As a result, we will meet the pollution reduction goals for this permit cycle for half of the cost.

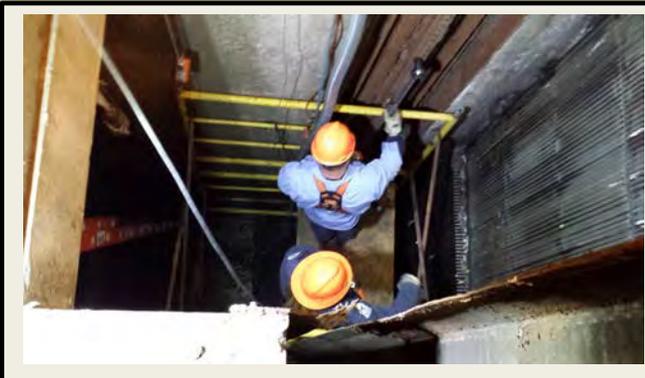
# DIRECTOR'S MESSAGE

*Continued*



Utility Line Technicians: Derrick Helm, Kevin Gallier, Mike Mundy, John Fulghum, Mike Abbott, and Sonny Richardson – Minus 11 degree water line break repair, February 20<sup>th</sup>, 2015, the coldest in Lynchburg's history.

“Water Resources is successful because of the dedication and passion of our employees who provide exceptional service to the citizens of Lynchburg.”



WWTP Maintenance Personnel: Joe Souza, Gary Marcum, Wayne Casey, and Steve Williams. Safety coordinated by Safety Manager, Jeff Martin - Mechanical Bar Screen Repairs, 30 feet deep, the lowest place in Lynchburg..

The extraordinary efforts of our staff do not just involve planning and working with regulators. What is truly amazing is the dedication of our staff that directly provides services to the citizens of Lynchburg. An example of this was on February 20<sup>th</sup>, 2015, two crews worked throughout the night on a water main break on Harrison Street. Our practice, whenever possible, is to repair water lines while they are still under pressure (blowing water) in order to avoid the possibility of debris and dirty water contaminating the water lines resulting in issuing Boil Water notices. Staying dry during a water main break is not an option. The temperature on February 20<sup>th</sup> was minus 11 degrees, the coldest recorded temperature in the history of Lynchburg. The crews not only demonstrated their dedication but in fact were extremely proud to have made the coldest water line repair ever.

Or the Wastewater Treatment Plant maintenance staff who recently made an extremely difficult repair to the bar screens. The bar screens are very large mechanical devices that extend 30 feet deep into the flowing wastewater. Their job is to remove any large objects from the flowing wastewater. I will leave it to your imagination what some of those objects might be. The work took weeks of preparation and planning between the maintenance staff and our safety staff. In addition to normal personal protective equipment, employees had to wear fall protection, monitor the weather and plant flows for flooding potential, lock and tag out the equipment, monitored the air quality for dangerous sewer gases, and had personnel standing by in the event they had to evacuate. They made very difficult and physically challenging repairs in extremely adverse conditions only a few feet from the very lowest point in Lynchburg. Their efforts saved thousands of dollars in contractor costs.

Water Resources is successful because of the dedication and passion of our employees who provide exceptional service to the citizens of Lynchburg. They keep systems going 24/7 that are essential to the health and well-being of our citizens, critical for our economy, and necessary for the protection of our environment.

*Tim Mitchell*  
Director

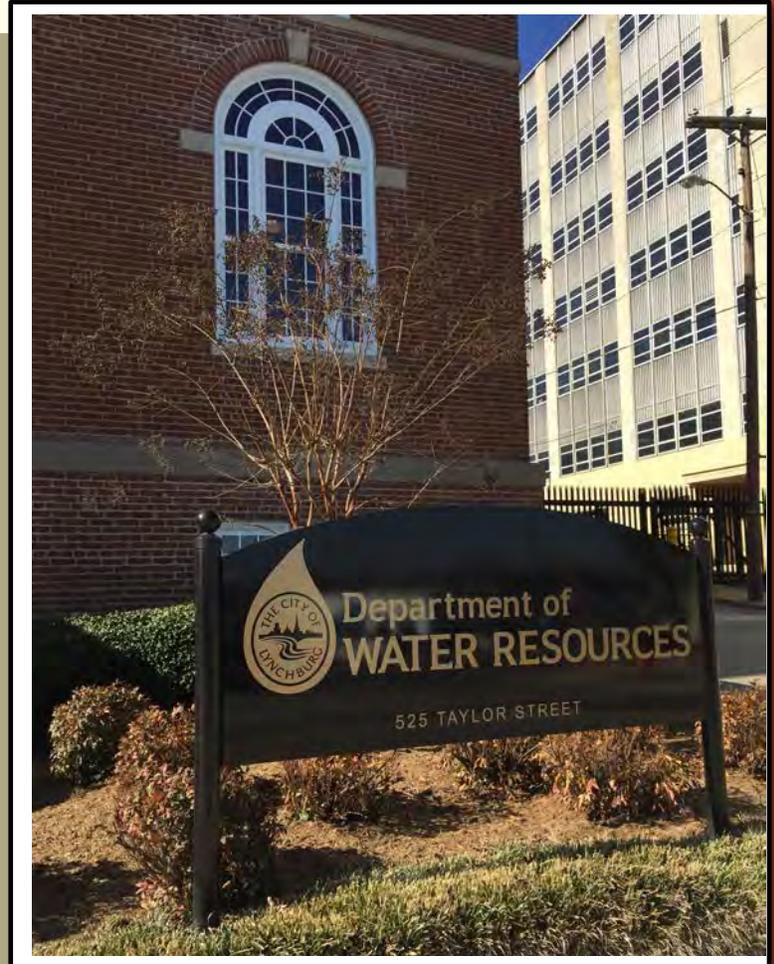
# ADMINISTRATION

## Support Functions

The Administration Division manages the Water, Sewer, and Stormwater Enterprise Funds providing financial, technical, engineering, and safety functions for all three operations. Additionally the administrative staff is very involved in the State and Federal regulatory and legislative processes advocating that laws and regulations are based on sound science and good judgment.

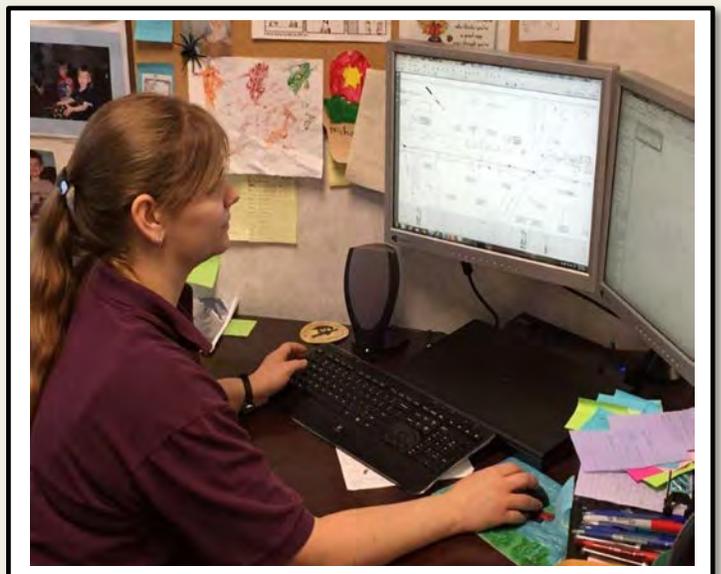
## Financial

Water Resources accounting staff oversees the financial planning and reporting of all financial activities for Water, Sewer and Stormwater Funds to ensure that these funds maintain current and future financial stability in accordance to City's financial policies. The primary activities include preparations of annual operating and capital budgets, 5 year forecasting revenues and expenditures for annual rate study presentation, periodic financial reports, participate in the annual audit process to for preparation of the City's Comprehensive Annual Financial Report (CAFR), and continuously managing cash flows. Other activities include working with three surrounding counties for reporting their allocated actual and forecasted costs of Regional Wastewater Treatment Plant and purchases of finished water.

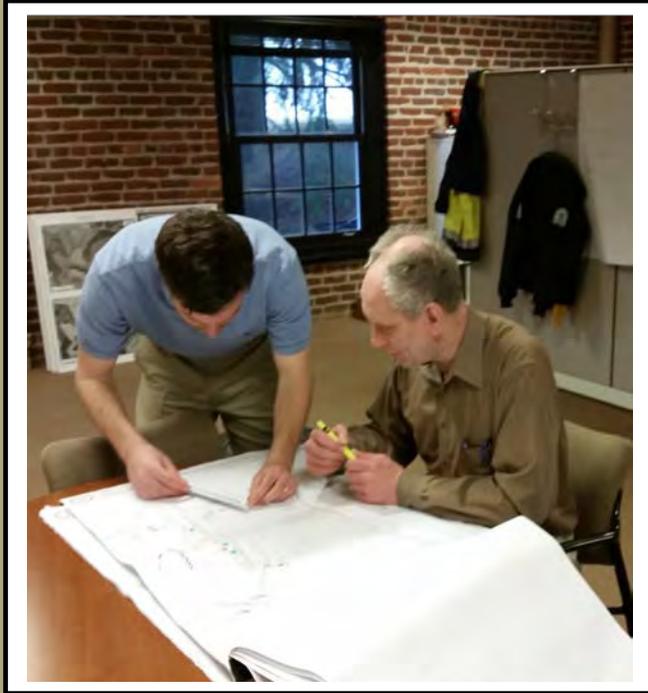


## Technical Services

The Technical Services area manages the Water, Sewer, and Stormwater GIS data including nearly 1,000 miles of pipeline and associated attributes such as manholes, valves, fire hydrants, and inlets. Additionally, the Division is responsible for our asset and work management systems. The staff provides support for many of the Department's complex technology needs such as: water pressure loggers, odor loggers, and security systems. Fire Hydrant flow tests are performed by the Technical Services staff as well as the management of the Department's Cross Connection Control and Backflow Prevention Program.



## Engineering



The Engineering section develops and manages the entire capital program totaling nearly \$53 million over the next five years for the Department of Water Resources. The engineering staff develops and manages project budgets, provides inspection services, plan review, and acts as a liaison between the design engineers and operations staff to help ensure that projects not only meet the physical needs but operational needs as well. Projects include water and sewer line projects, water and wastewater treatment projects, stormwater quality projects, and condition assessments just to name a few.

One of the staff primary responsibilities is master planning and asset management. Complex studies such as the CSO Long Term Control Plan, Downtown Water System Replacement, and Sanitary Sewer Evaluation Studies are developed and managed to determine the most cost effective way to manage the Water Resources' assets while keeping long term sustainability in mind.

The staff also works very closely with regulators from the Department of Environmental Quality, the Virginia Department of Health, the Department of Conservation and Recreation, the Environmental Protection Agency.



## Safety

The Safety Division's primary area of responsibility is employee safety. This is accomplished through developing and presenting current and relevant material to all employees starting with their first day training and continuing throughout their career. Each employee receives extensive and continuous safety training. The safety staff is actively involved with our employees with daily employee interaction at our facilities and in the field.

The Water Resources Department has some of the most challenging safety needs in the City. Our safety programs must span industrial safety to construction and work zone safety. Our employees are in constant risk from confined spaces, trenches, traffic, falls, chemicals, high voltage equipment, engulfment, large industrial equipment, and heavy construction equipment. This is especially challenging due to our range of operations in conjunction with 24 hour a day operations. The safety staff can go from having to address safety issues associated with a high flow wet weather event at the Wastewater Treatment Plant to having to plan and set-up a major road closure for an emergency water or sewer main repair project, anytime of day, any day of the week, under any weather conditions. Often multiple events can be occurring at once. This requires being available all the time.

Other areas of responsibility include: safety Equipment purchasing, inspection, and maintenance ranging from work zone supplies, shoring equipment, confine space equipment, high voltage safety equipment and chemical handling equipment. This equipment must ensure we have equipment on-hand to handle emergency situations that could arise anywhere in the water, wastewater, or stormwater systems. The division also performs incident investigations and documentation working closely with Risk Management and other outside agencies like State Corporation Commission.



Safety Manager, Jeff Martin and his safety staff are dedicated to employee safety. There is rarely an emergency that he does not respond to regardless of the time of day, how much he has worked, or weather conditions. It is obvious that he cares about the well-being of our employees.



# WATER

## Water Treatment

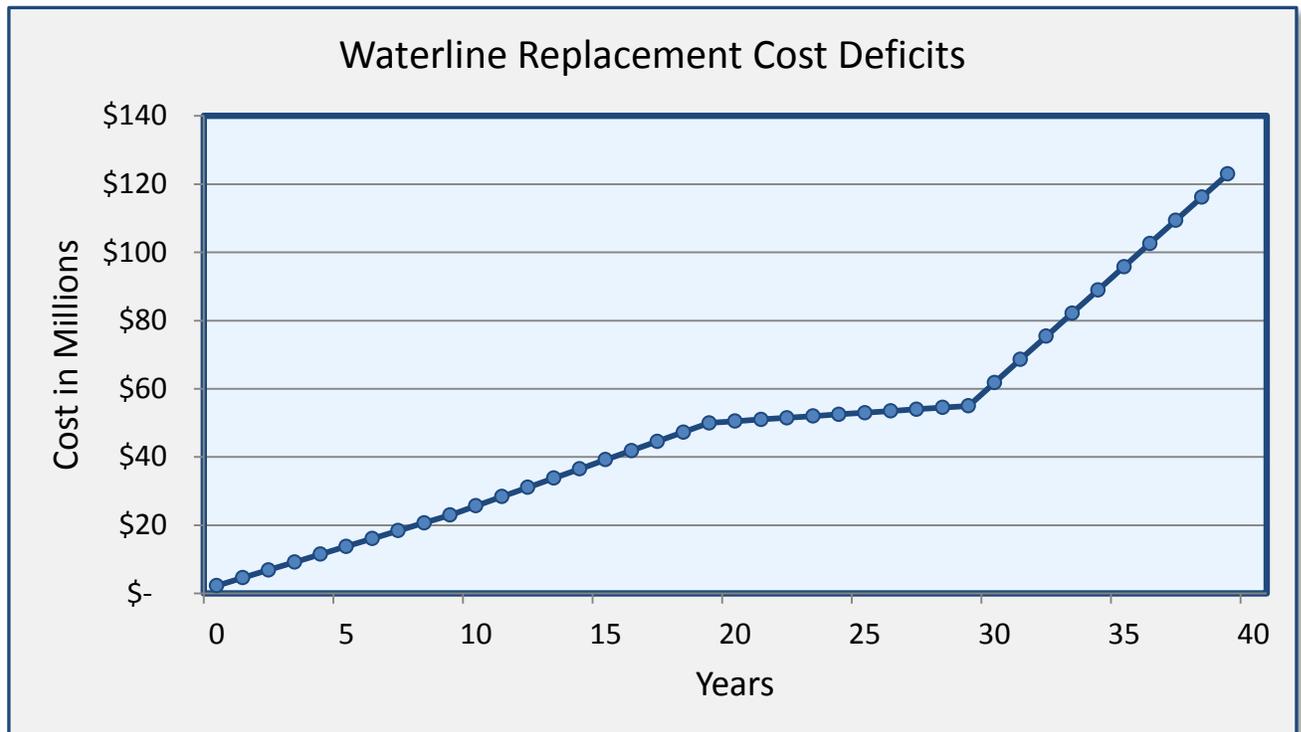
The Department of Water Resources continues to receive awards for exceptional drinking water quality. Last year we produced over 3.8 billion gallons exclusively from the Pedlar Reservoir. Every one of those gallons was at least three times cleaner than EPA requires.



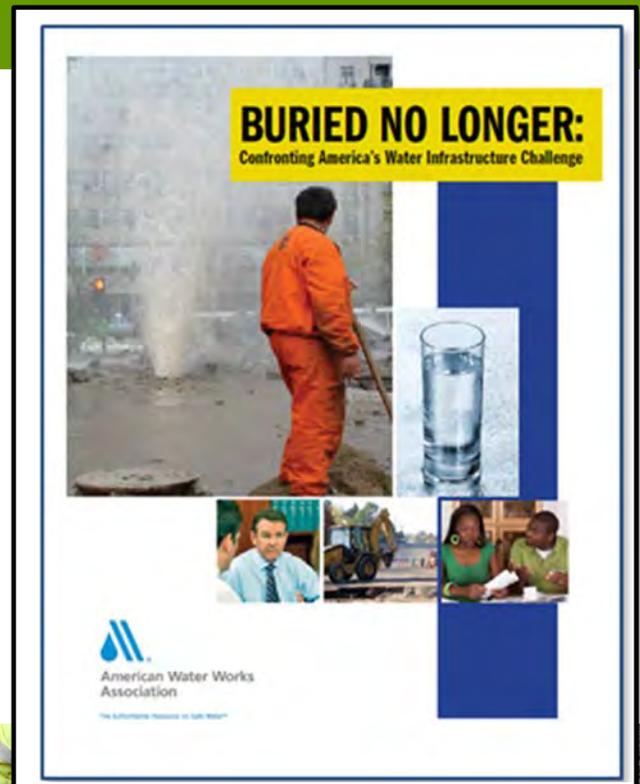
## Water Distribution

There are a lot of factors that are considered when developing a waterline replacement such as age, size, material and criticality. However, as a general rule, the average useful life of a water line is 100 years. This means that with 460 miles of water lines in the City we should be renewing or replacing 4.6 miles annually or 1% of the water system to be on track to renew the system once every hundred years. In FY 2014 the Department of Water Resources replaced a total of 12,845 linear feet (2.43 miles) of waterline or about 52% of what should have been replaced. There are definitely challenges with replacing 1% of the system including funding, staff resources, and traffic disruption just to name a few. The long term sustainability of our water system is dependent upon providing adequate resources renew our infrastructure, new technology to extend the life of our assets, and excellent planning the maximize the resources we do have. The graph below depicts the current and future waterline replacement needs.

Through an effective asset management program we can often extend the life of our water system through good planning and technology, however, we must recognize and be prepared to address the significant wave of infrastructure renewal. The American Water Works Association (AWWA) calls it “The Era of Infrastructure Replacement”, a time in which we must rebuild infrastructure that in some cases was built more than a century ago. Replacement of the water system will essentially echo the demographic history of Lynchburg. AWWA estimates that over 1 trillion dollars will need to be spent on renewing the nation’s water infrastructure over the next 25 years. In Lynchburg having one of the oldest water systems in the country we are already behind. The graph below illustrates the growing gap between our average current spending levels for water system renewal and the actual needs. Assuming we were caught up now with waterline replacements by 2055 the gap will be over \$120 million.



Our Utility Line Technicians make waterline repairs while the lines are still under pressure whenever possible in order to prevent the risk of contaminants entering the pipeline and the need to issue Boil Water Notices.





## Completed Waterline Replacements

**CSO 16.3A** – Work was completed in 2014 and included installation of 4,500 lf of new 8” and 12” water mains on Aragon, Cliff, Carroll, and Shaffer Streets and renewal of 75 water services. CSO separation of storm and sanitary sewer included new sewer and storm pipe and relining of existing sewer pipe.

**Fifth Street Phase II / Clay Street** – As a part of the Fifth Street project, work was completed on new 16” finished water main and 24” raw water main in the Fifth Street corridor prior to the road being rebuilt and streetscape improvements installed. This work was an extension of the new utilities installed with the roundabout in 2010. Approximately 2800 lf of finished water pipe and 2000 lf of raw water pipe was installed and 22 new services were connected to the new pipe. The work is part of an overall plan to provide a new infrastructure network from the College Hill Filtration Plant to the Central Business District in downtown Lynchburg.

**Bluff Walk / Commerce Street** – As part of the City’s initiative to building the infrastructure in downtown Lynchburg, new finished water and sewer mains were installed with the Bluff Walk project on Commerce Street. This includes approximately 1000 lf of 8” and 12” water main. This work was completed to avoid future utility line repairs where new streetscape improvements have been installed.

**Arkansas/Nevada Avenue Small Main Replacement** – Approximately 1200 lf of new 8” water main was installed on Arkansas and Nevada Avenues, replacing undersized 2” pipe. 14 new water services were connected from the existing properties to the new water main. The new main will provide more reliable fire protection for the residents on Arkansas Avenue. Work was completed in early 2014.

**15<sup>th</sup> Street** – Approximately 300 lf of new 8” pipe, and 3 new water services were installed in one block of 15<sup>th</sup> Street to replace a small water main that was constantly being repaired by Department of Water Resources maintenance personnel.

## Waterlines Under Construction

**Blue Ridge Farms, Phase 2** – Work includes water and sewer line replacement on Ardmore, Craigmont, Georgetown, Ashley, Standish, and Berkley. This project started in October 2014 and should be complete by the end of 2015. The project includes installation of approximately 8000 lf of 8” water main, 1400 lf of new sanitary sewer, and 2300 lf of relining of existing sanitary sewer.

**C Street Water Main Replacement** – The project included replacement of small diameter water main on C Street, D Street and Johnson Street. Approximately 500 lf of new 8” water main was installed on C Street and an old 4” water main was taken out of service on Norwood where services were tied into a larger parallel water main. Work was completed in November 2014.

**Dearington Water and Sewer Improvements** – New water main was installed on 2<sup>nd</sup>, York, Stoneridge, and Kirby Streets in 2014. The water main replaced aging small diameter water pipe. Approximately 1800 lf of new water line was installed with the work completing in October 2014. In addition a small amount of sewer point repair, lining, and manhole repairs were completed in the area. The work precedes a City project to build new sidewalks and crosswalks in the Dearington Elementary School area in 2015.

**Midtown Connector Improvements** – Beginning in 2013, the City’s ongoing Midtown Connector project has completed and put into service a significant portion of the water mains throughout 2014. Work has finished on the phases of work on Park Avenue between Fort and Langhorne and on 8<sup>th</sup> Street which includes 1200 lf of 12” water main and 1000 lf of 8” water main and 26 new water services.

Beginning July 2014, water mains will be installed on Langhorne Road (completed in December 2014), Rose Lane (completed in January 2015), Kemper Street (to be completed by March 2015), 16<sup>th</sup> Street (completed in July 2014). Sewer rehabilitation will be completed by January 2015. The remainder of the 2015 construction will be installation of a new roundabout and streetscaping features.

### Princeton Circle Water and Sewer Improvement

– Over 1800 lf of new 8” water main has been installed on North Princeton, West Princeton, and Duval Street finishing in December 2014. This water main replaces undersized mains in this neighborhood. In addition storm pipe and sewer pipe around West Princeton Circle is being lined or replaced to provide more reliable sanitary and stormwater containment. The sewer improvements are scheduled to complete in the spring of 2015.

**Taylor Street Water Main** – Approximately 350 lf of new 8” water main was installed on Taylor Street in front of the College Hill Water Filtration Plant. This main replaced an old 4” water main and was completed in February 2015 prior to the street being paved as part of the Department of Water Resources parking improvements.



## Other Significant Water Projects

**Wingate Tank #2** – This project installed a new 500,000 gallon finished water storage tank on Candler's Mountain. Completion of this tank in October 2014 doubled the storage in this area which serves Liberty University's campus east of US 460. This water tank will also allow the City to take the adjacent tank off-line for maintenance in the future.



**Wards Ferry Road Pump Station Renovation** – This project, completed in June 2014, included a complete renovation of the Wards Ferry Road Pump Station, including new pumps, new piping, a new emergency generator, and electrical improvements. The pump station allows the City to supplement up to an additional 2.5 mgd of flow to the higher elevations of the City in the event of an emergency.

# WASTEWATER



**Lynchburg Regional Wastewater Treatment Plant**

## WWTP

The Lynchburg Regional Wastewater Treatment Plant is a 22 MGD secondary treatment plant using a modified step feed activated sludge process to reduce nutrients and produce an effluent beyond design parameters. Daily the plant treats 11-12 MGD of wastewater from the residences, businesses and industries of the City of Lynchburg and portions of Amherst, Bedford and Campbell County's along with septage and truck hauled wastes from the Central Virginia area. During rainfall events, the plant will handle influent flows up to 70 MGD, storing some of it for later treatment. Daily, the plant removes approximately 2000 pounds of grit and screenings 30,000 pounds of BOD, 29,000 pounds of solids, 3000 pounds of nitrogen and 500 pounds of phosphorous along with elimination of toxicities and pathogenic bacteria prior to discharging to the James River.

The pollutants removed from the reclaimed water are converted to about 70 tons of solids per day referred to as sludge or biosolids. This material must be stabilized and disposed of in approved methods. Currently, the plant uses the regional landfill and a private landfill in Amelia County. In order to improve our reliability, reduce costs of hauling, become greener, and develop alternate disposal, the plant plans to bid and if feasible, begin land application of about 100 tons per week of biosolids in order to reduce the costs associated with hauling and disposing of biosolids at the private landfill. Part of Water Resources responsibilities is removal of materials such as grit, trash and other debris which collects in our sewer lines and cause overflows. These materials used to be transported directly to the landfill but due to regulations must now have more water removed before disposal at the landfill. This dewatering and disposal is being absorbed into the duties of the WWTP. In past year, we have begun work on an area of the plant to dump these materials and allow it to dry prior to proper disposal.

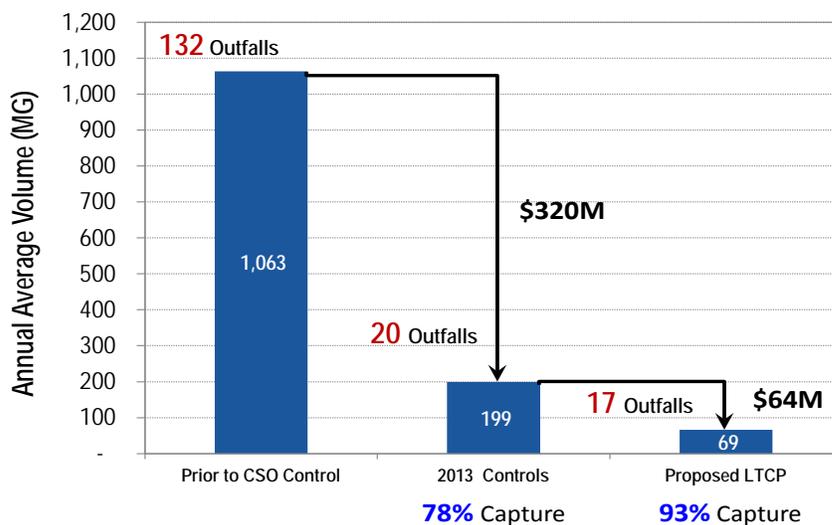


## CSO

After five years of intense effort on September 5, 2014 we received approval the CSO Long Term Control Plan (LTCP) from the Department of Environmental Quality (DEQ). Currently we are negotiating a new Consent Order that reflects the changes in the LTCP. This is a major accomplishment that will enable the City to meet the water quality goals associated with CSO much faster with less disruption while saving the City nearly a quarter of a billion dollars. This effort started with the vision and foresight of the Department of Water Resources staff who understood the changing regulatory environment and recognized the opportunity to not only improve the CSO Program but also to minimize the impacts of the changing regulations to our stormwater program. Although combined sewer overflows will still occasionally occur during large storm events, the new plan will still have reduced the overflow volume when complete by 93%. Additionally, during most rainfall events the stormwater that falls within the combined area will be conveyed to the wastewater treatment plant to receive full treatment before being discharged to the river.



## The Update LTCP Performance and Costs

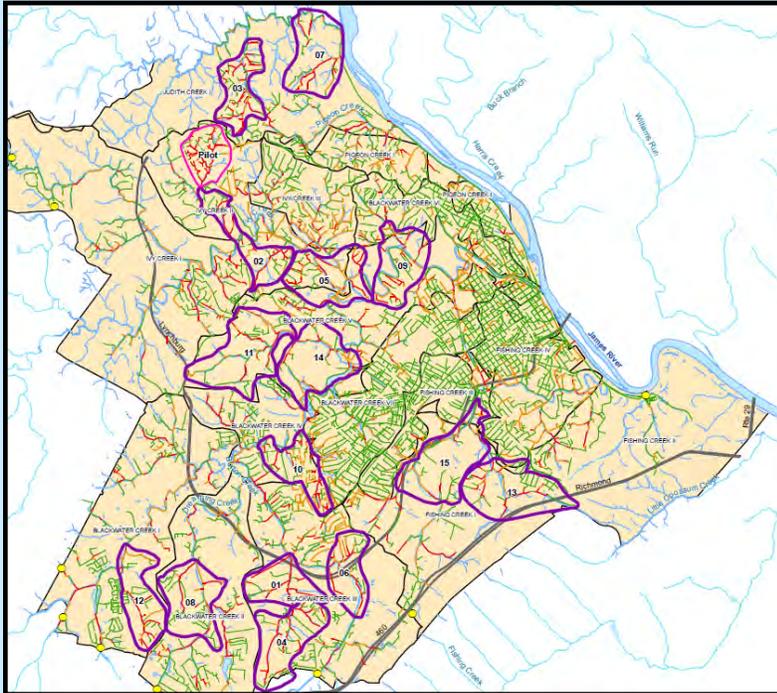


## Sewer Line Maintenance

Sewer line maintenance is becoming increasingly more complex and is garnering more regulatory scrutiny. 2014 marked the 40<sup>th</sup> anniversary of the Clean Water Act which among many other requirements, prohibit sanitary sewer overflows (SSOs). SSOs differ from CSO in that in a CSO event combined sewage and stormwater overflow through a constructed outfall that is permitted through the wastewater treatment plant's Virginia Pollution Discharge Elimination System (VPDES) permit. An SSO is a sewage overflow that typically occurs at a manhole but can be a result of a broken pipe or manhole or even a basement back-up. SSOs are typically a result of blockages caused by roots, grease, debris, or a structural defect.

Regulators expect utilities to have a robust sewer line maintenance program, typically called a Management, Operations and Maintenance (MOM) Program. Some program requirements include: Sewer Overflow Response Plans; Fats, Oils and Grease Programs, sewer cleaning and inspection plans, emergency call centers, SSO characterization and remediation plans, work management systems, and public notification protocols. The Department of Water Resources has been working on formally developing and implementing a MOM Program for the several years. This past year a new two person sewer cleaning crew, sewer cleaning truck (pictured below), and portable camera unit were added in order to better address the sewer maintenance needs. This will supplement the two existing sewer cleaning trucks and two camera units. Additionally, a vacant position was reassigned to oversee the sewer line maintenance operations and to further develop and implement a MOM Program.





## Criticality Model Priority Areas

### Likelihood of Failure Criteria

Criteria	Weighting
SSOs*	10
Root Potential	10
Pipe Age*	8
Maintenance*	8
Rehabilitation*	8
Stream Crossings	8
Pipe Material*	5
Hot Spot Cleaning	2
Chemical Root Cleaning	2
Soils	2

## Sanitary Sewer Evaluation Study (SSES)

Besides CSO, our next biggest challenge is maintenance of the sanitary sewer system. For the last several decades the majority of our resources have been spent in the combined areas of the City. This means that approximately 90% of the rest of the City's sewer system has generally not received an adequate level of maintenance. Over the past several years the Department of Water Resources has stepped up our efforts to perform condition assessments, flow monitoring, smoke testing, and CCTV inspections in order to develop an asset management program for our sewer system. Information such as overflow history, corrective maintenance history, pipe age and material, are capacity issues are used in a risk based approach to determine assets that have both a high likelihood of failure and consequence of failure. These assets then receive the highest priority for further investigation, maintenance and rehabilitation or replacement. Portions of the Judith Creek, Ivy Creek, and Burton Creek sewersheds have received additional evaluation.

### Criticality Model

Risk =  
(Consequence of Failure)  
X (Likelihood of Failure)

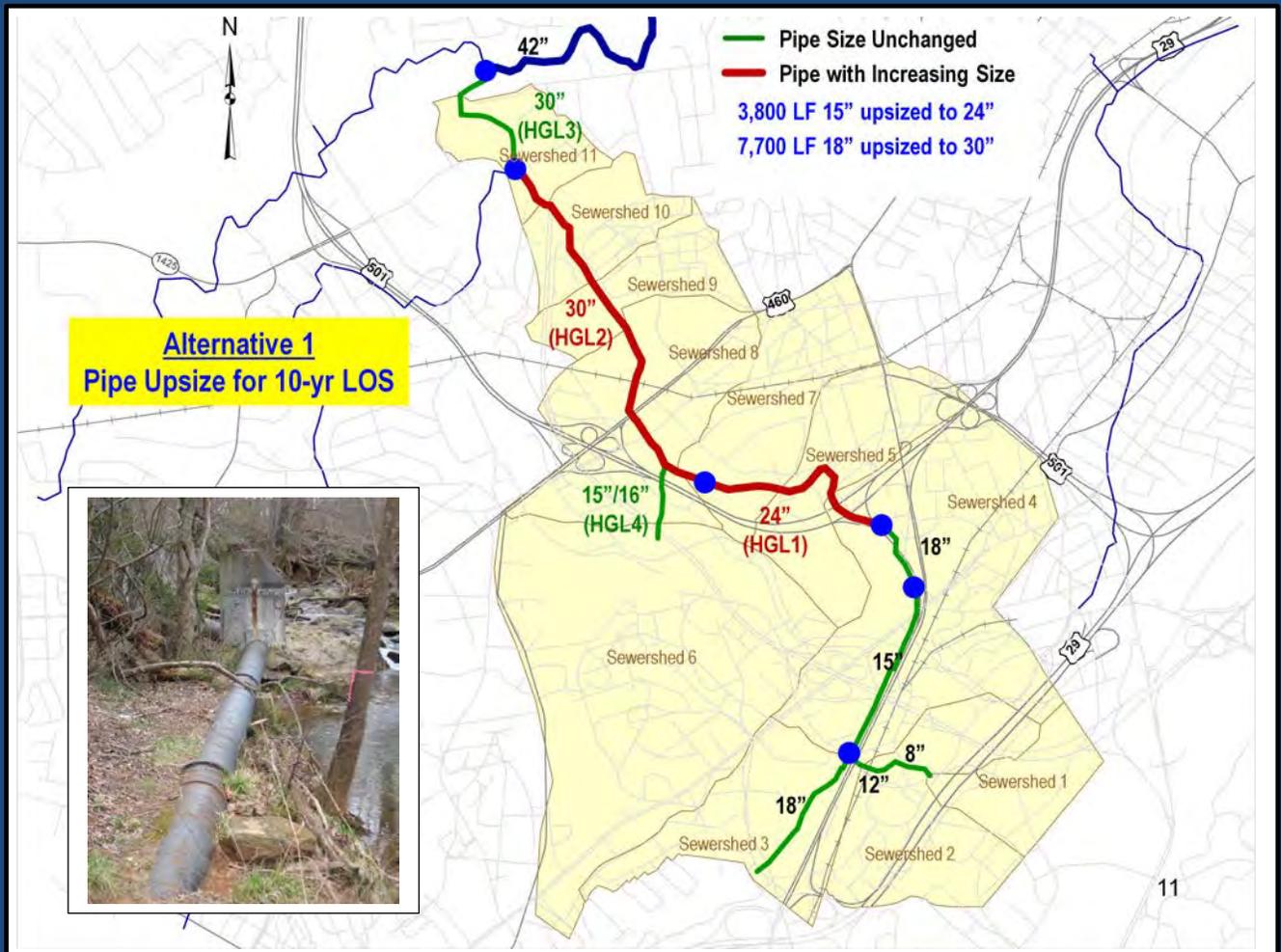


## Burton Creek Interceptor Replacement

The Burton Creek Interceptor provides sanitary sewer service to the Sandusky, Sheffield, College Park, Vista Acres, and Leesville Road neighborhoods in Lynchburg as well as the Wards Road commercial corridor, Liberty University, and Campbell County. The interceptor was installed in the 1960's and 1970's , extends from the Blackwater Creek Interceptor approximately five miles (including Rock Castle Creek) to the Campbell County line and is comprised primarily of 15-inch and 18-inch concrete pipe with significant lengths of exposed cast iron pipe.

An analysis of the Burton Creek Interceptor's level of service (LOS) was performed to identify the magnitude of the capacity limitations in the line. The City's hydrologic and hydraulic model (H&H) model was used to assist the LOS analysis. A long term simulation was performed utilizing historical rainfall data from 1948 to 2013 to identify critical storm events that corresponded to the 2, 5, and 10 year return frequencies. The LOS evaluation of the Burton Creek Interceptor identified multiple segments of the system that have less than a 2 year LOS.

Four alternatives were evaluated as possible options and compared to determine the best from a level of service, cost and constructability standpoint. Based on the results of the preliminary engineering report we are proceeding with the replacement of the interceptor with a larger pipe. The project will include approximately 3,800 linear feet of 24 inch pipe and 7,700 linear feet of 30 inch pipe. The project is currently under design and is expected to take 24 months to construct at a total cost of \$4.0 to \$4.5 million.





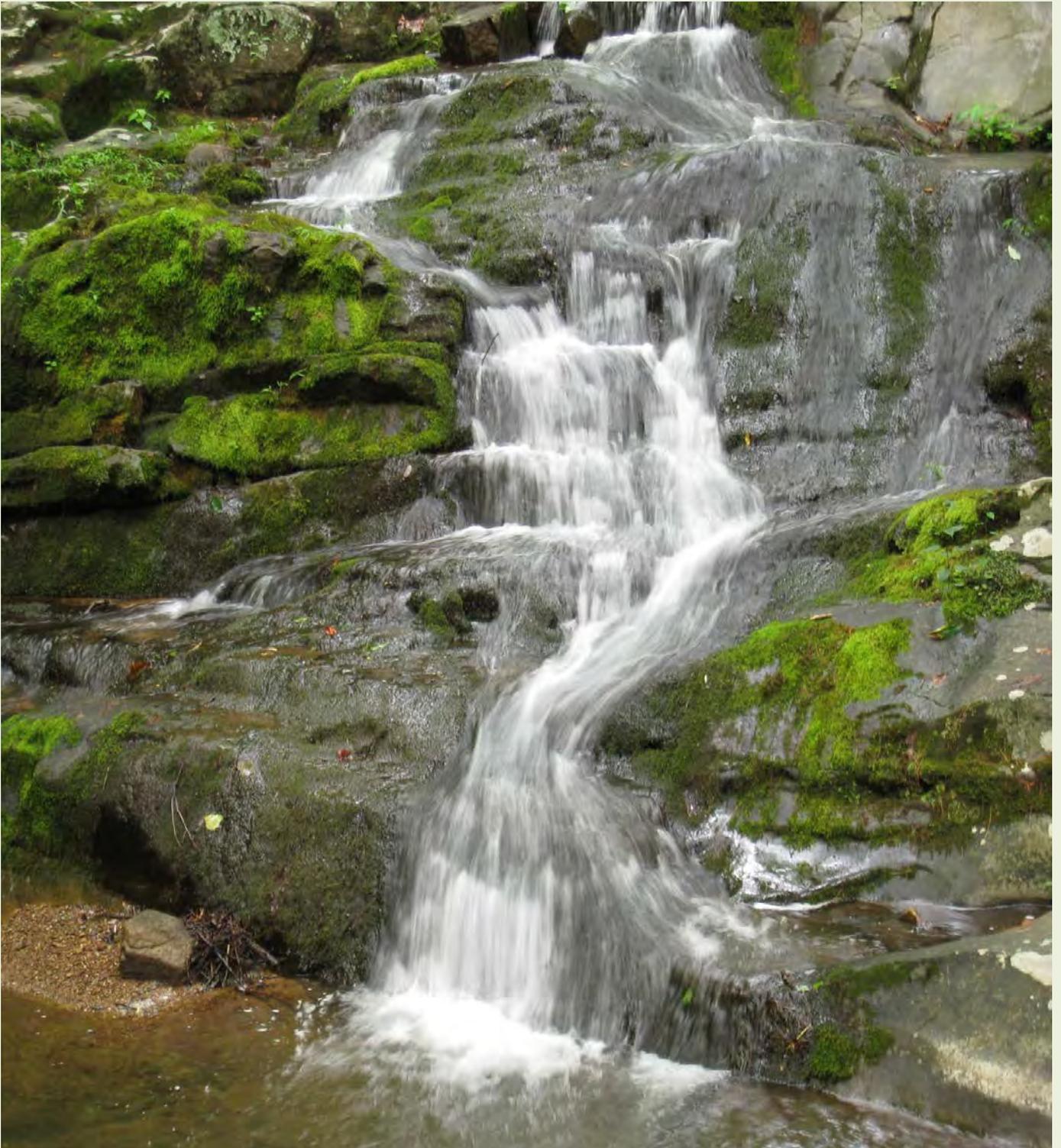
## Blue Ridge Farms

The sewer infrastructure in the Blue Ridge Farms neighborhood was installed in the 1960's. The sewer piping and manholes were installed poorly of substandard materials. They were also inadequately sloped and sized. These issues have created a maintenance burden requiring comprehensive cleaning and root control efforts. Sanitary sewer overflows have also occurred at these sewer lines.

In order to address these issues a four phase sewer rehabilitation and replacement plan was developed by the City's consultant Draper Aden. The first phase of construction was performed by F.L. Showalter the sewer portion was approximately \$1.0M, completed in 2013. The second phase is currently under construction also being performed by F.L. Showalter, the expected sewer cost is approximately \$750,000, completion will be early 2016. The estimated cost for Phase 3 is \$500,000 and Phase 4 is \$600,000. Current schedule projections are: Phase 3 to be complete summer 2018 and Phase 4 to be complete summer 2020.



# STORMWATER

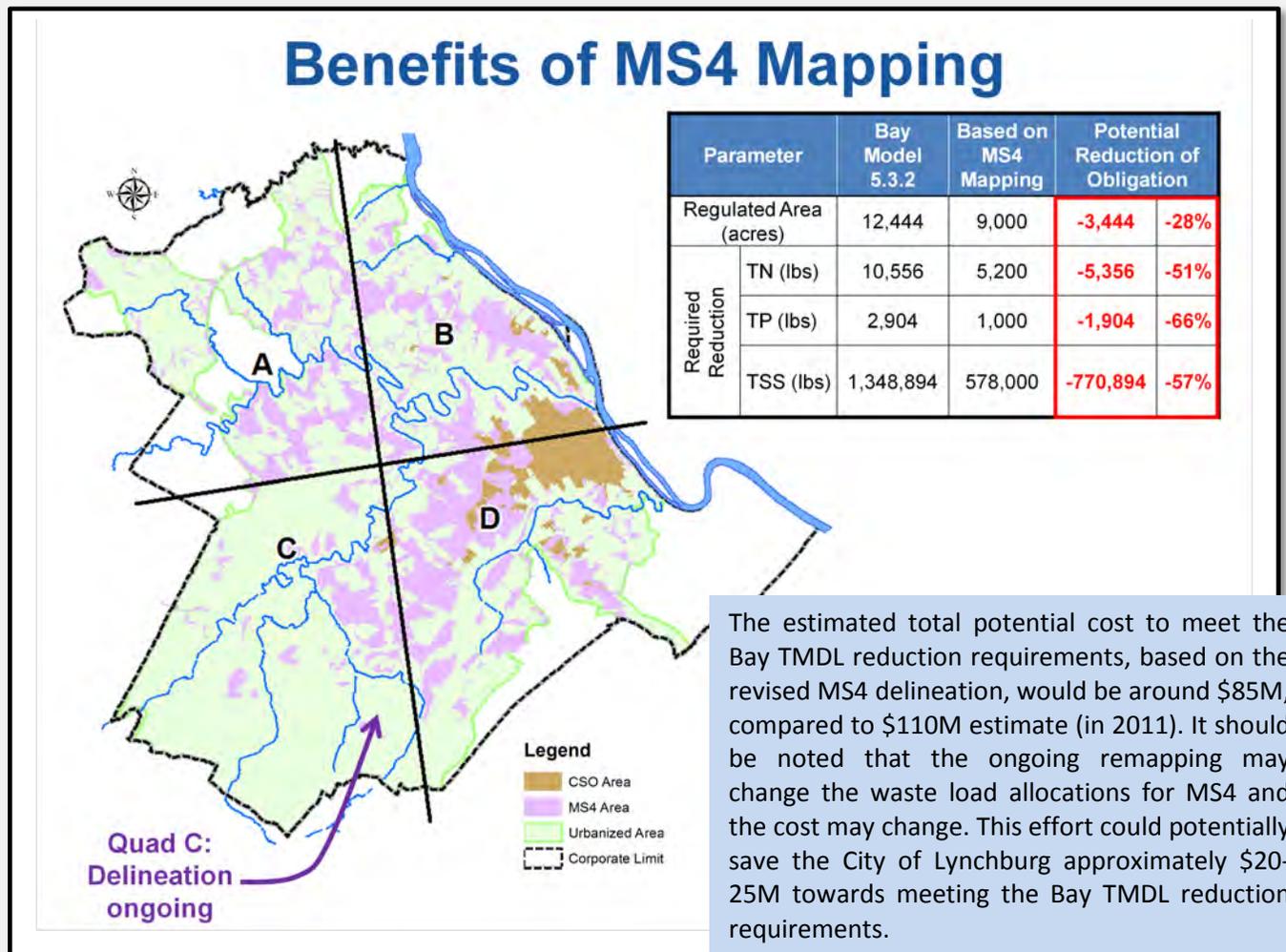


## Stormwater

Managing the City's Stormwater Program is becoming increasingly more complex and challenging. Various elements of our Municipal Separate Storm Sewer System (MS4) permit have staggered due dates. As we approach the middle of the permit cycle compliance efforts are intensifying. The next few pages provide an overview of our efforts associated with MS4 permit compliance and achieving water quality goals.

## Master Plan – MS4 Mapping and Condition Assessment

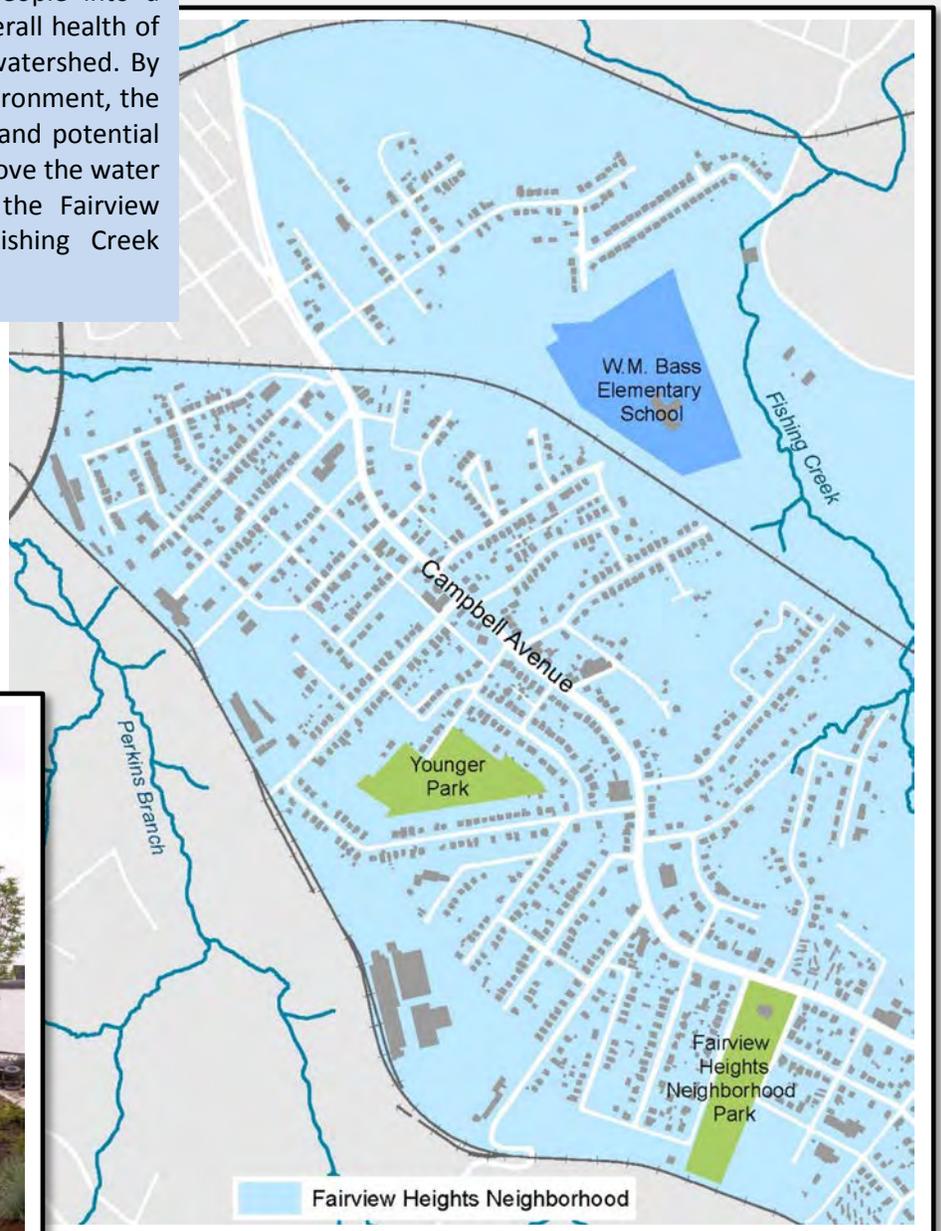
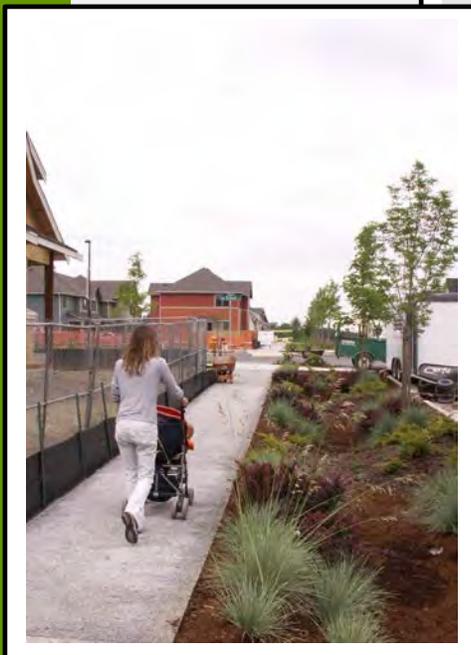
The Stormwater Master Plan effort consists of many elements necessary for MS4 Phase II Permit compliance. One significant effort is the MS4 mapping. By June 30, 2017, we are required to have our entire MS4 area mapped. By the end of FY 2015 we will have completed 50% of the mapping, inventory and condition assessments of the surface features of the stormwater conveyance system assets. The remainder of this effort will be completed during FY 2016 and FY 2017. The MS4 area essentially consists of all public drainage systems including inlets, curb and gutter, ditches, and pipes and the associated drainage area. This effort has resulted in a greater understanding of the connectivity and complexity of the stormwater conveyance system and its maintenance and rehabilitation needs. This phase of work has not conducted televised inspections of the underground system and understanding of its overall condition. The results of the condition assessment have identified approximately \$850,000 in stormwater infrastructure needs (not including pipe) over the next five years in Quadrant A. The Chesapeake Bay Model 5.3.2 estimated the City of Lynchburg’s MS4 area to be 12,444 acres. Based on the mapping we have done to date we are estimating that the actual MS4 area is closer to 9,000 acres. This is very significant because the required nitrogen, phosphorous, and sediment reductions are directly associated with the amount of regulated MS4 area. While the City is responsible for the remaining unregulated urban area reductions, there is currently no regulatory obligation. This may all change again with the 2017 update of the Bay Model. The map below illustrates the four quadrants that the City was divided into for mapping purposes and the estimated reductions in obligations for pollutant load reductions.



## Walkable Watershed Grant

The City of Lynchburg was a recipient of a National Fish and Wildlife Foundation (NFWF) Grant, along with Charlottesville, VA and Petersburg, VA, for the implementation of a Walkable Watersheds project. The Walkable Watersheds project will integrate the flow of water and people into a cohesive strategy to improve the overall health of a community and the surrounding watershed. By connecting the built and natural environment, the project will develop a concept plan and potential green infrastructure projects to improve the water flow and pedestrian amenities in the Fairview Heights Neighborhood and the Fishing Creek Watershed.

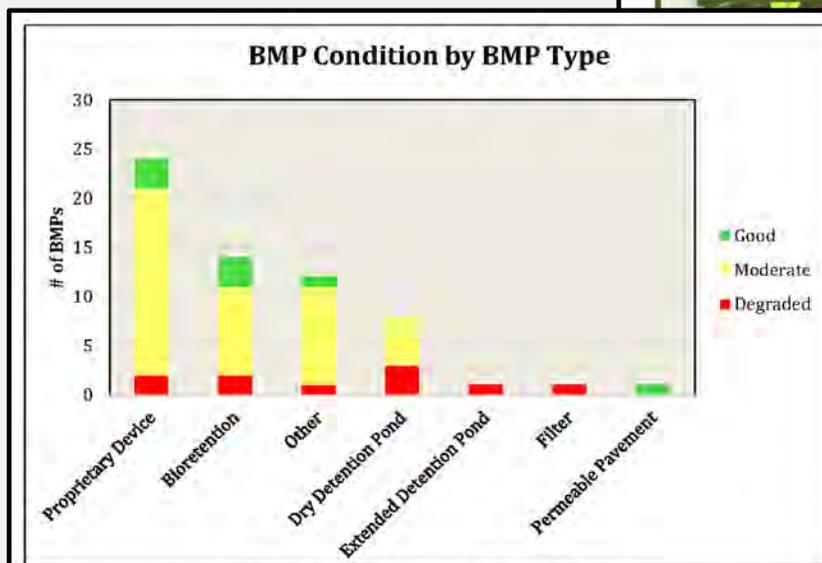
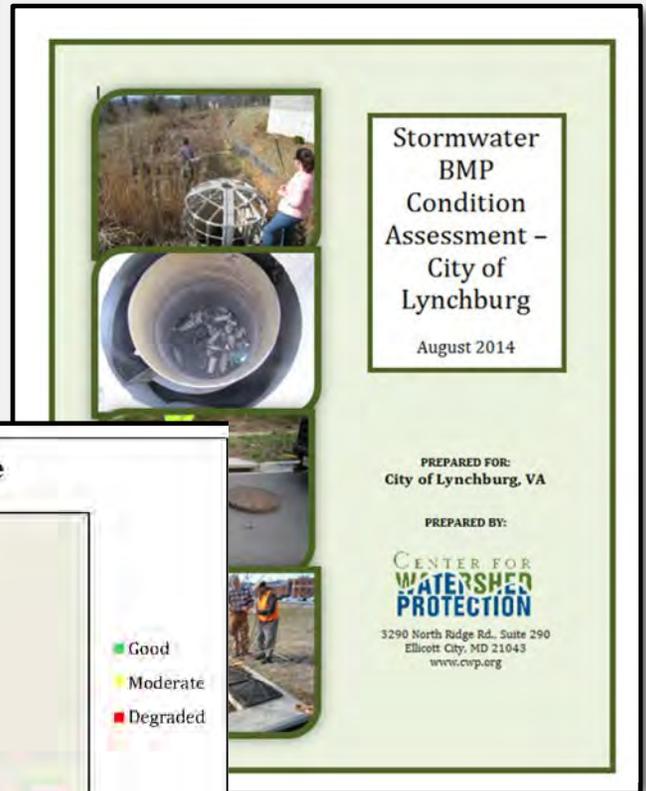
*A Walkable Watershed integrates the flow of **water** and **people** into a cohesive strategy to improve the overall health of a community and the surrounding watershed.*



## BMP Assessment and Inspection

As part of a broader water quality planning process for the Department of Water Resources, the Center for Watershed Protection led an assessment of the City's existing stormwater best management practices (BMPs) on both public and private properties. The field work occurred between March and June, 2014 and included three main objectives: (1) assess the condition of existing BMPs to determine overall needs for maintenance and management, (2) identify opportunities to retrofit existing BMPs to improve conditions and help gain pollutant removal credits, and (3) assist in the development of BMP inspection and maintenance procedures consistent with VSMP regulations, the MS4 permit, and local priorities.

A total of 61 public and 171 private BMPs were assessed. The data collected will be compiled into a spreadsheet and integrated into the Water Resource Department's geodatabase and inspection records incorporated into our work management software. Of the City owned BMPs, 10 were found to be in degraded condition, 43 were in moderate condition, and 8 were in good condition.



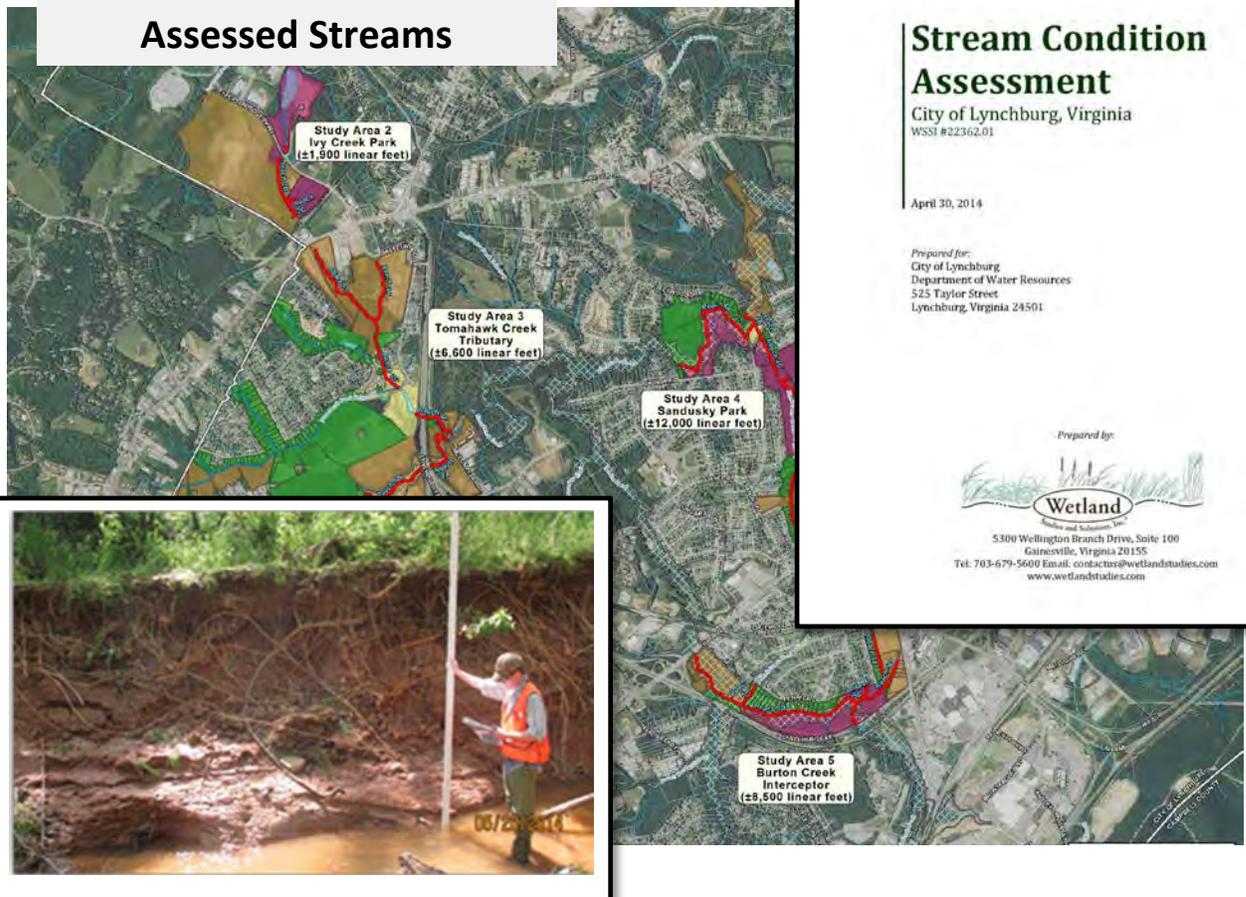
**Figure 3: BMP Condition by BMP Type\***  
 [\*"Other" includes: In-stream detention pond, Level Spreader, Underground Detention, Vegetated Roof]

## Stream Condition Assessment

Wetland Studies and Solutions, Inc. (WSSI) conducted stream condition assessments on six study areas (totaling approximately 71,460 linear feet of stream) within the City of Lynchburg. The purpose of this study was to identify and prioritize streams for restoration specifically considering improvements relevant to the Chesapeake Bay Total Maximum Daily Loads (TMDLs) and stream protection.

The project consisted of six study areas located throughout the western and southern portions of the City of Lynchburg, Virginia. Study Area 1 is located along Peaks View Park and Ivy Creek. Study Area 2 is located along Ivy Creek Park and its tributaries. Study Area 3 is located along unnamed tributaries to Tomahawk Creek, within a series of residential subdivisions. Study Area 4 is located along Sandusky Park and Blackwater Creek and its tributaries. Study Area 5 is located along Burton Creek and its tributaries within a subdivision south of Fort Avenue and Wards Road. Study Area 6 is located along Tomahawk Creek west of the Lynchburg Expressway (Route 501).

The Rapid Stream Assessment Technique (RSAT) was utilized for this stream condition assessment. The RSAT method was selected because it provides a “simple, rapid reconnaissance-level assessment of stream quality conditions,” and because this methodology has successfully been used by other localities for the same purpose. Of the 15 miles of streams assessed, 7 miles were assessed and prioritized in detail for TMDL credits.



## TMDL Projects

In FY 2015 stormwater management projects were identified and incorporated into the TMDL Action Plan to meet the 5% reduction goal of the Chesapeake Bay TMDL. Projects that were identified were the conversion of two existing Best Management Practices into Level 2 Bio-retention BMPs, conversion of a stormwater pond into a constructed wetland, and two stream restoration projects on tributaries of Blackwater Creek and Rock Castle Creek. Design of these projects will begin in the second half of FY 2015. Construction is expected to begin in FY 2016 and take approximately two years to complete all projects. The approximate cost of these projects is \$3.4 million.

As a result of our proactive approach and planning, the City of Lynchburg was the recipient of a \$1.7 million Stormwater Local Assistance Fund (SLAF) Grant from the Department of Environmental Quality for the implementation of these stormwater management BMPs. This grant will fund 50% of the \$3.4 million total cost of the stormwater BMPs that will achieve the 5% reduction requirement of the Chesapeake Bay TMDL in the City's 2013-2018 MS4 permit.



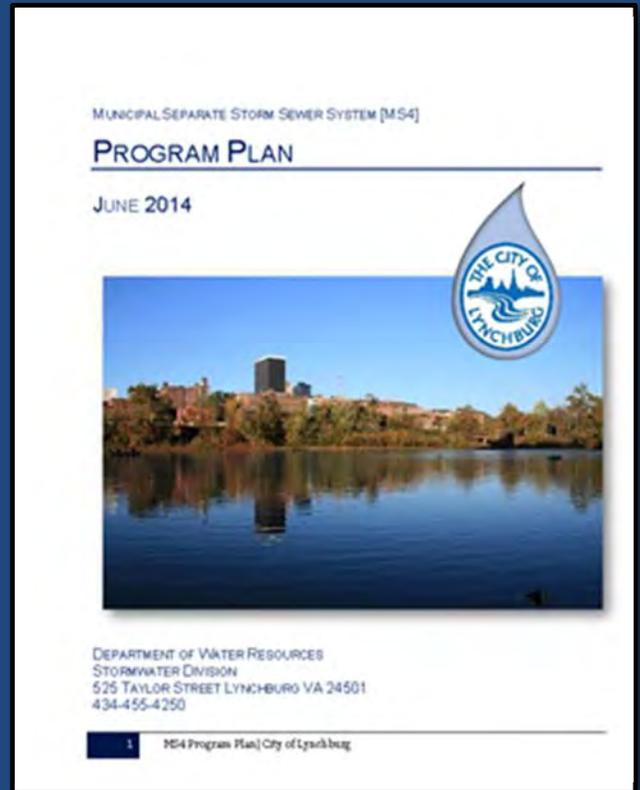
Awarded \$1.7 million SLAF Grant

Project Type	Location	Description	Cost	TMDL Credit (lb/yr)			Contribution Towards Meeting Total POC Reduction Requirement		
				TN	TP	TSS	TN	TP	TSS
BMP Retrofit	Sheffield Elementary School	Convert existing dry detention pond to a level 2 bioretention basin	\$100,300	17.52	2.86	1,029	0.4%	0.3%	0.2%
	LAUREL School	Replace existing bioretention with a new level 2 bioretention basin with a larger drainage area	\$115,700	23.34	3.34	625	0.5%	0.4%	0.1%
	Greenwood CSO Pond	Convert in-stream detention pond to a level 1 constructed wetland	\$398,000	128.62	19.59	8,327	2.7%	2.2%	1.6%
Stream Restoration	Blackwater Creek	Restore 900 LF of stream 4F	\$759,500	32.75	36.14	24,114	0.7%	4.0%	4.6%
	Rock Castle Creek	Restore 2,570 LF of streams 5C, 5D, 5E, & 5G	\$2,037,050	160.79	154.54	102,249	3.4%	17.2%	19.7%
<b>Total</b>			<b>\$3,410,550</b>	<b>363.02</b>	<b>216.47</b>	<b>136,343</b>	<b>7.8%</b>	<b>24.1%</b>	<b>26.2%</b>

## MS4 Program Plan

The Municipal Separate Storm Sewer System [MS4] Program Plan intended to meet the requirements of the Small MS4 General Permit effective July 1, 2013 through June 30, 2018. The program plan includes the means and the methods to address the technical elements of the permit for the next five years. The Program Plan must include the work plan for the Six Minimum Control Measures and TMDL Action Plans for the Chesapeake Bay and other approved TMDLs. The Six Minimum Control Measures (MCM) include:

1. Public Educations and Outreach
2. Public Involvement/Participation
3. Illicit Discharge Detection and Elimination
4. Construction Site Stormwater Runoff Control
5. Post Construction Management
6. Pollution Prevention and Good Housekeeping



## MCM 1 - Public Education and Outreach

During permit year one the City of Lynchburg Developed a Public Education and Outreach Plan as required by our MS4 permit. Implementation of the plan began in permit year two (July, 2015). The plan includes identification of high priority water quality issues which include: pet waste pollution, homeowner yard maintenance, and septic maintenance. We have participated in various educational events reaching over 1,200 people.



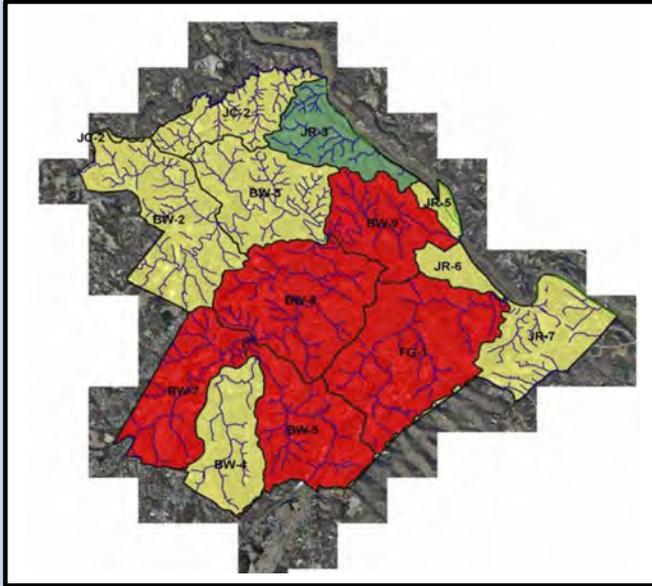
## MCM 2 – Public Involvement

A number of Public Involvement events were held last year including activities such as a tire cleanup event where over 70 tires were removed from a one mile section of stream with the help of 21 students and volunteers from Heritage High School, rain Barrel Workshops, storm drain marking, and March on Litter to name a few. Nearly 700 people have participated in public involvement activities.

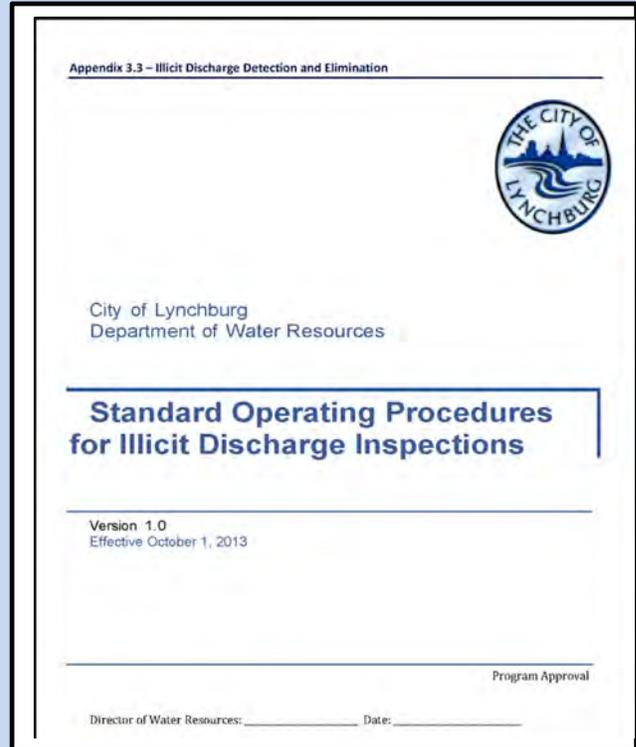


## MCM 3 - Illicit Discharge Detection & Elimination

Illicit discharges are any discharges to the municipal separate storm sewer system that is not composed entirely of stormwater. Last year 22 illicit discharges were investigated with 13 leading to additional enforcement actions.

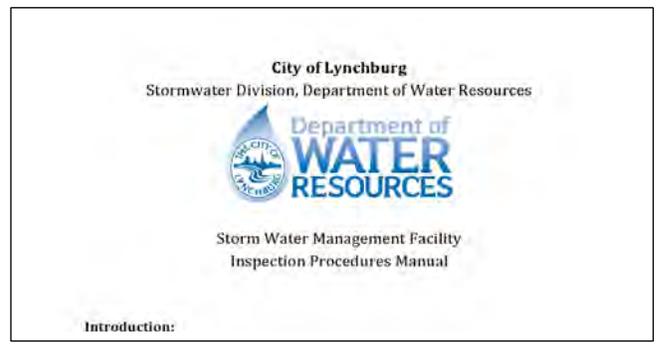
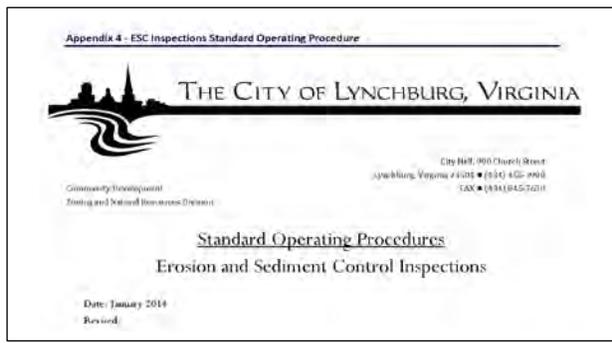


Highest Potential – Red  
 Medium Potential Areas – Yellow  
 Low Potential Areas - Green



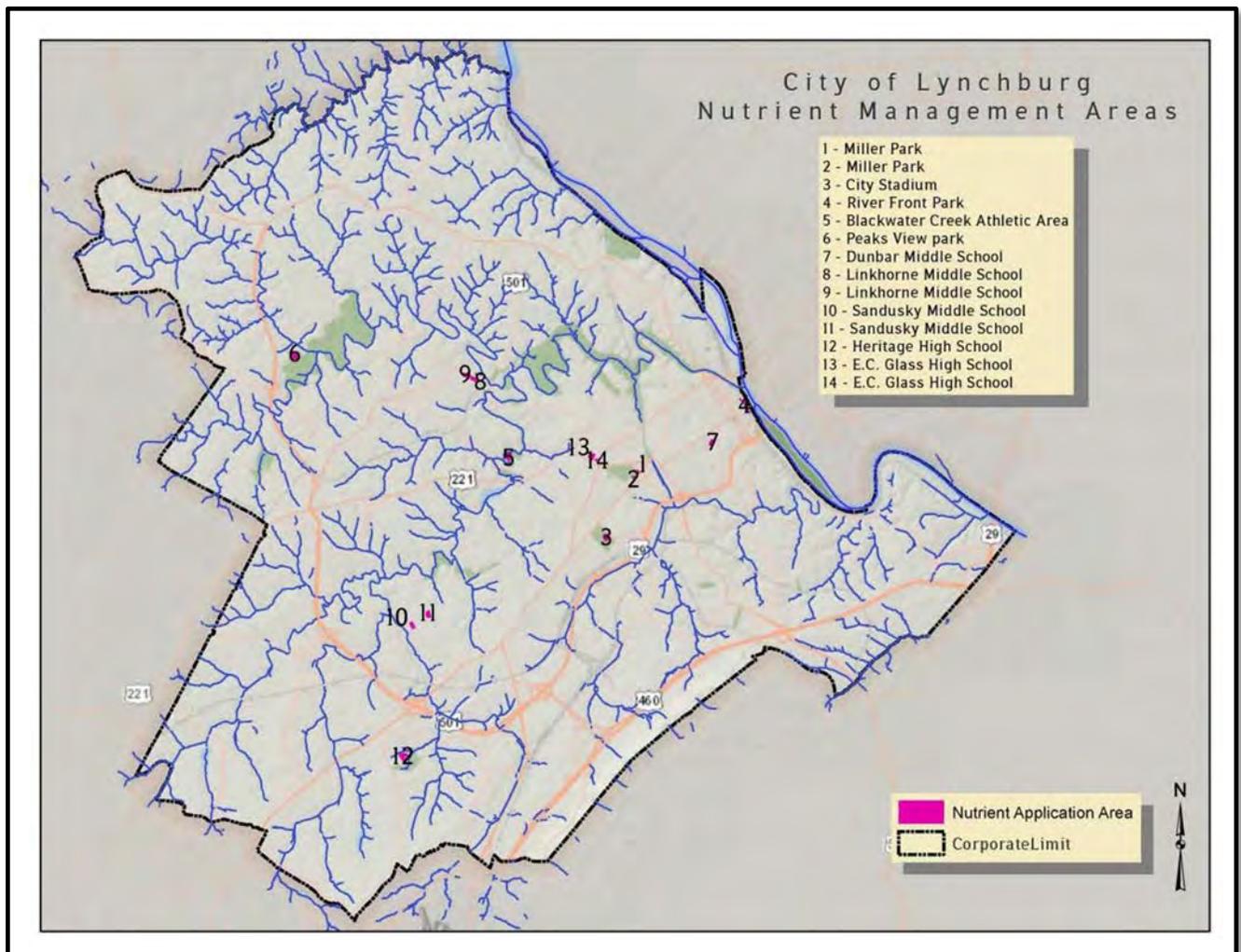
## MCM 4 & 5 – Construction Site Runoff Control and Post Construction Stormwater Management

The Community Development Department is responsible for the administration, plan review, inspections and enforcement of MCM 4 and MCM 5 Construction Site Runoff Control. The Water Resources Department is responsible for Post Construction Stormwater Management which includes inspections and enforcement of Stormwater Maintenance Agreements as well as maintaining the BMP tracking database associated with MCM 5.



## MCM 6 – Good Housekeeping

Good Housekeeping practices apply to any City owned facility where activities occur that have a high potential to impact water quality. Stormwater Pollution Prevention Plans (SWPPPs) must be developed for each facility and include BMPs that specifically address the pollution threats at each facility. To date ten facilities have been identified including a number of Public Works Facilities, Parks & Rec Facilities, the Fleet Facility, Fire Station #7, and Lynchburg City Schools Maintenance Facility. Urban Nutrient Management Plans must be addressed for managed turf and park areas in the City. Fourteen facilities have been identified for nutrient management plan development including eight schools. Good Housekeeping also includes an employee training program that at a minimum addresses the following: recognition and reporting of illicit discharges, pollution prevention, erosion and sediment control, VSMP certification, pesticide and herbicide certifications, and emergency spill response. Unlike some MS4 permit requirements MCM 6 – Good Housekeeping involves nearly every operating department as well as City Schools. The Department of Water Resources has met regularly with all stakeholders responsible for these facilities and is working to ensure that these requirements are addressed consistently and can reasonably be implemented.



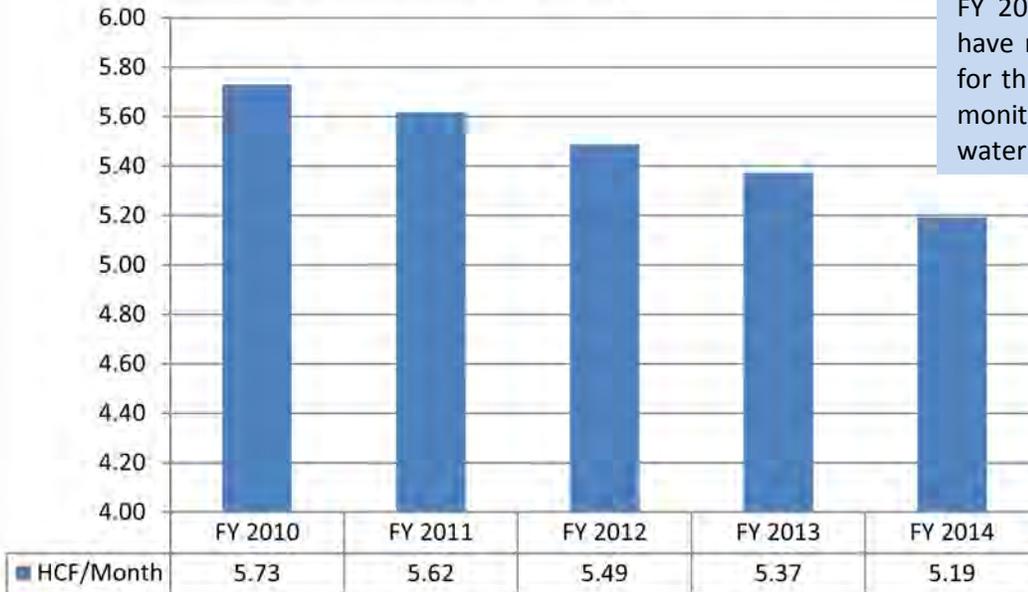
## Water Fund

The operating budget for the Water Fund consists of revenues from inside the City water sales and account charges, county water contracts, industrial water contracts, transfers from the Sewer and Stormwater Funds for services provided by the Administrative Division, and other revenue sources that include fire protection charges, connection and availability fees, interest, and other minor revenue sources. Operating expenses are comprised from four divisions: Water Treatment, Water Line Maintenance, Meter Reading, and Administration. Non-departmental, capital transfers, and debt service make up the remaining expenses. Overall revenues are expected to increase by approximately \$208,000 (1.4%) above the FY 2015 budgeted revenues. This is primarily attributable increases in the transfers from the Stormwater Fund and increases in account charges associated with more water services. Expenses are expected to increase by approximately \$876,000 (6.1%) primarily as a result of increases in debt service and capital transfers. Two new positions are proposed, a GIS Analyst to help address the growing need to adequately map and attribute our water, sewer, and stormwater assets, and a Work Planner to help coordinate, manage, and document field work performed.

	<u>FY 2015</u>	<u>FY 2016</u>	<u>Inc/(Dec)</u> <u>Difference</u>
<b>Operating Budgeted Revenues</b>			
Water Sales and Account Charges			
- Inside City	8,693,560	8,777,400	83,840
Water Contracts - Counties	2,096,700	2,113,440	16,740
Water Contracts - Industrial	558,250	569,800	11,550
Sewer and Stormwater Fund Charges	1,630,000	1,754,000	124,000
Other	1,621,480	1,593,629	(27,851)
<b>Total Operating Budgeted Revenues</b>	<b>14,599,990</b>	<b>14,808,269</b>	<b>208,279</b>
<b>Operating Budgeted Expenditures</b>			
Water Treatment	3,343,589	3,283,545	(60,044)
Water Line Maintenance	1,759,553	1,816,464	56,911
Meter Reading	899,065	875,093	(23,972)
Administration	3,422,003	3,293,285	(128,718)
Non-Departmental	229,600	334,859	105,259
Transfer - Capital	800,000	1,250,000	450,000
Debt Service	3,839,779	4,316,541	476,762
<b>Total Operating Budgeted Expenditures</b>	<b>14,293,589</b>	<b>15,169,787</b>	<b>876,198</b>
<b>Total Budgeted Change of Unrestricted</b>			
<b>Net Assets</b>	<b>306,401</b>	<b>(361,518)</b>	

## Water Fund

### Average Monthly Water Sold Domestic Customers



Decreasing household consumption coupled with an increase in non-revenue water presents challenges going forward. Just in the last five years typical household consumption has decreased by over 9% while non-revenue water jumped from 9.3% in FY 2013 to 12.6% in FY 2014. We have not yet determined the reason for this increase but will continue to monitor and try to identify areas of water loss.

### Non-Revenue Water



## Water Fund

Overall water withdraws increased from an average of 10.25 mgd in FY 2013 to an average of 10.61 mgd in FY 2014 and the total number of customers in from 22,517 to 22,628 during the same period. The variable treatment costs (chemicals and power) had a slight overall decrease from a total of \$240 per million gallons treated in FY 2013 to a total of \$229 per million gallons treated in FY 2014. This is almost entirely attributable to being on exclusively Pedlar water since the beginning of FY 2014.

### Water Variable Expenses/MG



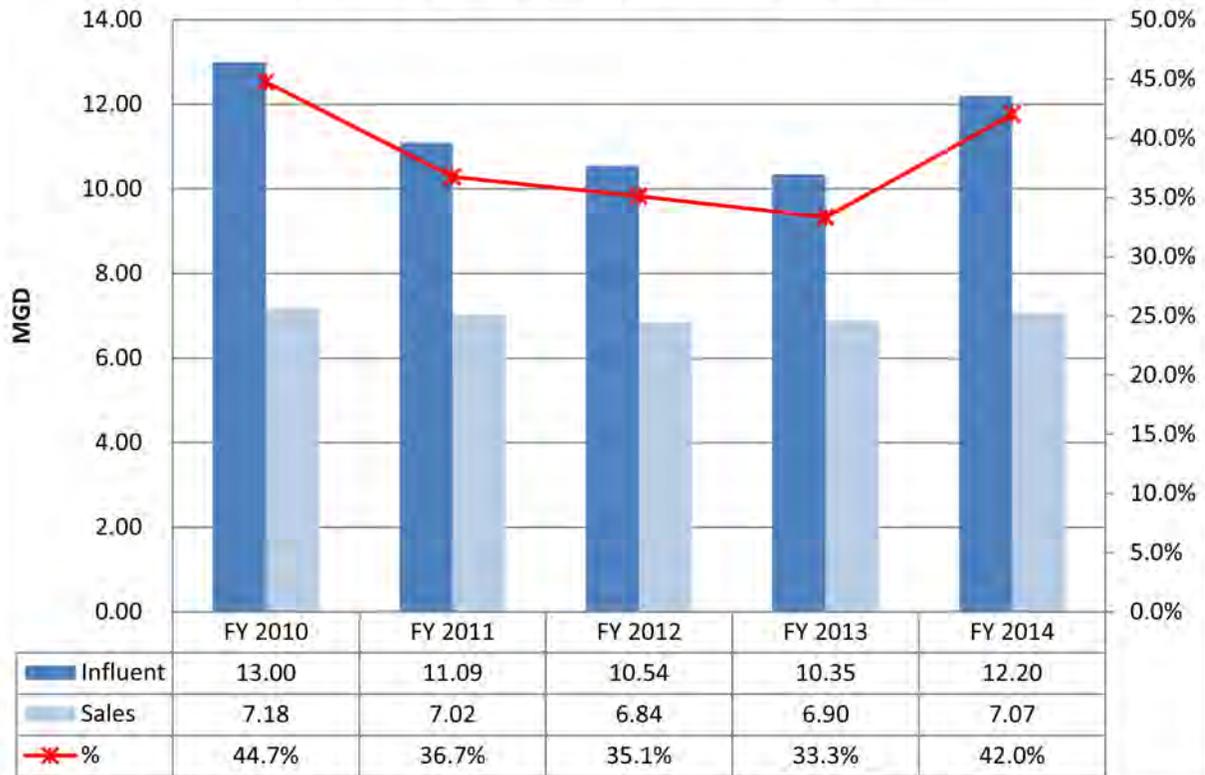
	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
—●— Chemicals	\$90	\$105	\$65	\$80	\$67
—*— Utilities / MG	\$163	\$153	\$139	\$160	\$162

## Sewer Fund

The operating budget for the Sewer Fund consists of revenues from inside the City water sales and account charges, county sewer contracts, industrial sewer contracts, septic hauler fees, industrial surcharges, and other revenue sources that include connection and availability fees, interest, and other minor revenue sources. Operating expenses are comprised from two divisions: Wastewater Treatment, and Sewer Line Maintenance. Non-departmental, capital transfers, and debt service make up the remaining expenses. Overall revenues are expected to increase by approximately \$887,000 (4.3%) above the FY 2015 budgeted revenues. This is primarily attributable to a 3.2% proposed sewer volume rate increase. Expenses are expected to increase by approximately \$52,800 (0.2%). Wastewater Treatment increases reflect the addition of one instrumentation technician position in order to better address the increasing complexity and quantity of the equipment used in processing wastewater. Additional increases include the following: (1) contractual services primarily attributable to sludge hauling and mechanical maintenance and repair services, (2) electricity, and (3) mechanical maintenance and repair materials. These additional costs are offset by decreases indirect costs.

	<u>FY 2015</u>	<u>FY 2016</u>	<u>Inc/(Dec) Difference</u>
<b>Operating Budgeted Revenues</b>			
Sewer Sales and Account Charges			
- Inside City	15,640,500	16,557,060	916,560
Sewer Contracts - Counties	1,281,332	1,208,695	(72,637)
Sewer Contracts - Industrial	1,971,488	2,068,072	96,584
Septic Hauler	482,000	500,000	18,000
Industrial Surcharges and Monitoring	560,000	363,590	
Other	638,290	763,533	125,243
<b>Total Operating Budgeted Revenues</b>	<b>20,573,610</b>	<b>21,460,950</b>	<b>887,340</b>
<b>Operating Budgeted Expenditures</b>			
Waste Water Treatment Plant	7,690,624	7,812,424	121,800
Sewer Line Maintenance	2,422,059	2,336,243	(85,816)
Non-Departmental	238,200	345,963	107,763
Transfer - Capital	2,000,000	1,500,000	(500,000)
Debt Service	8,961,298	9,370,351	409,053
<b>Total Operating Budgeted Expenditures</b>	<b>21,312,181</b>	<b>21,364,981</b>	<b>52,800</b>
<b>Total Budgeted Change of Unrestricted</b>			
<b>Net Assets</b>	<b>(738,571)</b>	<b>95,969</b>	

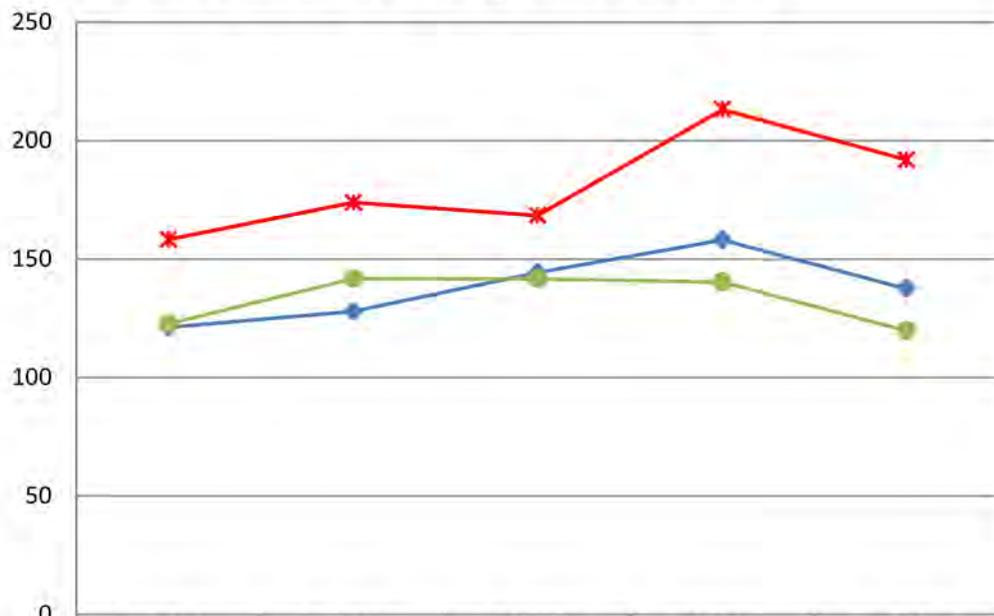
## Sewer Sales to Influent



### Sewer Fund

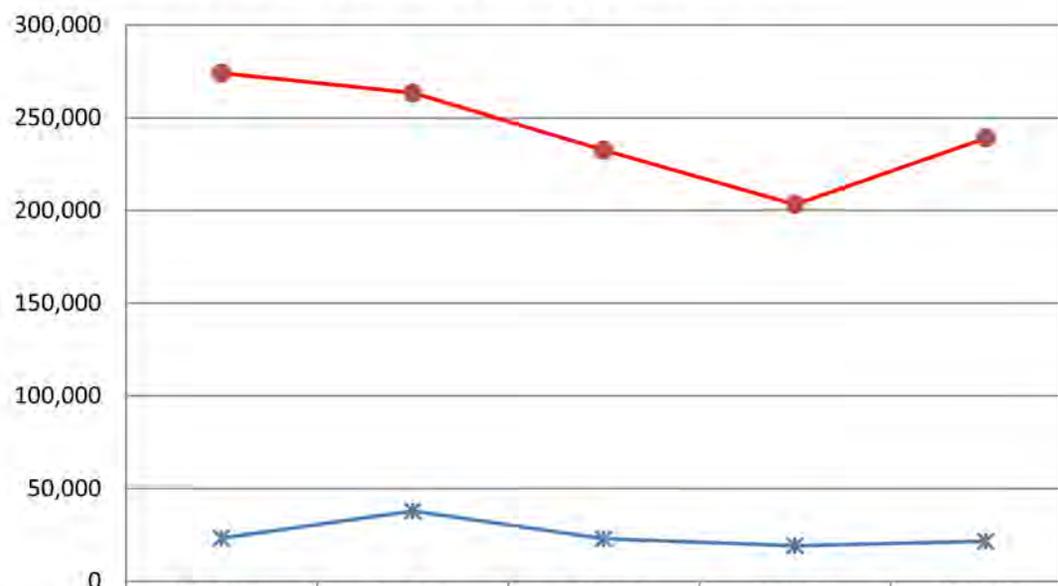
In FY 2014 the influent flow at the WWTP averaged 12.20 mgd while the actual billed sewer use averaged only 7.07 mgd. Basically this indicates that approximately 42% of the flow at the wastewater treatment plant is either rain water or ground water that enters the sewer system. The total variable expenses which includes chemicals, utilities, and sludge disposal decreased significantly from \$511 per million gallons treated in FY 2013 to \$449 per million gallons treated in FY 2014. This was due to several factors including impacts of the recent construction project and increased wet weather flows which have the effect of lowering the concentrations of pollutants. Another area we monitor closely is nitrogen and phosphorous discharges. The lower we can keep these discharges the more nutrient credits we have available to sell. Variable expense and nitrogen and phosphorous discharge history are shown on the next page.

## Sewer Variable Expenses/MG



	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
◆ Chemicals	121	128	144	158	137
* Utilities	158	174	168	213	192
● Sludge Disposal	123	142	142	140	120

## Nitrogen/Phosphorous Annual Discharge in Lbs



	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
* Phosphorous	23,319	37,923	22,949	19,156	21,565
● Nitrogen	273,963	263,308	232,563	203,280	239,208

## Stormwater Fund

The operating budget for the Stormwater Fund consists of revenues primarily from fees associated with the amount of impervious area. Other revenue includes VDOT Highway maintenance fees for work performed by Water Resources that is eligible for reimbursement and a minor amount of revenue from Virginia Stormwater Management Permit (VSMP) fees. Revenue is expected to remain essentially flat for the next fiscal year. Operating expenses include management of the Stormwater Program by Water Resources, maintenance activities of stormwater infrastructure and Best Management Practices (BMPs) by Water Resources, certain maintenance activities performed by Public Works, and management of the Construction Site Runoff or the VSMP Program by Community Development. Overall expenses are expected to increase by approximately \$70,000 (1.9%) in FY 2016. This is primarily attributable to increases in departmental expenditures related to contractual services, stormwater payment to the Water Fund, Community Development's budget, and reimbursement to the Sewer Fund for the Stormwater Fund start-up costs partially offset by decreases in capital outlay due the one time purchase of a VacCon truck in FY 2015.

	<u>FY 2015</u>	<u>FY 2016</u>	<u>Inc/(Dec) Difference</u>
<b>Operating Budgeted Revenues</b>			
Stormwater Service	3,149,400	3,149,400	
State Categorical Aid - Highway Maint.	275,000	275,000	-
Other	74,450	57,278	(17,172)
<b>Total Operating Budgeted Revenues</b>	<b>3,498,850</b>	<b>3,481,678</b>	<b>(17,172)</b>
<b>Operating Budgeted Expenditures</b>			
Departmental	2,675,230	2,504,725	(170,505)
Non-Departmental	25,800	39,780	13,980
Transfer - Sewer Operating	-	126,734	126,734
Transfer - Capital	1,050,000	1,150,000	100,000
<b>Total Operating Budgeted Expenditures</b>	<b>3,751,030</b>	<b>3,821,239</b>	<b>70,209</b>
<b>Total Budgeted Change of Unrestricted Net Assets</b>			
	<b>(252,180)</b>	<b>(339,561)</b>	

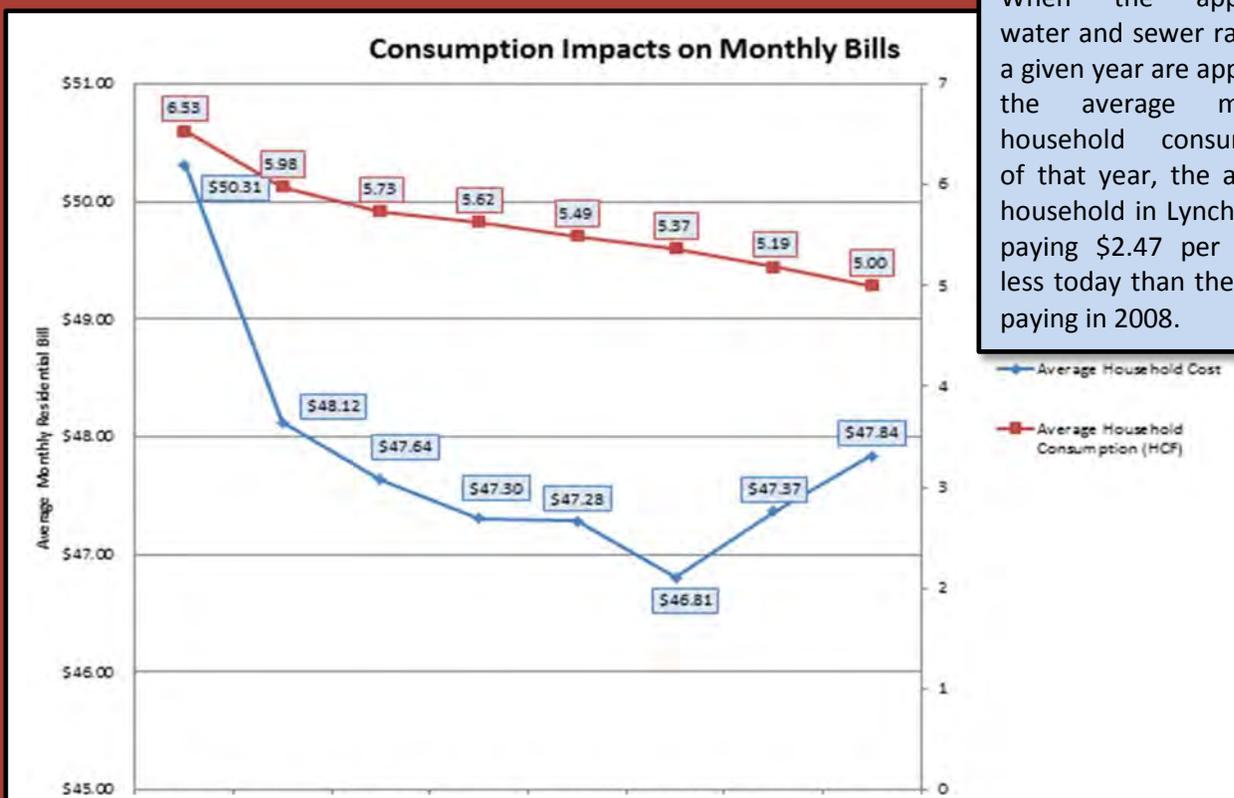
## Rate Analysis

Each year significant effort and planning go into evaluating the utility rates and rate structure to ensure that rates adequately cover the actual cost of providing the associated service while minimizing the impacts to our customers. The recommended rate adjustments in this report will result in a typical monthly water, sewer, and stormwater bill increase of \$1.26 or the equivalent of a 1.8% utility bill increase. The only recommended increases are a 3.2% increase in the Sewer Volume Rate from \$5.65 per HCF to \$5.83 per HCF and a 2.7% increase in the Sewer Only Rate from \$45.92 to \$47.18.

Due to cash reserves in the Water Fund at the end of FY 2015 projected to be approximately 54% of the water operating fund budget no increases in water rates or fees are required for FY 2016. However, going forward water volume rate increases of at least 5% from FY 2017 through FY 2018 may be necessary primarily due to the anticipated loss of revenue from Bedford County. Additionally going forward declining consumption continues to be a challenge due to the large fixed costs. Future increases may incur by increasing the monthly service charge or a combination of increasing the monthly service charge and volumetric rates in order to stabilize revenues. One concern related to increases in the monthly service charge is that it disproportionately impacts the lower volume users so a balance between increasing the volume rates and the monthly service charges is needed.

Sewer volumetric increases are recommended due to increases in debt service and maintaining Council's minimum debt coverage ratio of 1.20. Additionally, significant resources are needed for sanitary sewer system condition assessment and maintenance. CSO expenditures for the next several years will primarily be funded through the \$30 million State Grant.

While all other rates and fees may not fully recover the cost of service, additional increases are not recommended at this time but will be evaluated annually for adequacy.



When the applicable water and sewer rates for a given year are applied to the average monthly household consumption of that year, the average household in Lynchburg is paying \$2.47 per month less today than they were paying in 2008.

## Proposed Water and Sewer Rates

Below is a comparison of the current water and sewer rates to the proposed FY 2016 rates. The only increases recommended are the Sewer Volume Charge and the Sewer Only Charge.

		Proposed	%
	FY 2015	FY 2016	Increase
<b>Water</b>			
Volume charge / hcf	\$2.43	\$2.43	0%
<b>Sewer</b>			
Volume charge / hcf	5.65	5.83	3.2%
BOD charge / 100 lbs	23.52	23.52	0%
TSS charge / 100 lbs.	26.60	26.60	0%
Septic hauler charge	204.90	204.90	0%
Industrial permit fee	varies	varies	0%
Sewer only	45.92	47.18	2.7%
<b>Stormwater</b>			
Rater per sfu per month	\$4.00	\$4.00	0%
<b>Fire Protection</b>			
Hydrants & 8" or smaller fire lines	19.79	19.79	0%
10" fire lines	35.53	35.53	0%
12" fire lines	56.38	56.38	0%
<b>Availability Fees</b>			
Water	1220.00	1220.00	0%
Sewer	1950.00	1950.00	0%
<b>Water Connection Fees</b>			
¾" & 5/8" meters	1,045.00	1,045.00	0%
1" service – 5/8' meter	1,100.00	1,100.00	0%
1" service – 1" meter	1,265.00	1,265.00	0%
Greater than 1"- minimum	1,265.00	1,265.00	0%
<b>Sewer Connection Fees</b>			
4" sewer line	1,210.00	1,210.00	0%
Greater than 4"- minimum	1,320.00	1,320.00	0%
<b>Other Charges</b>			
Monthly Service Charge	Next Page	Next Page	Next Page
Cut-on charge	15.00	15.00	0%
Cut-off charge	25.00	25.00	0%
Delinquent account fee	5%	5%	0%

## Monthly Service Charges

There are no proposed changes in the Monthly Service Charges. The chart below reflects the current fees per meter size.

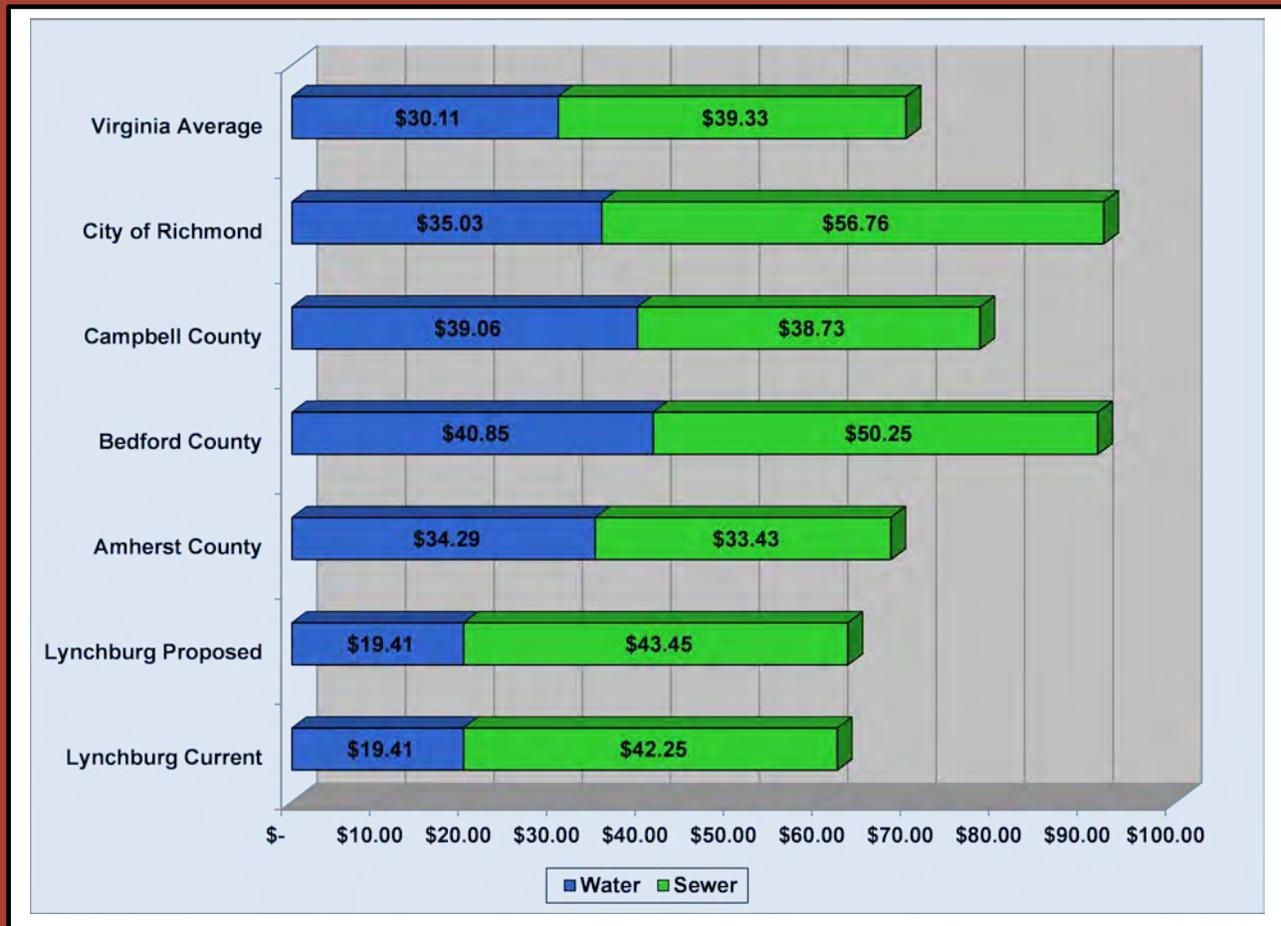
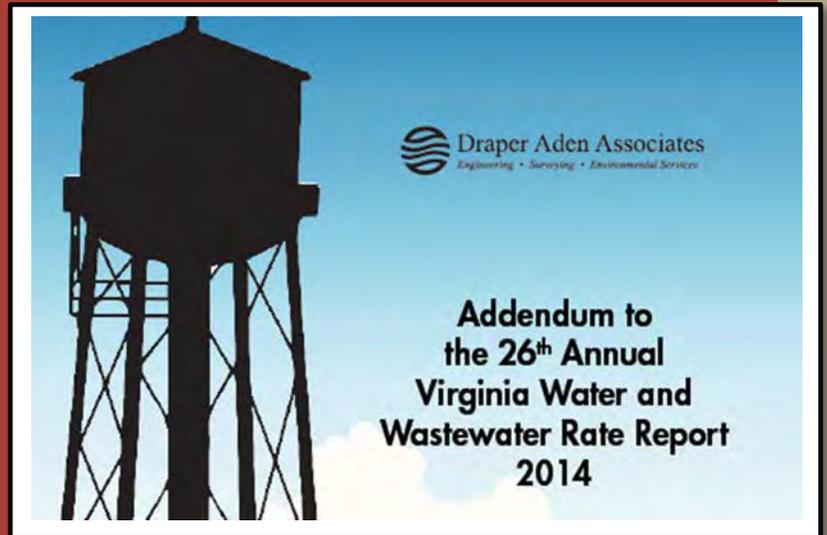
Meter Size	Exist. Account Charge	Meter Factor	Fee per Equivalent Meter	Fee per Meter Size	Total Service Charge
5/8"	\$3.69	1.0	\$4.00	\$4.00	<b>\$7.69</b>
3/4"	\$3.69	1.5	\$4.00	\$6.00	<b>\$9.69</b>
1"	\$3.69	2.5	\$4.00	\$10.00	<b>\$13.69</b>
1-1/2"	\$3.69	5.0	\$4.00	\$20.00	<b>\$23.69</b>
2"	\$3.69	8.0	\$4.00	\$32.00	<b>\$35.69</b>
3"	\$3.69	15.0	\$4.00	\$60.00	<b>\$63.69</b>
4"	\$3.69	30.0	\$4.00	\$120.00	<b>\$123.69</b>
6"	\$3.69	60.0	\$4.00	\$240.00	<b>\$243.69</b>
8"	\$3.69	90.0	\$4.00	\$360.00	<b>\$363.69</b>
10"	\$3.69	150.0	\$4.00	\$600.00	<b>\$603.69</b>

Based on Draper Aden's Rate Report 89% of water utilities and 83% of wastewater utilities contained a fixed charge in their rate structure. Of these for an average household 87% of the water utilities charged more than \$5.00 per month with 10% charging more than \$25.00 per month. For wastewater utilities, 94% charged more than \$5.00 per month and 9% charged more than \$35.00 per month.

## Rate Comparisons

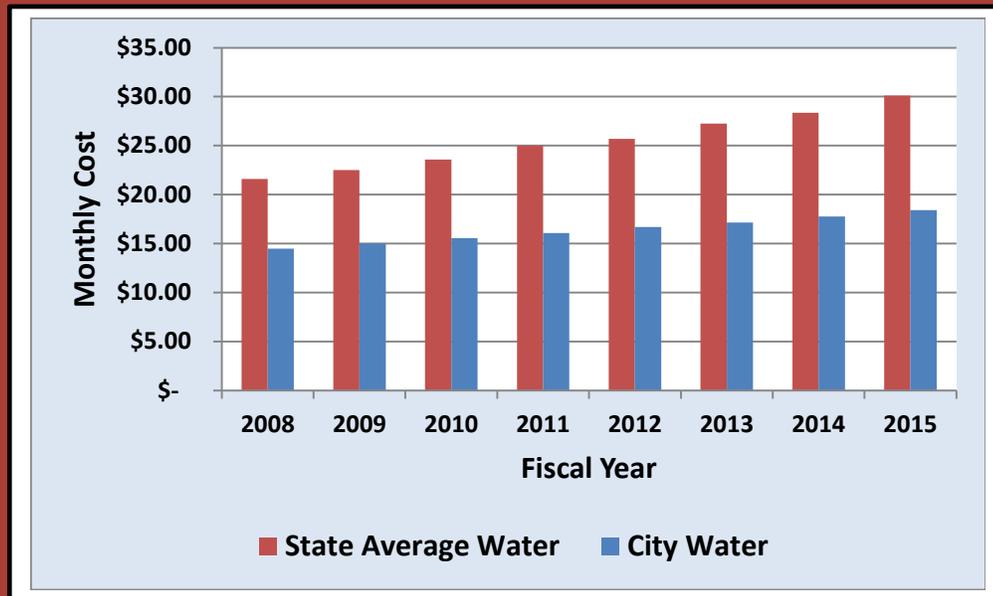
A comparison of the City's water and sewer bills for a customer using 5,000 gallons (6.68 hcf) of water per month is shown below. (Information from other localities and the statewide average is based on the "26<sup>th</sup> Annual Virginia Water and Wastewater Rate Report 2014", prepared by Draper Aden Associates.)

The City of Lynchburg's current combined rates are the lowest in the region including those of Amherst, Bedford, and Campbell Counties. Also Lynchburg's rates for water and sewer are lower than the City of Richmond; the State's other CSO city.



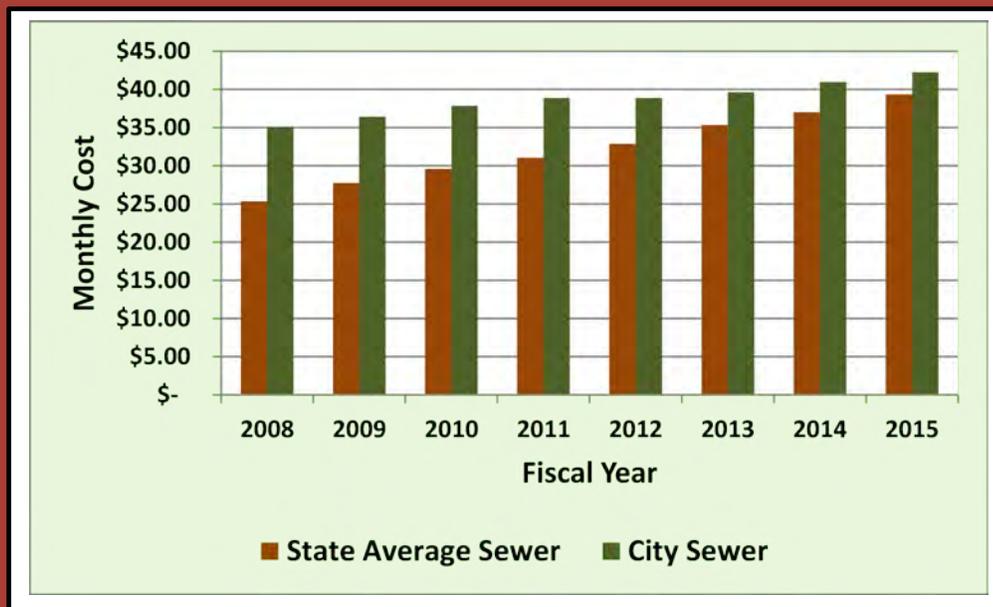
## Water Rate Comparison

As shown below, the City of Lynchburg's water rate is \$10.70 per month less than the statewide average. Last year the state average water rate increased by \$1.77 (6.2%) per month. Over the last ten years the average water rate has increased by 65%.



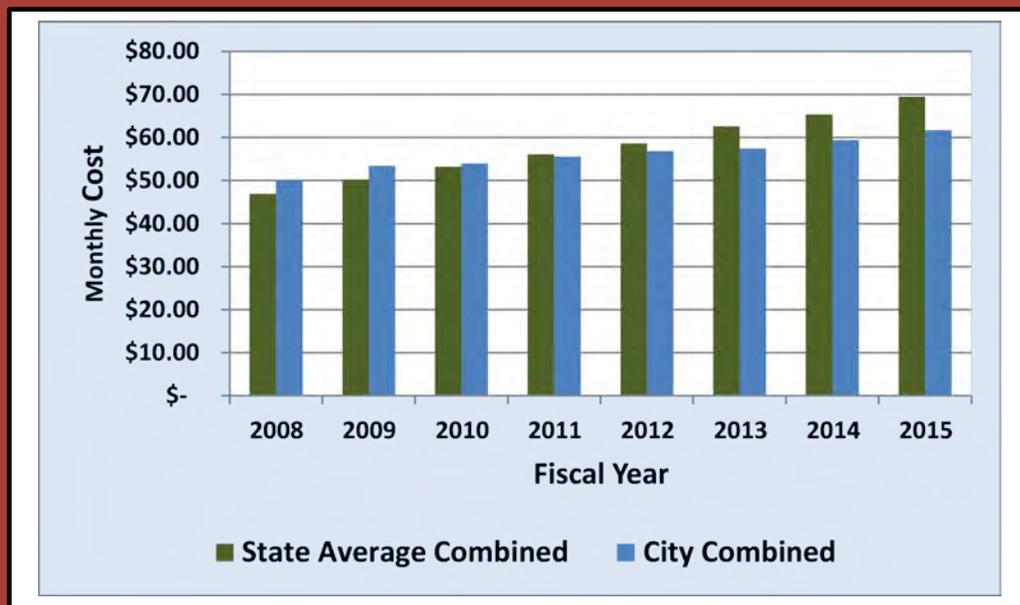
## Sewer Rate Comparison

As shown below, the City of Lynchburg's sewer rate is \$2.92 per month more than the statewide average. Last year the state average water rate increased by \$2.33 (6.3%) per month. Over the last ten years the average sewer rate has increased by 88%.



## Combined Water and Sewer Rates

This is the fifth year that the City of Lynchburg's combined water and sewer rates have been lower than the statewide average. This year the difference in the average monthly bill is \$7.78. This is quite an accomplishment given the fact that we are an older core City with a Combined Sewer System.



**APPENDIX A**

**PROJECTION LETTER**



**PJ Sun, LLC**  
**Providing Services to the**  
**Water Industry**

February 2, 2015

City Council  
 City of Lynchburg  
 900 Church Street  
 Lynchburg, Virginia 24504

We have assembled, from information provided by management, the accompanying financial projections of the Water, Sewer and Stormwater Funds of the City of Lynchburg for each of the six years ending June 30, 2020. The accompanying projections were prepared to help management evaluate the need for current rate adjustments, potential future rate adjustments and develop strategies for funding capital improvements.

**PROPOSED JULY 1, 2015 RATE INCREASES**

No increase is proposed as of July 1, 2015 (FY 2016) for the water volume rate, stormwater charge or account charge. A 3.2% increase in the sewer volume rate is proposed. As shown in Table 1 below the average residential customer with 7 HCF (Hundred Cubic Feet) of monthly water use will see a \$1.26 increase in their monthly utility bill from the City. This is the equivalent of a 1.8% utility bill increase. The percent increase in the monthly utility bill will be slightly lower for customers that have monthly water use less than 7 HCF.

**TABLE 1: Actual and Proposed Water & Sewer Rates**

	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2015</b>	<b>FY 2016</b>
	<b>Rate/ HCF</b>	<b>Rate/ HCF</b>	<b>Monthly Bill</b>	<b>Monthly Bill</b>
Water	\$2.43	\$2.43	\$17.01	\$17.01
Sewer	5.65	5.83	39.55	40.81
Stormwater	4.00	4.00	4.00	4.00
Account Charge	7.69	7.69	7.69	7.69
Total	-	-	\$68.25	\$69.51

An overview of the rate increases that are likely to be needed after FY 2016 together with a discussion of future projected financial results in the Water, Sewer and Stormwater Funds are described in the remainder of this letter report.

**WATER FUND**

No increase in the water rates is needed effective July 1, 2015 (FY 2016) because the Water Fund has built-up cash reserves in excess of 60% of the water operating fund budget. However, going forward, water volume rate increases of at least 5% from FY 2017 through FY 2019 are projected. These rate increases are largely needed to offset projected lost revenues from Bedford County. As of the date of this letter the City is still in negotiation with Bedford County for a new

water contract. The projections anticipate an overall reduction in revenue from Bedford which could be a result of reduced consumption, reduced rates or both.

Over the past five years annual water capital expenditures have averaged \$4.2 million and have resulted in renewal and replacement of much of the above ground water assets and some underground infrastructure. As shown in Table 2 below, future annual water capital expenditures will likely average \$4.0 million per year through FY 2020.

**TABLE 2: Water CIP Expenditures (\$ in 000's)**

	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Distribution improvements	\$4,443	\$2,963	\$3,462	\$2,185	\$2,750	\$2,000
Facility improvements	537	440	400	400	400	1,550
Water tank rehabilitation	43	215	375	335	135	340
All other	352	276	280	170	50	50
Total	\$5,375	\$3,894	\$4,517	\$3,090	\$3,335	\$3,940

As shown in Table 2 above, close to 74% of the projected water capital expenditures are earmarked for renewal and replacement in the distribution network targeting the oldest and most vulnerable water mains in the City. Much of this will be in the City's central business district.

The Water Fund financial projections that are incorporated with this letter report are based on a number of assumptions that include significant decreases of water purchases by Bedford County and future volume rate increases. Other critical assumptions include: (1) issuance of up to \$7.0 million of new debt to finance capital expenditures, (2) general inflationary cost increases of 3% per year and (3) no growth in City customer water use. Table 3 presents the projected water bill increases, debt coverage ratio and unreserved cash balance as a percent of budget for the FY 2015 to FY 2020 projection period.

**TABLE 3: Water Fund Debt Coverage & Unreserved Cash Balances as a % of Budget**

Year	Water Bill Increase	Debt Coverage Ratio	Unreserved Cash % of Budget
FY 2015	-	1.26	54%
FY 2016	0%	1.24	50%
FY 2017	4.1%	1.16	44%
FY 2018	4.2%	1.14	36%
FY 2019	4.3%	1.22	32%
FY 2020	1.7%	1.31	30%

The projected water bill increase is based on the projected increase in the volume rate and no increase in the water portion of the account charge. The debt coverage ratio temporarily falls below Council's 1.20 criteria for two years due to a projected decrease in revenues from Bedford County. The unreserved cash % of budget falls from 54% to 30% because more internally generated funds are projected to be used to fund capital expenditures than in the past.

## SEWER FUND

The Virginia DEQ (Department of Environmental Quality) has recently approved a new Long Term Control Plan for the City's CSO Program. The new Long Term Control Plan provides for major expansion of flow capacity at the wastewater treatment plant in- lieu of complete separation of combined sewers in the CSO areas of the City. The new Long Term Control Plan schedule indicates that the CSO program can be completed within the next ten years at a total cost of approximately \$60.0 million. As shown in Table 4 below, sewer capital expenditures will likely average \$11.0 million per year through FY 2020.

**TABLE 4: Sewer CIP Expenditures (\$ in 000's)**

	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
CSO projects	\$6,297	\$4,449	\$9,450	\$9,227	\$8,288	\$6,473
Burton Creek Interceptor	400	2,000	1,978	-	-	-
SSES Program	1,338	720	320	625	905	825
Sewer main improvements	1,037	748	890	1,165	1,065	1,065
WWTP – Control Building	-	150	1,000	850	-	-
All other	1,275	1,165	1,056	955	390	391
Total	\$10,347	\$9,232	\$14,694	\$12,822	\$10,648	\$8,754

All of the CSO projects will be financed from a \$30.0 million grant that was recently awarded to the City by the Commonwealth of Virginia and a \$14.1 million 0% interest loan from the Virginia Water Facilities Revolving Fund. No other borrowing is contemplated for sewer projects through FY 2020. The Department is also working on a Sanitary Sewer Evaluation Study (SSES) that is designed to identify defective sewer lines throughout the City and develop an associated repair, rehabilitation and replacement program.

The Sewer Fund financial projections that are included with this letter report are based on the following critical assumptions: (1) continuation of City customer sewer use at FY 2014 levels, (2) a gradual increase in sewer use from contract customers and (3) general inflationary cost increases of 3% per year. Table 5 presents the projected sewer bill increases, debt coverage ratio and unreserved cash balance as a percent of budget for the FY 2015 to FY 2020 projection period.

**TABLE 5: Sewer Fund Debt Coverage & Unreserved Cash Balances as a % of Budget**

Year	Sewer Bill Increase	Debt Coverage Ratio	Unreserved Cash % of Budget
FY 2015	-	1.22	23%
FY 2016	2.9%	1.21	24%
FY 2017	2.6%	1.24	23%
FY 2018	2.1%	1.30	23%
FY 2019	1.0%	1.34	25%
FY 2020	1.0%	1.35	27%

## STORMWATER FUND

The Department of Water Resources was recently awarded a \$1.7 million Stormwater Local Assistance Fund (SLAF) grant from the Department of Environmental Quality (DEQ) for stormwater capital projects. The Department's plan is to match the grant with the stormwater capital funds and with proceeds from a \$1.7 million 0% loan from the Virginia Water Facilities Revolving Fund. The combination of these funds should allow the City to construct stormwater quality improvement projects needed to meet its Phase II Municipal Separate Storm Sewer System (MS4) permit for total maximum daily load (TMDL) allocation by 2018. As shown in Table 6 below, stormwater capital expenditures are projected to total \$19.4 million from FY 2015 through FY 2020.

**TABLE 6: Stormwater CIP Expenditures (\$ in 000's)**

	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Master Planning	\$887	\$270	\$640	\$570	\$500	\$350
Quality improvements	220	1,574	1,799	1,270	3,145	5,500
System infrastructure	318	400	610	245	260	205
Coordinated capital	-	50	100	150	150	200
<b>Total</b>	<b>\$1,425</b>	<b>\$2,294</b>	<b>\$3,149</b>	<b>\$2,235</b>	<b>\$4,055</b>	<b>\$6,255</b>

The amount of water quality improvement projects shown in the above table in FY 2019 and FY 2020 are based on preliminary estimates. The ongoing stormwater master planning efforts will better define specific capital projects needed to meet future permit requirements and estimated capital costs. The Master Planning will also include a condition assessment of the stormwater system and continuing efforts to inventory and map the stormwater system to inform the utility of its stormwater infrastructure renewal needs.

Table 7 presents the projected stormwater monthly bill, debt coverage ratio and unreserved cash balance as a percent of budget for the FY 2015 to FY 2020 projection period.

**TABLE 7: Stormwater Fund Debt Coverage & Unreserved Cash Balances as a % of Budget**

Year	Stormwater Fee	Debt Coverage Ratio	Unreserved Cash % of Budget
FY 2015	\$4.00	-	34%
FY 2016	\$4.00	-	16%
FY 2017	\$4.00	-	14%
FY 2018	\$4.42	9.64	16%
FY 2019	\$4.42	3.47	15%
FY 2020	\$4.75	1.89	13%

As shown in Table 7 above, no increase in the \$4.00 per month stormwater charge is projected until July 1, 2017 (FY 2018). Going forward it is clear that the stormwater fee will need to increase but it is not possible to predict with any certainty when and how much an increase will

be needed. As the master plan is developing, better estimates will be developed to help determine future increases in the stormwater fee.

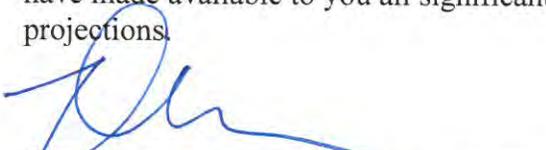
It has been our pleasure to work with the Department of Water Resources to prepare this report and the financial projections that follow. We are available at your convenience to answer any questions you may have.

Sincerely,



Paul J. Cumiskey

We the undersigned have participated in the preparation and review of the attached financial projections and to the best of our knowledge believe they reasonably present the expected capital expenditures, borrowings, revenues and expenses, and cash flows related to the City's Water, Sewer and Stormwater Funds for the projection period. Further, to the best of our knowledge we have made available to you all significant information that we believe is relevant to the financial projections.



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Timothy A. Mitchell, P.E., Director



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John Rosser, CPA, Financial Professional

**APPENDIX B**

**FINANCIAL PROJECTIONS**

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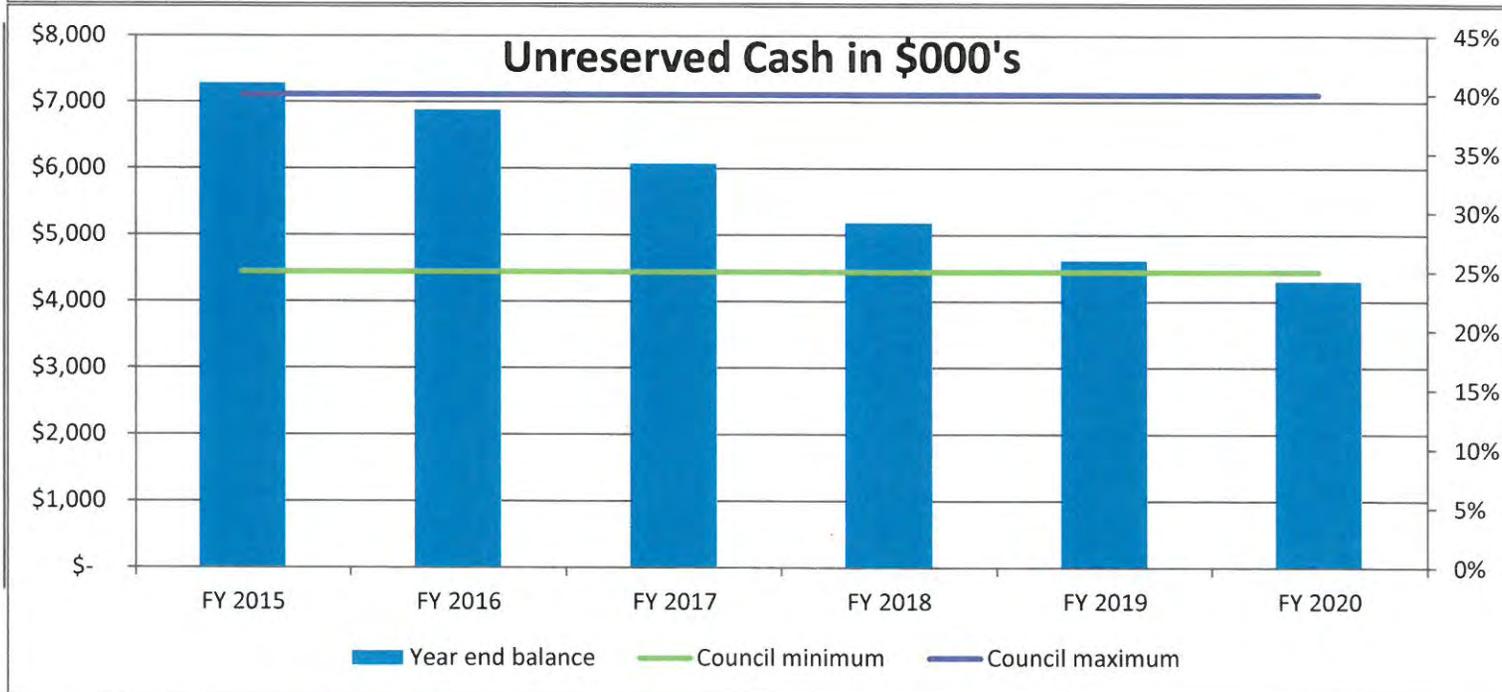
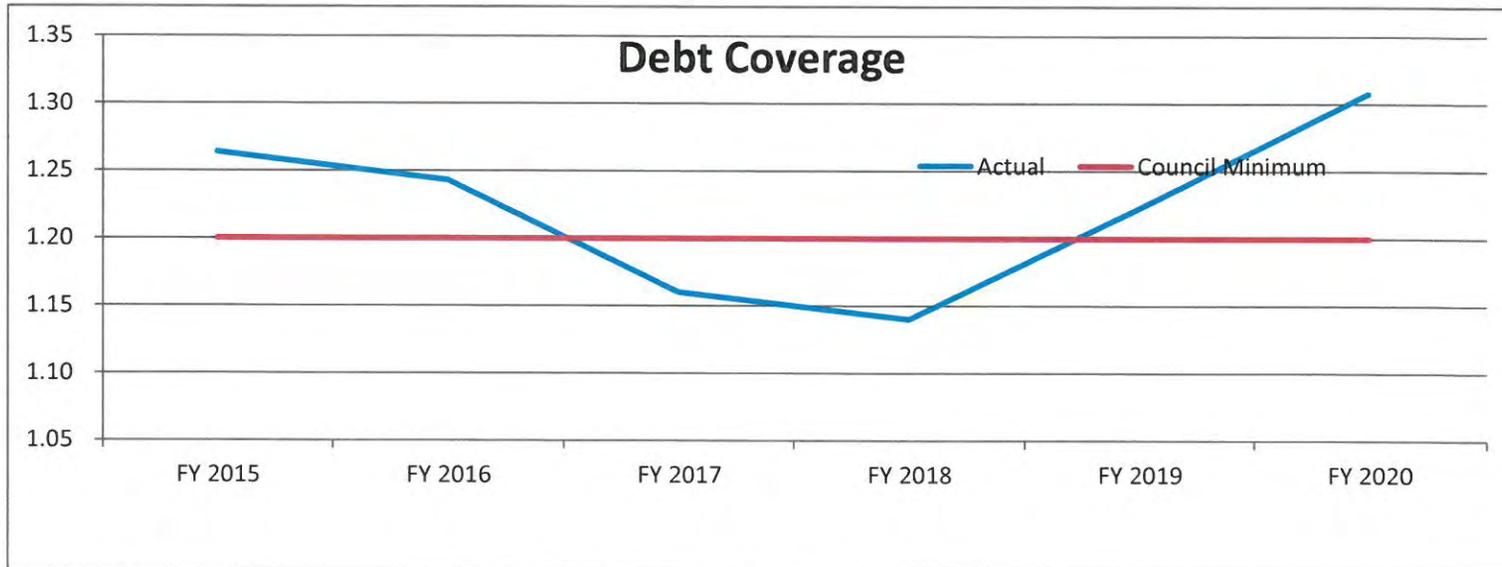
WATER FUND  
FINANCIAL PROJECTIONS  
FY 2015 to FY 2020

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## WATER FUND KEY ASSUMPTIONS

1. Annual water production will approximate 10.5 MGD (the past 5 year average) through FY 2017. In FY 2018 through FY 2020 annual water production will decrease to approximately 10.0 MGD when it is assumed that Bedford County will reduce its water purchases from the City.
2. The annual volume of water billed to non-contract customers is estimated at 3.10 million HCF for each year during the projection period. Over the past five years the annual water volume billed to non-contract customers has averaged 3.13 million HCF and has ranged from 3.10 million HCF in FY 2012 to 3.19 million HCF in FY 2011.
3. Except for Bedford County, the annual water volume billed to contract customers will generally remain stable. However, a small decrease is assumed due to a phased closure of a regional training academy in Amherst County.
4. Bedford County is assumed to have a change in volume and/or rate between FY 2017 and FY 2020. A conservative approach was used to project Bedford's combined revenues from FY 2017 through FY 2020. The water rates to Amherst County, Bedford and Campbell County are assumed to increase 3% per year plus an additional 4% in FY 2017 due to a factored impact of reduced water purchases from Bedford County. Water rates to Frito-Lay and Rock Tenn are based on recently negotiated rates.
5. No increase in the water volume rate is assumed in FY 2016. The water volume rate is projected to increase 5% per year in FY 2017, FY 2018 and FY 2019 to make-up for the loss in revenue from Bedford County. The water volume rate is projected to increase 2% in FY 2020. No increase in the account / fixed charge is projected during the projection period.
6. Operating expenses in FY 2016 are based on budget submission documents. Operating expenses after FY 2016 are assumed to increase 3% per year unless otherwise noted. However, the impact of reduced water use due to decreased water sales to Bedford County has been factored into the projected electricity and chemical expenses starting in FY 2018.
7. There are 68.35 equivalent full time approved staff positions in Water Fund sub-departments in FY 2015. Two additional positions are proposed for FY 2016. No new positions are assumed from FY 2017 to FY 2020.
8. Short term line of credit financing is assumed to be available starting in FY 2017 at 3%; long term debt financing is assumed to be available at 4.5%, 30 year repayment terms.
9. Additional assumptions are included in notes on the following financial projections pages.

# WATER FUND



**CITY OF LYNCHBURG  
WATER CAPITAL FINANCING PLAN**

	<b>Est.</b>	<b>Budget</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>
	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<b>BEGINNING FUNDS (1)</b>	<b>\$2,071,332</b>	<b>\$4,027,856</b>	<b>\$1,383,644</b>	<b>\$1,116,644</b>	<b>\$3,276,644</b>	<b>\$1,191,644</b>
<b>RECEIPTS</b>						
Transfers	800,000	1,250,000	1,250,000	1,250,000	1,250,000	1,250,000
LOC borrowing	-	-	3,000,000	-	-	-
G.O. borrowings, net proceeds	6,531,376	-	-	4,000,000	-	3,000,000
total receipts	<b>7,331,376</b>	<b>1,250,000</b>	<b>4,250,000</b>	<b>5,250,000</b>	<b>1,250,000</b>	<b>4,250,000</b>
<b>EXPENDITURES</b>						
Annual water petitions	135,000	80,286	280,000	170,000	50,000	50,000
Distribution system improvements	4,442,754	2,962,676	3,462,000	2,185,000	2,750,000	2,000,000
Water main replacements	161,990	-	-	-	-	-
Annual facility improvements	537,000	439,860	400,000	400,000	400,000	1,550,000
Water tank rehabilitation	33,130	215,000	375,000	335,000	135,000	340,000
Wingate tank	9,978	-	-	-	-	-
Other	55,000	196,390	-	-	-	-
total expenditures	<b>5,374,852</b>	<b>3,894,212</b>	<b>4,517,000</b>	<b>3,090,000</b>	<b>3,335,000</b>	<b>3,940,000</b>
<b>ENDING FUNDS</b>	<b>\$4,027,856</b>	<b>\$1,383,644</b>	<b>\$1,116,644</b>	<b>\$3,276,644</b>	<b>\$1,191,644</b>	<b>\$1,501,644</b>

**Notes:**

1. Beginning funds in FY 2015 equals cash and investments in the Water Capital Fund.

**CITY OF LYNCHBURG  
PROJECTED STATEMENT OF WATER FUND DEBT COVERAGE**

	<b>Actual</b>	<b>Est.</b>	<b>Budget</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>
	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<b>Revenues:</b>							
Charges for services	\$10,920,341	\$11,732,798	\$11,856,798	\$12,281,418	\$12,730,867	\$13,201,704	\$13,433,508
Water contracts	2,554,838	2,647,981	2,683,240	2,067,600	1,817,068	1,854,433	1,892,041
Interest and other	275,643	269,482	268,231	268,231	268,231	268,231	268,231
total revenues	13,750,822	14,650,261	14,808,269	14,617,249	14,816,166	15,324,368	15,593,780
<b>Expenses:</b>							
Water treatment	2,740,908	3,205,743	3,253,545	3,351,151	3,398,111	3,500,054	3,605,056
Water line maintenance	1,592,117	1,751,815	1,816,464	1,870,958	1,927,087	1,984,899	2,044,446
Meter reading	796,244	900,408	875,093	901,346	928,386	956,238	984,925
Administration / engineering	2,982,121	3,289,312	3,293,285	3,392,084	3,493,846	3,598,661	3,706,621
Non-departmental	275,570	273,400	369,859	369,905	380,252	390,909	401,887
Capitalizable cost (1)	(171,114)	(160,000)	(164,800)	(169,744)	(174,836)	(180,081)	(185,484)
total expenses	8,215,846	9,260,678	9,443,446	9,715,699	9,952,845	10,250,681	10,557,451
<b>Operating income</b>	5,534,976	5,389,583	5,364,823	4,901,550	4,863,320	5,073,687	5,036,329
<b>Debt Service</b>	3,586,308	4,264,603	4,316,315	4,225,483	4,266,432	4,150,714	3,851,269
<b>Net Revenue</b>	<b>\$1,948,668</b>	<b>\$1,124,980</b>	<b>\$1,048,508</b>	<b>\$676,067</b>	<b>\$596,888</b>	<b>\$922,973</b>	<b>\$1,185,060</b>
<b>Debt Coverage Ratio</b>	1.54	1.26	1.24	1.16	1.14	1.22	1.31

**Notes:**

1. Capitalizable cost includes internal labor charges applicable to time spent on capital project activities.

**CITY OF LYNCHBURG  
PROJECTED STATEMENT OF WATER FUND SOURCES & USES OF CASH**

	<b>Actual</b>	<b>Est.</b>	<b>Budget</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>
	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<b>Sources of Cash:</b>							
Beginning cash balance	\$9,311,414	\$10,045,043	\$12,091,546	\$9,051,042	\$7,990,364	\$9,272,416	\$6,630,308
Net revenue plus capitalized costs	1,777,554	964,980	883,708	506,323	422,052	742,892	999,577
LOC borrowing	1,965,029	-	-	3,000,000	-	-	-
Federal grant	77,824	-	-	-	-	-	-
G.O. bond proceeds (1)	-	14,204,875	-	-	7,000,000	-	3,000,000
total sources of cash	<b>13,131,821</b>	<b>25,214,898</b>	<b>12,975,254</b>	<b>12,557,364</b>	<b>15,412,416</b>	<b>10,015,308</b>	<b>10,629,884</b>
<b>Uses of Cash:</b>							
Capital Fund expenditures	3,292,585	5,374,852	3,894,212	4,517,000	3,090,000	3,335,000	3,940,000
Other capital expenditures	-	75,000	30,000	50,000	50,000	50,000	50,000
Repayment of LOC borrowing	-	7,673,500	-	-	3,000,000	-	-
Payments to other organizations	12,968	-	-	-	-	-	-
Change in working capital items	(218,775)	-	-	-	-	-	-
total uses of cash	<b>3,086,778</b>	<b>13,123,352</b>	<b>3,924,212</b>	<b>4,567,000</b>	<b>6,140,000</b>	<b>3,385,000</b>	<b>3,990,000</b>
<b>Ending Cash</b>	<b>\$10,045,043</b>	<b>\$12,091,546</b>	<b>\$9,051,042</b>	<b>\$7,990,364</b>	<b>\$9,272,416</b>	<b>\$6,630,308</b>	<b>\$6,639,884</b>

Cash in Capital Fund	\$2,071,332	\$4,027,856	\$1,383,644	\$1,116,644	\$3,276,644	\$1,191,644	\$1,501,644
Customer deposits	772,461	782,461	792,461	802,461	812,461	822,461	832,461
Unrestricted cash	7,201,250	7,281,229	6,874,937	6,071,259	5,183,311	4,616,203	4,305,779
<b>Total cash</b>	<b>\$10,045,043</b>	<b>\$12,091,546</b>	<b>\$9,051,042</b>	<b>\$7,990,364</b>	<b>\$9,272,416</b>	<b>\$6,630,308</b>	<b>\$6,639,884</b>
Unrestricted cash as a % of budget	61%	54%	50%	44%	36%	32%	30%

**Notes:**

1. G.O. bond proceeds in FY 2015 is actual.

**CITY OF LYNCHBURG  
CHARGES FOR SERVICES**

	<b>Actual</b>	<b>Est.</b>	<b>Budget</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>
	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<b>Water Sales</b>							
HCF of use	3,151,129	3,100,000	3,100,000	3,100,000	3,100,000	3,100,000	3,100,000
Water volume rate (1)	2.38	2.43	2.43	2.55	2.68	2.81	2.87
	<b>\$7,499,688</b>	<b>\$7,533,000</b>	<b>\$7,533,000</b>	<b>\$7,905,000</b>	<b>\$8,300,250</b>	<b>\$8,715,263</b>	<b>\$8,889,568</b>
<b>All Other:</b>							
Account / Fixed charge (2)	943,097	1,244,400	1,244,400	1,244,400	1,244,400	1,244,400	1,244,400
Sewer/Stormwater Fund charge (3)	1,580,000	1,630,000	1,754,000	1,806,620	1,860,819	1,916,643	1,974,142
Hydrant rentals-water	6,930	3,000	3,000	3,000	3,000	3,000	3,000
Hydrant rentals-equip.	7,200	7,200	7,200	7,200	7,200	7,200	7,200
General Fund Fire Protection (4)	358,938	879,498	879,498	879,498	879,498	879,498	879,498
Cut-on/off-late fees	110,810	100,000	100,000	100,000	100,000	100,000	100,000
Meter removal	11,770	7,500	7,500	7,500	7,500	7,500	7,500
Delinquent account fee	89,167	85,000	85,000	85,000	85,000	85,000	85,000
Fire protection	96,684	103,200	103,200	103,200	103,200	103,200	103,200
Connection fee (5)	94,654	50,000	50,000	50,000	50,000	50,000	50,000
Availability fee (5)	53,011	60,000	60,000	60,000	60,000	60,000	60,000
Water cost plus & other	68,392	30,000	30,000	30,000	30,000	30,000	30,000
	<b>3,420,653</b>	<b>4,199,798</b>	<b>4,323,798</b>	<b>4,376,418</b>	<b>4,430,617</b>	<b>4,486,441</b>	<b>4,543,940</b>
	<b>\$10,920,341</b>	<b>\$11,732,798</b>	<b>\$11,856,798</b>	<b>\$12,281,418</b>	<b>\$12,730,867</b>	<b>\$13,201,704</b>	<b>\$13,433,508</b>

**Notes:**

1. No increase in the water volume rate planned for FY 2016; thereafter the volume rate increases 5% from FY 2017 through FY 2019 and 2% in FY 2020.
2. Account / Fixed charge increased in FY 2015 due to a \$2.00 increase in the fixed charge by meter size equivalent effective July 1, 2014. No increase in this charge is planned over the next five years at this time.
3. Sewer/Stormwater Fund charge is designed to recover cost charged to the Adm. / Engineering Dept. that are attributable to the Sewer and Stormwater Funds. The Sewer / Stormwater Fund charge increases in FY 2016 is due to additional staff positions assumed to be hired that will support the Sewer and Stormwater Funds.
4. General Fund Fire Protection charge increased in FY 2015 based on updated calculation of the City's fire protection costs. No increase in this charge or the private fire protection fees assumed during the projection period.
5. No increases in availability and connection fees assumed due to uncertainty in real estate market.

**CITY OF LYNCHBURG  
WATER CONTRACTS**

	<b>Actual</b>	<b>Est.</b>	<b>Budget</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>
	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<b>AMHERST (1) (2)</b>							
HCF of use	43,960	35,000	30,000	25,000	20,000	15,000	15,000
Rate	1.97	2.00	2.04	2.10	2.25	2.32	2.39
Current year bills	\$86,589	\$70,000	\$61,200	\$52,500	\$45,000	\$34,800	\$35,850
Prior year settlement	(210)	996	-	-	-	-	-
	\$86,379	\$70,996	\$61,200	\$52,500	\$45,000	\$34,800	\$35,850
<b>BEDFORD (2) (3)</b>							
HCF of use	716,278	750,000	750,000	750,000	488,000	488,000	488,000
Rate	2.00	1.98	2.04	1.20	1.24	1.27	1.31
Current year bills	\$1,434,409	\$1,485,000	\$1,530,000	\$900,000	\$603,168	\$621,263	\$639,901
Prior year settlement	(1,874)	22,374	-	-	-	-	-
	\$1,432,535	\$1,507,374	\$1,530,000	\$900,000	\$603,168	\$621,263	\$639,901
<b>CAMPBELL (2) (4)</b>							
HCF of use	261,500	256,000	256,000	256,000	256,000	256,000	256,000
Rate	2.00	2.00	2.04	2.10	2.25	2.32	2.39
Current year bills	\$523,064	\$512,000	\$522,240	\$537,600	\$576,000	\$593,920	\$611,840
Prior year settlement	(5,683)	(639)	-	-	-	-	-
	\$517,381	\$511,361	\$522,240	\$537,600	\$576,000	\$593,920	\$611,840
<b>ROCK TENN (5)</b>							
HCF of use	253,020	245,000	245,000	245,000	245,000	245,000	245,000
Rate	1.29	1.45	1.48	1.50	1.54	1.57	1.57
	\$325,662	\$355,250	\$362,600	\$367,500	\$377,300	\$384,650	\$384,650
<b>FRITO-LAY (5)</b>							
HCF of use	143,750	140,000	140,000	140,000	140,000	140,000	140,000
Rate	1.34	1.45	1.48	1.50	1.54	1.57	1.57
	\$192,881	\$203,000	\$207,200	\$210,000	\$215,600	\$219,800	\$219,800
	<b>\$2,554,838</b>	<b>\$2,647,981</b>	<b>\$2,683,240</b>	<b>\$2,067,600</b>	<b>\$1,817,068</b>	<b>\$1,854,433</b>	<b>\$1,892,041</b>

**Notes:**

1. Amherst water use assumed to decrease as the Central Virginia Training Center is phased-out.
2. Amherst and Campbell County water rates increase approximately 7% in FY 2018 due to inflation plus impacts of a factored decreased water use from Bedford County. After FY 2018 rates assumed to increase 3% per year
3. A conservative approach was used to project Bedford's County's combined revenues from FY 2017 through FY 2020 due to potential volume and/or rate change.
4. Campbell's water use includes water not used per existing take or pay contract.
5. Rock Tenn and Frito-Lay rates are based on cost of service rate calculations as per contract terms.

**CITY OF LYNCHBURG  
INTEREST & OTHER WATER REVENUES**

	<b>Actual</b>	<b>Est.</b>	<b>Budget</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>
	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<b>Investment earnings (1)</b>	21,508	25,000	24,000	24,000	24,000	24,000	24,000
<b>IRS interest rebate</b>	231,596	233,482	233,231	233,231	233,231	233,231	233,231
<b>Federal grants</b>	13,103	-	-	-	-	-	-
<b>All other</b>	9,436	11,000	11,000	11,000	11,000	11,000	11,000
	<b>\$275,643</b>	<b>\$269,482</b>	<b>\$268,231</b>	<b>\$268,231</b>	<b>\$268,231</b>	<b>\$268,231</b>	<b>\$268,231</b>

**Note:**

1. Investment earnings are based on an estimated .25% interest earnings rate on all cash and investment balances.

**CITY OF LYNCHBURG  
ADMIN. / ENGINEERING**

	<b>Actual</b>	<b>Est.</b>	<b>Budget</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>
	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
Personal services (1)	\$1,202,719	\$1,271,997	\$1,455,776	\$1,499,449	\$1,544,433	\$1,590,766	\$1,638,489
Fringe benefits	424,093	481,477	553,641	570,250	587,358	604,978	623,128
Supplies & materials	54,902	45,656	54,475	56,109	57,793	59,526	61,312
Gasoline / fuel	7,664	10,050	10,450	10,764	11,086	11,419	11,762
Internal service charges	18,777	24,453	27,603	28,431	29,284	30,163	31,067
Rentals & leases	5,151	4,500	5,000	5,150	5,305	5,464	5,628
Communication charges	13,047	13,900	14,750	15,193	15,648	16,118	16,601
Contractual services	175,802	159,353	133,231	137,228	141,345	145,585	149,953
Training & travel	13,672	15,547	15,000	15,450	15,914	16,391	16,883
Indirect costs (2)	852,890	1,099,940	845,105	870,458	896,572	923,469	951,173
City engineering charges (3)	46,112	0	0	0	0	0	0
Self - insurance	154,001	146,529	162,329	167,199	172,215	177,381	182,703
Miscellaneous	13,291	15,910	15,925	16,403	16,895	17,402	17,924
<b>Total</b>	<b>2,982,121</b>	<b>3,289,312</b>	<b>3,293,285</b>	<b>3,392,084</b>	<b>3,493,846</b>	<b>3,598,661</b>	<b>3,706,621</b>

**Notes:**

1. Personal services in FY 2016 assumes 24.6 staff positions will be filled throughout the year.
2. Indirect cost decrease in FY2016 is mostly attributable to General Fund's decreased engineering costs chargeable to Water Fund.
3. City engineering charges are included as part of the indirect cost starting in FY 2015.

**CITY OF LYNCHBURG  
WATER TREATMENT**

	<b>Actual</b>	<b>Est.</b>	<b>Budget</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>
	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
Personal services (1)	\$1,026,200	\$1,065,329	\$1,073,100	\$1,105,293	\$1,138,452	\$1,172,605	\$1,207,784
Fringe benefits	391,541	434,290	440,250	453,458	467,061	481,073	495,505
Supplies & materials	94,478	129,600	132,700	136,681	140,781	145,005	149,355
Chemicals (2) (3)	261,502	446,400	450,000	463,500	453,535	467,141	481,155
Gasoline / fuel	7,849	9,200	10,200	10,506	10,821	11,146	11,480
Internal service charges	32,804	31,360	24,426	25,159	25,914	26,691	27,492
Rentals & leases	972	4,000	4,000	4,120	4,244	4,371	4,502
Communication charges	10,992	12,800	12,600	12,978	13,367	13,768	14,181
Electricity (2) (3)	448,067	585,000	560,000	576,800	564,399	581,331	598,771
Other utilities	178,372	174,200	195,190	201,046	207,077	213,289	219,688
Contractual services	212,150	229,430	266,229	274,216	282,442	290,916	299,643
Training & travel	3,893	13,000	13,000	13,390	13,792	14,205	14,632
Misc., incl. operations fee	72,088	71,135	71,850	74,006	76,226	78,512	80,868
<b>Total</b>	<b>2,740,908</b>	<b>3,205,743</b>	<b>3,253,545</b>	<b>3,351,151</b>	<b>3,398,111</b>	<b>3,500,054</b>	<b>3,605,056</b>

**Notes:**

1. Personal services in FY 2016 assumes 24 staff positions will be filled throughout the year.
2. Chemicals and electricity includes a contingency for incremental cost of treating James River water in dry weather periods.
3. Chemicals and electricity expense reflect the impact of decreased water use from Bedford County beginning in FY 2018.

**CITY OF LYNCHBURG  
WATER LINE MAINTENANCE**

	<b>Actual</b>	<b>Est.</b>	<b>Budget</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>
	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
Personal services (1)	\$602,526	\$627,563	\$624,547	\$643,283	\$662,582	\$682,459	\$702,933
Fringe benefits	221,514	245,636	245,486	252,851	260,436	268,249	276,297
Supplies & materials	458,637	500,931	520,300	535,909	551,986	568,546	585,602
Gasoline / fuel	42,878	33,333	36,950	38,059	39,200	40,376	41,588
Internal service charges	97,974	129,588	153,995	158,615	163,373	168,274	173,323
Rentals & leases	1,229	3,500	3,500	3,605	3,713	3,825	3,939
Communication charges	1,636	3,200	3,150	3,245	3,342	3,442	3,545
Contractual services	159,991	200,544	220,406	227,018	233,829	240,844	248,069
Training & travel	5,660	3,750	4,250	4,378	4,509	4,644	4,783
Miscellaneous	72	3,770	3,880	3,996	4,116	4,240	4,367
<b>Total</b>	<b>1,592,117</b>	<b>1,751,815</b>	<b>1,816,464</b>	<b>1,870,958</b>	<b>1,927,087</b>	<b>1,984,899</b>	<b>2,044,446</b>

**Notes:**

1. Personal services in FY 2016 assumes 14.75 staff positions will be filled throughout the year.

**CITY OF LYNCHBURG  
METER READING**

	<b>Actual</b>	<b>Budget</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>
	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
Personal services (1)	\$261,450	\$266,004	\$251,920	\$259,478	\$267,262	\$275,280	\$283,538
Fringe benefits	99,564	108,778	108,707	111,968	115,327	118,787	122,351
Supplies & materials	348,745	419,200	408,125	420,369	432,980	445,969	459,348
Gasoline / fuel	19,607	19,030	20,050	20,652	21,271	21,909	22,566
Internal service charges	28,712	35,605	31,587	32,535	33,511	34,516	35,551
Rentals & leases	-	100	100	103	106	109	113
Communication charges	3,719	3,513	4,125	4,249	4,376	4,507	4,643
Contractual services	34,297	46,178	45,979	47,358	48,779	50,242	51,750
Training & travel	150	2,000	4,500	4,635	4,774	4,917	5,065
Miscellaneous	-	-	-	-	-	-	-
<b>Total</b>	<b>796,244</b>	<b>900,408</b>	<b>875,093</b>	<b>901,346</b>	<b>928,386</b>	<b>956,238</b>	<b>984,925</b>

**Notes:**

1. Personal services in FY 2016 assumes 7 staff positions will be filled throughout the year.

**CITY OF LYNCHBURG  
WATER NON-DEPARTMENTAL**

	<b>Actual</b>	<b>Est.</b>	<b>Budget</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>
	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
Financial audit	\$22,527	\$23,000	\$23,375	\$24,076	\$24,799	\$25,542	\$26,309
Interest on customer deposits	5,084	5,700	6,000	6,180	6,365	6,556	6,753
OPEB/Retirees health/WC insurance	110,788	179,700	188,076	193,718	199,530	205,516	211,681
Utility billing upgrades & other	-	-	-	-	-	-	-
Allowance for doubtful accounts	37,390	20,000	30,000	30,900	31,827	32,782	33,765
Budget compensation adjustments (1)	-	-	87,408	90,030	92,731	95,513	98,378
Project costs charged to operations	99,781	45,000	35,000	25,000	25,000	25,000	25,000
	<b>\$275,570</b>	<b>\$273,400</b>	<b>\$369,859</b>	<b>\$369,905</b>	<b>\$380,252</b>	<b>\$390,909</b>	<b>\$401,887</b>

**Notes:**

1. Budget compensation adjustments include assumed pay increases for all Water Fund sub-departments.

**CITY OF LYNCHBURG  
WATER FUND BONDS PAYABLE AND DEBT SERVICE**

	<b>Est.</b>	<b>Budget</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>
	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
P&I on borrowings o/s @ 6/30/14 (1)	\$3,329,748	\$3,308,015	\$3,194,433	\$3,042,762	\$2,779,423	\$2,502,228
G.O. Bond Issue July 10, 2014	934,855	1,008,300	986,050	963,800	941,550	919,300
Interest on LOC (2)	-	-	45,000	45,000	-	-
Debt Service payments on G.O. Bonds \$7.0 million issued in FY 2018 (3)	-	-	-	214,870	429,741	429,741
	<b>\$4,264,603</b>	<b>\$4,316,315</b>	<b>\$4,225,483</b>	<b>\$4,266,432</b>	<b>\$4,150,714</b>	<b>\$3,851,269</b>

**Notes:**

1. Based on Debt Book as of June 30, 2014.
2. Interest on LOC based on a 3.0% annual rate.
3. \$7.0 million G.O. bond issue assumed to occur in early FY 2018; Terms are assumed to be at 4.5%, 30 year repayment. First principal and interest payment assumed to occur in last quarter of FY 2018.

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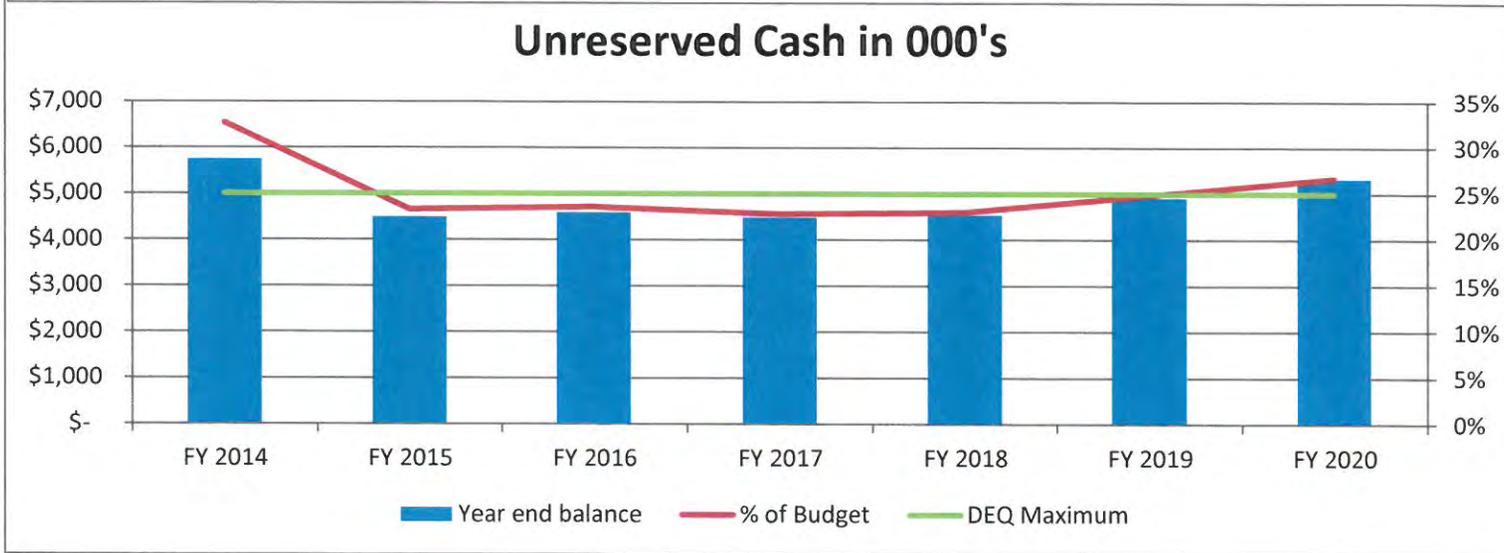
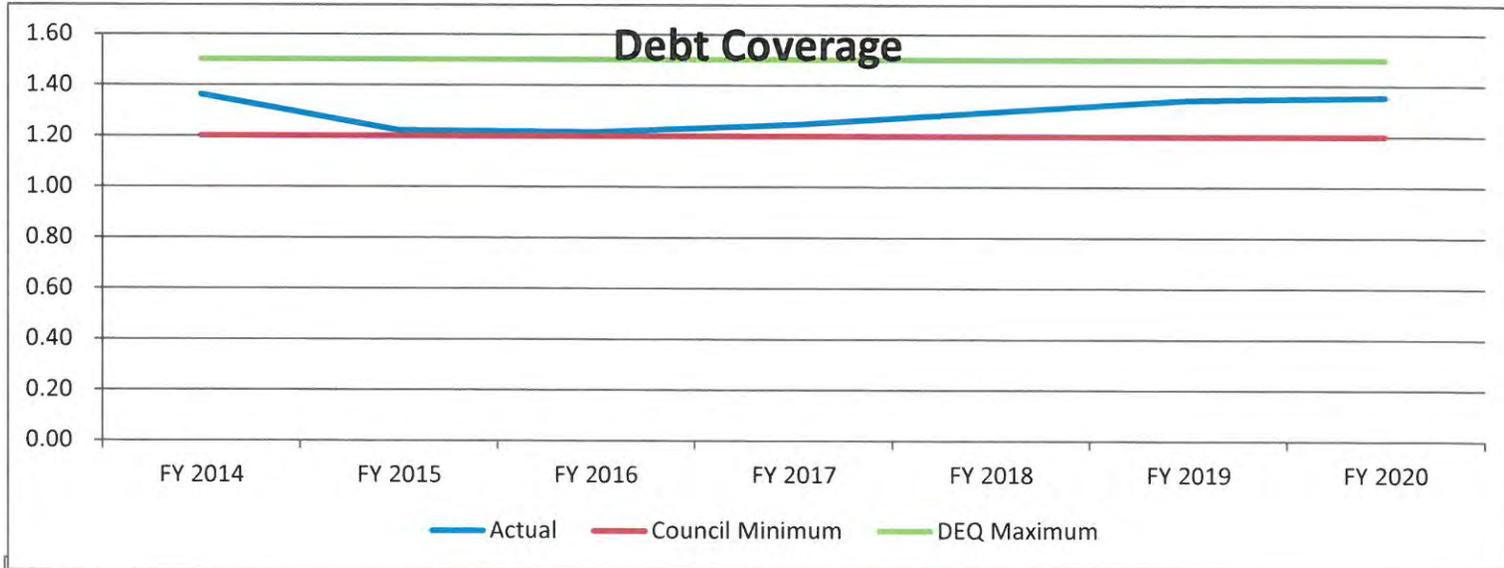
SEWER FUND  
FINANCIAL PROJECTIONS  
FY 2015 to FY 2020

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## SEWER FUND KEY ASSUMPTIONS

1. Annual sewer flow at the wastewater treatment plant (WWTP) averages 11.0 MGD during the projection period. Over the past five years WWTP flow has averaged 11.4 MGD and has ranged from 10.3 MGD in FY 2013 to 13.0 MGD in FY 2010.
2. The annual volume of wastewater billed to non-contract customers is estimated at 2.62 million HCF for each year during the projection period. Over the past five years the annual wastewater billed to non-contract customers has averaged 2.57 million HCF and has ranged from 2.51 million HCF in FY 2012 to 2.62 million HCF in FY 2014.
3. The annual wastewater flow applicable to Amherst, Bedford and Campbell Counties is assumed to increase slightly each year. Cost rates for wastewater treatment to the three counties are assumed to increase at the same rate as the increase in the wastewater treatment plant operating expenses. Capital payments from Campbell County in FY 2015 include a \$449,003 pre-payment on prior year financing arrangements offered by the City and as provided for by the wastewater treatment contract between the City and three counties.
4. The sewer volume rate is assumed to increase 3.2% in FY 2016; 2.9% in FY 2017; 2.3% in FY 2018 and 1.1% in FY 2019 and FY 2020. No increase in the account / fixed charge is projected during the projection period.
5. Sewer rates applicable to Rock Tenn. and Frito-Lay are based on recently negotiated rates. Sewer revenues from these two companies are projected to increase in the 4% to 5% range through FY 2019 and 2% in FY 2020. Septic hauler charges and industrial sur-charges are assumed to decrease due to declines in waste loadings.
6. Operating expenses in FY 2015 and FY 2016 are based on budget submission documents. Operating expenses after FY 2016 are assumed to increase 3% per year unless otherwise noted.
7. There are 52.45 equivalent full time approved staff positions in the Sewer Fund departments. One additional position is proposed for FY 2016. No new positions are assumed from FY 2017 to FY 2020.
8. The City was awarded a \$30.0 million grant in FY 2015 from the State to help finance the CSO program. As a result, no short term line of credit or G.O. borrowing is contemplated during the projection. However, a \$14.1 million loan from the Virginia Water Facility Revolving Fund is projected in FY 2018 to complete CSO projects scheduled to be constructed in FY 2019 and FY 2020. It is anticipated that the loan will be at 0%, 20 year repayment terms.
9. Additional assumptions are included on the following financial projections pages.

# SEWER FUND



CITY OF LYNCHBURG  
SEWER LOCAL CAPITAL FINANCING PLAN

	Est.	Budget	Proj.	Proj.	Proj.	Proj.
	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
<b>BEGINNING FUNDS (1)</b>	<b>\$3,892,691</b>	<b>\$8,515,067</b>	<b>\$5,232,208</b>	<b>\$1,988,226</b>	<b>\$643,226</b>	<b>\$533,226</b>
<b>RECEIPTS</b>						
Transfers	2,925,000	1,500,000	2,000,000	2,250,000	2,250,000	2,250,000
LOC borrowing	-	-	-	-	-	-
G.O. borrowing	5,747,768	-	-	-	-	-
<b>Total Receipts</b>	<b>8,672,768</b>	<b>1,500,000</b>	<b>2,000,000</b>	<b>2,250,000</b>	<b>2,250,000</b>	<b>2,250,000</b>
<b>EXPENDITURES</b>						
SSES	1,337,635	720,000	320,000	625,000	905,000	825,000
Sewer extensions	355,000	290,000	260,000	250,000	150,000	150,000
Sewer system improvements	1,036,849	747,905	890,000	1,165,000	1,065,000	1,065,000
RDP	10,000	20,000	30,000	45,000	45,000	45,862
WWTP control building	-	150,000	1,000,000	850,000	-	-
WWTP improvements	458,025	322,000	270,000	100,000	195,000	195,000
Blue Ridge Farms	400,000	347,564	496,000	560,000	-	-
Burton Creek interceptor	400,000	2,000,000	1,977,982	-	-	-
College Hill Water Plant	25,000	125,000	-	-	-	-
Other	27,883	60,390	-	-	-	-
<b>Total Expenditures</b>	<b>4,050,392</b>	<b>4,782,859</b>	<b>5,243,982</b>	<b>3,595,000</b>	<b>2,360,000</b>	<b>2,280,862</b>
<b>ENDING FUNDS</b>	<b>\$8,515,067</b>	<b>\$5,232,208</b>	<b>\$1,988,226</b>	<b>\$643,226</b>	<b>\$533,226</b>	<b>\$502,364</b>

**Notes:**

1. Beginning funds in FY 2015 equals cash and investments in the Sewer Capital Fund.

**CITY OF LYNCHBURG  
SEWER VCWRLF & GRANT FINANCING PLAN**

	Est.	Budget	Proj.	Proj.	Proj.	Proj.
	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
<b>BEGINNING FUNDS</b>	<b>\$ 30,067,405</b>	<b>\$ 23,770,459</b>	<b>\$ 19,322,264</b>	<b>\$ 9,872,264</b>	<b>\$ 14,761,141</b>	<b>\$ 6,472,911</b>
<b>RECEIPTS</b>						
State grant reimbursements	-	-	-	-	-	-
VCWRLF loan approvals - 0%	-	-	-	14,115,647	-	-
<b>Total Receipts</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>14,115,647</b>	<b>-</b>	<b>-</b>
<b>EXPENDITURES FROM STATE GRANT</b>						
JRI 3A	244,306					
JRI 3B	5,581,997	2,583,295	-	-	-	-
CSO 125	90,785	264,900	-	-	-	-
CSO 61	31,000		-	-	-	-
CSO - WWTP PER/Design		1,054,506	1,450,000	1,250,000	-	-
CSO - WWTP - headwork construction	-	-	8,000,000	7,976,770	-	-
CSO - WWTP Disinfection					645,494	
<b>Total Expenditures from State Grant</b>	<b>5,948,088</b>	<b>3,902,701</b>	<b>9,450,000</b>	<b>9,226,770</b>	<b>645,494</b>	<b>-</b>
<b>EXPENDITURES FROM VCWRLF LOANS</b>						
Long Term Control Plan	67,190	-	-	-	-	-
CSO 1D3.2	534					
CSO 16.3A	19,186					
JRI 3A	25,428					
College Hill parking lot	136,520	-	-	-	-	-
CSO WWTP PER Design	100,000	545,494	-	-	-	-
CSO - WWTP Disinfection	-	-	-	-	2,257,736	1,087,911
CSO - WWTP tanks	-	-	-	-	5,385,000	5,385,000
<b>Total Expenditures from VCWRLF loans</b>	<b>348,858</b>	<b>545,494</b>	<b>-</b>	<b>-</b>	<b>7,642,736</b>	<b>6,472,911</b>
<b>ENDING FUNDS</b>	<b>\$ 23,770,459</b>	<b>\$ 19,322,264</b>	<b>\$ 9,872,264</b>	<b>\$ 14,761,141</b>	<b>\$ 6,472,911</b>	<b>\$ -</b>

**Notes:**

1. Beginning funds and VCWRLF loan approvals are funds held by DEQ on behalf of the City. No interest is earned on these funds.
2. Beginning Funds based on July Schedule 1 remaining balances.

\$30.0 million CSO Grant from State	\$ 29,173,053
\$ 10.1 million VCWRLF	894,352
	<u>\$ 30,067,405</u>

**CITY OF LYNCHBURG  
PROJECTED STATEMENT OF SEWER FUND DEBT COVERAGE**

	<b>Actual</b>	<b>Est.</b>	<b>Budget</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>
	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<b>Revenues:</b>							
Charges for services	\$17,242,509	\$17,432,937	\$17,924,722	\$18,390,882	\$18,778,994	\$18,984,198	\$19,190,051
Sewer contracts	3,220,261	3,677,621	3,332,495	3,457,990	3,569,059	3,691,234	3,726,064
Interest and other	220,520	203,334	203,733	68,799	63,099	62,099	64,349
<b>Total Revenues</b>	<b>20,683,290</b>	<b>21,313,892</b>	<b>21,460,950</b>	<b>21,917,671</b>	<b>22,411,152</b>	<b>22,737,531</b>	<b>22,980,464</b>
<b>Expenses:</b>							
WWTP	6,773,133	7,488,698	7,582,424	7,808,047	8,045,588	8,290,256	8,542,263
Sewer line maintenance	2,021,496	2,433,320	2,301,243	2,441,199	2,464,435	2,538,368	2,614,519
Non-departmental	305,708	282,833	345,963	356,342	367,032	378,043	389,384
Capitalizable cost (1)	(159,026)	(145,000)	(149,350)	(153,831)	(158,445)	(163,199)	(168,095)
<b>Total Expenses</b>	<b>8,941,311</b>	<b>10,059,851</b>	<b>10,080,280</b>	<b>10,451,757</b>	<b>10,718,610</b>	<b>11,043,468</b>	<b>11,378,072</b>
<b>Operating Income</b>	<b>11,741,979</b>	<b>11,254,041</b>	<b>11,380,670</b>	<b>11,465,914</b>	<b>11,692,542</b>	<b>11,694,063</b>	<b>11,602,391</b>
<b>Debt service</b>	<b>8,625,165</b>	<b>9,223,035</b>	<b>9,370,095</b>	<b>9,215,034</b>	<b>9,026,910</b>	<b>8,712,659</b>	<b>8,570,466</b>
<b>Net Revenue</b>	<b>\$3,116,814</b>	<b>\$2,031,006</b>	<b>\$2,010,575</b>	<b>\$2,250,880</b>	<b>\$2,665,632</b>	<b>\$2,981,404</b>	<b>\$3,031,925</b>
<b>Debt Coverage Ratio</b>	<b>1.36</b>	<b>1.22</b>	<b>1.21</b>	<b>1.24</b>	<b>1.30</b>	<b>1.34</b>	<b>1.35</b>

**Notes:**

1. Capitalizable cost includes internal labor charges applicable to time spent on capital project activities.

**CITY OF LYNCHBURG  
PROJECTED STATEMENT OF SEWER FUND SOURCES & USES of CASH**

	<b>Actual</b>	<b>Est.</b>	<b>Budget</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>
	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<b>Sources of Cash:</b>							
Beginning cash balance	\$8,891,197	\$9,634,898	\$13,006,280	\$9,819,645	\$6,472,712	\$5,184,900	\$5,443,104
Net revenue plus capitalized costs	2,957,788	1,886,006	1,861,225	2,097,049	2,507,187	2,818,205	2,863,830
LOC borrowing		-	-	-	-	-	-
G.O. bond proceeds, net (1)	-	5,747,768	-	-	-	-	-
State grant reimbursements	-	5,948,088	3,902,701	9,450,000	9,226,770	645,494	-
VWFRF loan draw downs	8,470,494	348,858	545,494.00	-	-	7,642,736	6,472,911
Proceeds from sale of assets	71,000	-	-	-	-	-	-
Proceeds from other organizations, net	611,480	-	-	-	-	-	-
<b>Total Sources of Cash</b>	<b>21,001,959</b>	<b>23,565,618</b>	<b>19,315,699</b>	<b>21,366,694</b>	<b>18,206,670</b>	<b>16,291,334</b>	<b>14,779,846</b>
<b>Uses of Cash:</b>							
Capital & VCWRLF expenditures	11,425,399	10,347,338	9,231,054	14,693,982	12,821,770	10,648,230	8,753,773
Other capital expenditures	-	212,000	265,000	200,000	200,000	200,000	200,000
LOC repayment	-	-	-	-	-	-	-
Change in working capital items & other	(58,338)	-	-	-	-	-	-
<b>Total Uses of Cash</b>	<b>11,367,061</b>	<b>10,559,338</b>	<b>9,496,054</b>	<b>14,893,982</b>	<b>13,021,770</b>	<b>10,848,230</b>	<b>8,953,773</b>
<b>Ending Cash</b>	<b>\$9,634,898</b>	<b>\$13,006,280</b>	<b>\$9,819,645</b>	<b>\$6,472,712</b>	<b>\$5,184,900</b>	<b>\$5,443,104</b>	<b>\$5,826,073</b>

Cash in capital fund	\$3,892,691	\$8,515,067	\$5,232,208	\$1,988,226	\$643,226	\$533,226	\$502,364
Unrestricted cash	5,742,207	4,491,213	4,587,437	4,484,486	4,541,674	4,909,878	5,323,709
<b>Total cash</b>	<b>\$9,634,898</b>	<b>\$13,006,280</b>	<b>\$9,819,645</b>	<b>\$6,472,712</b>	<b>\$5,184,900</b>	<b>\$5,443,104</b>	<b>\$5,826,073</b>
Unrestricted cash as a % of budget	33%	23%	24%	23%	23%	25%	27%

**Notes:**

1. G.O. bond proceeds in FY 2015 is actual

**CITY OF LYNCHBURG  
CHARGES FOR SERVICES**

	Actual	Est.	Budget	Proj.	Proj.	Proj.	Proj.
	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
<b>CITY CUSTOMERS</b>							
HCF of use	2,621,921	2,622,000	2,622,000	2,622,000	2,622,000	2,622,000	2,622,000
Rate (1)	5.65	5.65	5.83	6.00	6.14	6.21	6.28
	\$14,813,852	\$14,814,300	\$15,286,260	\$15,732,000	\$16,099,080	\$16,282,620	\$16,466,160
<b>ALL OTHER:</b>							
Account / Fixed charge (2)	870,186	1,270,800	1,270,800	1,270,800	1,270,800	1,270,800	1,270,800
VDOT reimbursement	-	-	-	-	-	-	-
College Hill backwash	126,732	130,534	134,450	138,484	142,638	146,917	151,325
Leachate treatment	68,061	70,102	72,206	74,372	76,603	78,901	81,268
Septic hauler charges (3)	542,983	500,000	500,000	500,000	500,000	500,000	500,000
Industrial pre-treatment	2,212	4,500	4,635	4,774	4,917	5,065	5,217
Industrial surcharges (3)	468,846	318,000	327,540	337,366	347,487	357,912	368,649
Industrial monitoring	41,336	35,000	36,050	37,132	38,245	39,393	40,575
Cut-on penalties	102,547	96,000	98,880	101,846	104,902	108,049	111,290
Connection charges (4)	106,570	75,000	75,000	75,000	75,000	75,000	75,000
Availability charges (4)	81,198	100,000	100,000	100,000	100,000	100,000	100,000
Sewer cost plus	10,886	12,000	12,000	12,000	12,000	12,000	12,000
Collection & Tax Lien Fees	7,100	6,700	6,901	7,108	7,321	7,541	7,767
All other	-	-	-	-	-	-	-
	2,428,657	2,618,637	2,638,462	2,658,882	2,679,914	2,701,578	2,723,891
	<b>\$17,242,509</b>	<b>\$17,432,937</b>	<b>\$17,924,722</b>	<b>\$18,390,882</b>	<b>\$18,778,994</b>	<b>\$18,984,198</b>	<b>\$19,190,051</b>

**Notes:**

1. Sewer volume rate assumed to increase 3.2% in FY 2016; 2.9% in FY 2017; 2.3% in FY 2018; 1.1% in FY 2019 and FY 2010.
2. Account / Fixed charge increased in FY 2015 due to a \$2.00 increase in the fixed charge by meter size equivalent effective July 1, 2014. No increase in this charge is planned over the next five years at this time.
3. Decrease in septic hauler and industrial sur-charges is due to reduce waste loadings.
4. Availability and connection fees for FY 2015 - FY 2020 are conservative due to uncertainty in real estate development.

**CITY OF LYNCHBURG  
SEWER CONTRACTS**

	<b>Actual</b>	<b>Est.</b>	<b>Budget</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>
	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<b>AMHERST</b>							
Operating (1)	\$189,662	\$196,596	\$212,308	\$218,625	\$225,276	\$232,127	\$239,183
Existing capital amort.	271,798	269,592	256,331	255,736	252,780	249,896	247,009
Prior Year O&M settlement	5,692	10,764	-	-	-	-	-
Capital PAYGO.	30,001	15,045	26,946	25,901	25,560	23,856	26,128
Future capital - Financed	-	-	2,997	6,421	8,973	30,121	39,750
	<b>497,153</b>	<b>491,997</b>	<b>498,582</b>	<b>506,683</b>	<b>512,589</b>	<b>536,000</b>	<b>552,070</b>
<b>BEDFORD</b>							
Operating (1)	228,000	228,000	227,473	234,241	241,368	248,708	256,268
Existing capital amort.	217,973	222,020	214,199	211,857	194,758	138,976	111,578
Prior Year O&M settlement	(35,147)	(32,146)	-	-	-	-	-
Capital PAYGO.	26,150	32,231	22,579	20,703	23,251	24,115	15,925
Future capital - Financed	-	0	558	1,135	1,135	8,437	8,437
	<b>436,976</b>	<b>450,105</b>	<b>464,809</b>	<b>467,936</b>	<b>460,512</b>	<b>420,236</b>	<b>392,208</b>
<b>CAMPBELL</b>							
Operating (1)	191,000	214,211	219,890	226,433	233,322	240,417	247,726
Existing capital amort. (2)	127,576	508,600	55,533	55,532	55,531	55,531	55,531
Prior Year O&M settlement	7,463	8,875	-	-	-	-	-
Capital PAYGO.	25,681	32,345	24,887	28,210	23,251	24,115	15,925
Future capital - Financed	-	-	722	722	722	31,495	31,495
	<b>351,720</b>	<b>764,031</b>	<b>301,032</b>	<b>310,897</b>	<b>312,826</b>	<b>351,558</b>	<b>350,677</b>
<b>INDUSTRIAL</b>							
Rock Tenn (3)	1,042,550	1,075,825	1,139,117	1,207,702	1,281,063	1,342,523	1,369,373
Frito-Lay (4)	891,862	895,663	928,955	964,771	1,002,069	1,040,917	1,061,735
	<b>1,934,412</b>	<b>1,971,488</b>	<b>2,068,072</b>	<b>2,172,473</b>	<b>2,283,132</b>	<b>2,383,440</b>	<b>2,431,109</b>
	<b>\$3,220,261</b>	<b>\$3,677,621</b>	<b>\$3,332,495</b>	<b>\$3,457,990</b>	<b>\$3,569,059</b>	<b>\$3,691,234</b>	<b>\$3,726,064</b>

**Notes:**

1. County operating revenues based on % of WWTP expenses (Amherst-2.8%, Bedford-3.0%, Campbell-2.9%).
2. Campbell County's existing capital amortization payments increase in FY 2015 due to a pre-payment on prior capital financing provided by the Sewer Fund.
3. Rock Tenn revenues are assumed to increase 5% - 6% per year through FY 2019; then 2% per year.
4. Frito-Lay revenues are assumed to increase 4% per year through FY 2019; then 2% per year.

**CITY OF LYNCHBURG  
OTHER SEWER REVENUES**

	<b>Actual</b>	<b>Est.</b>	<b>Budget</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>
<b>Other Revenues</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
Interest revenue (1)	23,904	28,300	28,400	20,200	14,500	13,500	15,750
State highway maintenance	-	-	-	-	-	-	-
Federal grant - Derecho	10,759						
Miscellaneous revenue	11,170	6,000	6,000	6,000	6,000	6,000	6,000
Gain (loss) on asset disposal	5,653						
SW Fund start-up repayment (2)	126,734	126,734	126,734	-	-	-	-
IRS interest rebate	42,300	42,300	42,599	42,599	42,599	42,599	42,599
	<b>\$220,520</b>	<b>\$203,334</b>	<b>\$203,733</b>	<b>\$68,799</b>	<b>\$63,099</b>	<b>\$62,099</b>	<b>\$64,349</b>

**Notes:**

1. Investment earnings are based on an estimated .25% interest earnings rate on all cash and investment balances.
2. SW Fund start-up repayment is a transfer from the Stormwater Fund to recover the cost incurred by the Sewer Fund to study, organize and implement the Stormwater Fund and fee.

**CITY OF LYNCHBURG  
WASTEWATER TREATMENT**

	<b>Actual</b>	<b>Est.</b>	<b>Budget</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>
	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
Personal services (1)	\$1,534,438	\$1,594,473	\$1,663,505	\$1,713,410	\$1,764,812	\$1,817,757	\$1,872,290
Fringe benefits	559,826	614,342	646,499	665,894	685,871	706,447	727,640
Supplies & materials	401,133	450,275	449,500	462,985	476,875	491,181	505,916
Sludge disposal - landfill	533,417	575,000	550,000	566,500	583,495	601,000	619,030
Chemicals	612,390	640,000	655,000	674,650	694,890	715,736	737,208
Gasoline / fuel	39,299	36,500	51,500	53,045	54,636	56,275	57,964
Internal service charges	157,598	170,366	191,131	196,865	202,771	208,854	215,120
Rentals & leases	4,389	6,000	6,000	6,180	6,365	6,556	6,753
Communication charges	7,241	9,100	9,100	9,373	9,654	9,944	10,242
Electricity	792,670	790,000	800,000	824,000	848,720	874,182	900,407
Other utilities (2)	61,537	124,300	128,300	132,149	136,113	140,197	144,403
Contractual services	814,750	921,233	1,036,127	1,067,211	1,099,227	1,132,204	1,166,170
Training & meetings	23,194	16,700	19,700	20,291	20,900	21,527	22,173
Indirect costs (3)	488,021	767,680	567,892	584,929	602,477	620,551	639,167
Self-insurance	48,470	48,470	55,770	57,443	59,166	60,941	62,770
Water Adm. Services	791,000	812,000	827,400	852,222	877,789	904,122	931,246
Nutrient payments (4)	-	-	-	-	-	-	-
Nutrient sales (4)	(125,071)	(110,000)	(105,000)	(110,000)	(110,000)	(110,000)	(110,000)
Misc.	28,831	22,259	30,000	30,900	31,827	32,782	33,765
	<b>6,773,133</b>	<b>7,488,698</b>	<b>7,582,424</b>	<b>7,808,047</b>	<b>8,045,588</b>	<b>8,290,256</b>	<b>8,542,263</b>

**Notes:**

1. Personal services in FY 2016 assumes 38 staff positions will be filled throughout the year.
2. Other utilities increase in FY 2015 due to uncertainty of length of cold weather.
3. Indirect cost decrease in FY2016 is mostly attributable to General Fund's decreased engineering costs chargeable to Sewer Fund.
4. Nutrient Payments/Sales represent net purchases and sales of Chesapeake Bay Nutrient Credits for nitrogen and phosphorus within the Virginia Nutrient Credit Exchange Association.

**CITY OF LYNCHBURG  
SEWER LINE MAINTENANCE**

	<b>Actual</b>	<b>Est.</b>	<b>Budget</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>
	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
Personal services (1)	\$485,624	\$582,300	\$591,787	\$609,541	\$627,827	\$646,662	\$666,061
Fringe benefits	192,501	245,007	247,286	254,705	262,346	270,216	278,323
Supplies & materials	142,686	160,231	190,000	195,700	201,571	207,618	213,847
Gasoline / fuel	45,916	67,155	53,400	55,002	56,652	58,352	60,102
Internal service charges (2)	167,578	222,520	130,176	205,000	211,150	217,485	224,009
Rentals & leases	1,297	8,940	3,000	3,090	3,183	3,278	3,377
Communication charges	3,660	4,700	5,600	5,768	5,941	6,119	6,303
Contractual services (3)	214,360	294,816	356,350	367,041	328,052	337,893	348,030
Training & meetings	4,867	4,150	4,950	5,099	5,251	5,409	5,571
Indirect costs (4)	203,812	342,794	206,437	212,630	219,009	225,579	232,347
Self-insurance	152,257	152,257	157,257	161,975	166,834	171,839	176,994
City engineering charges (5)	67,938	0	0	0	0	0	0
Water Adm. Services	339,000	348,000	354,600	365,238	376,195	387,481	399,105
Miscellaneous Expenses	-	450	400	412	424	437	450
	<b>2,021,496</b>	<b>2,433,320</b>	<b>2,301,243</b>	<b>2,441,199</b>	<b>2,464,435</b>	<b>2,538,368</b>	<b>2,614,519</b>

**Notes:**

1. Personal services in FY 2016 assumes 15.45 staff positions will be filled throughout the year.
2. Internal service charges fluctuate due to changes in vehicle replacement cost estimates.
3. Increase in contractual charges is due, in part, to implementation of the Collections Management Operations Management (CMOM) program.
4. Indirect cost decrease in FY2016 is mostly attributable to General Fund's decreased engineering costs chargeable to Sewer Fund.
5. City engineering charges are part of indirect costs starting in FY 2015.

**CITY OF LYNCHBURG  
NON-DEPARTMENTAL-SEWER**

	<b>Est.</b>	<b>Budget</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>
	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
Financial audit	\$17,186	\$17,875	\$18,411	\$18,964	\$19,532	\$20,118
Allowance for doubtful accounts	35,000	40,000	41,200	42,436	43,709	45,020
OPEB/Retirees health/WC insurance	230,647	230,647	237,566	244,693	252,034	259,595
Legal & professional (CSO)	-	-	-	-	-	-
Major sewer line cleaning	-	-	-	-	-	-
Compensation adjustments (1)	-	57,441	59,164	60,939	62,767	64,650
Project costs charged to operations	-	-	-	-	-	-
	<b>\$282,833</b>	<b>\$345,963</b>	<b>\$356,342</b>	<b>\$367,032</b>	<b>\$378,043</b>	<b>\$389,384</b>

**Notes:**

1. Budget compensation adjustments include assumed pay increases for all Sewer Fund sub-departments.

**CITY OF LYNCHBURG  
SEWER FUND BONDS PAYABLE**

	<b>Est.</b>	<b>Budget</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>
	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
P&I on debt o/s @ 6/30/14 (1)	8,846,703	8,962,095	8,816,034	8,636,910	8,331,659	7,492,684
July 10, 2014 G.O. Bond Issue	376,332	408,000	399,000	390,000	381,000	372,000
Interest on LOC borrowing (2)	-	-	-	-	-	-
P&I payments on G.O. bonds (2)	-	-	-	-	-	-
VWFRF debt service	-	-	-	-	-	705,782
	<b>\$9,223,035</b>	<b>\$9,370,095</b>	<b>\$9,215,034</b>	<b>\$9,026,910</b>	<b>\$8,712,659</b>	<b>\$8,570,466</b>

**NOTES:**

1. Based on Debt Book as of June 30, 2014.
2. No G.O or LOC financing assumed to be needed after FY 2015 through FY 2020.
3. VWFRF debt service based on a \$14.1 million loan closed June 30, 2018. Interest assumed to be at 0% with a 20 year repayment term starting in FY 2020.

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STORMWATER FUND  
FINANCIAL PROJECTIONS  
FY 2015 to FY 2020

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**CITY OF LYNCHBURG  
STORMWATER CAPITAL FINANCING PLAN**

	<b>Est.</b>	<b>Budget</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>
	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<b>Sources of Financing:</b>						
Beginning funds (1)	\$ 1,118,338	\$ 743,650	\$ 3,010,480	\$ 2,426,430	\$ 4,346,430	\$ 6,596,430
Transfer from operations	1,050,000	1,150,000	900,000	600,000	400,000	350,000
SLAF grant (2)	-	1,705,275	-	-	-	-
VWFRF loans (3)	-	1,705,275	1,665,000	3,555,000	5,905,000	5,000,000
total receipts	2,168,338	5,304,200	5,575,480	6,581,430	10,651,430	11,946,430
<b>Capital Expenditures:</b>						
System infrastructure	317,832	399,720	610,000	245,000	260,000	205,000
Master planning (4)	887,356	270,000	640,000	570,000	500,000	350,000
Quality improvements	219,500	1,574,000	1,799,050	1,270,000	3,145,000	5,500,000
Coordinated capital (5)	-	50,000	100,000	150,000	150,000	200,000
total expenditures	1,424,688	2,293,720	3,149,050	2,235,000	4,055,000	6,255,000
<b>Ending Capital Funds (6)</b>	<b>\$ 743,650</b>	<b>\$ 3,010,480</b>	<b>\$ 2,426,430</b>	<b>\$ 4,346,430</b>	<b>\$ 6,596,430</b>	<b>\$ 5,691,430</b>

**Notes:**

1. Beginning funds in FY 2015 equals cash and investments in the Stormwater Capital Fund.
2. SLAF grant has been awarded and is earmarked for stormwater quality improvements projects needed to meet the first permit cycle water quality goals by FY 2018. The grant is for project expenditures in FY 2016 and FY 2017.
3. VWFRF loans all assumed to be awarded in quarter 3 of the year shown and used for expenditures in the subsequent year.
4. Master planning expenditures will be funded from operating transfers.
5. Coordinated capital expenditures include projects that are planned and constructed as part of General Fund projects.
6. Ending capital funds include SLAF grant and VWFRF loan amounts that are reserved for specific project expenditures, most of which are in the subsequent year.

**CITY OF LYNCHBURG  
PROJECTED STATEMENT OF STORMWATER DEBT COVERAGE**

	<b>Actual</b>	<b>Est.</b>	<b>Budget</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>
	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<b>Revenues:</b>							
Charges for services	\$ 3,124,545	\$ 3,149,400	\$ 3,149,400	\$ 3,149,400	\$ 3,475,900	\$ 3,475,900	\$ 3,737,100
General Fund transfer (VDOT)	650,000	275,000	275,000	275,000	275,000	275,000	275,000
Interest & other	-	114,412	57,278	57,278	57,278	57,278	57,278
total revenues	3,774,545	3,538,812	3,481,678	3,481,678	3,808,178	3,808,178	4,069,378
<b>Expenses:</b>							
Departmental	\$2,565,294	\$2,125,277	\$2,475,725	\$2,557,510	\$2,915,311	\$3,052,770	\$3,144,353
Non-Departmental	30,418	27,800	39,780	40,454	41,149	41,865	42,601
Incremental O&M (1)	-	-	-	20,000	45,000	145,000	245,000
total expenses	2,595,712	2,153,077	2,515,505	2,617,964	3,001,460	3,239,634	3,431,954
<b>Operating Income</b>	1,178,833	1,385,735	966,173	863,714	806,718	568,544	637,424
<b>Debt Service</b>	-	-	-	-	85,264	168,514	346,264
<b>Net Revenue</b>	1,178,833	1,385,735	966,173	863,714	721,455	400,030	291,160
<b>Debt Coverage Ratio</b>	n/a	n/a	n/a	n/a	9.46	3.37	1.84

**Notes:**

1. Incremental O&M expenses is a best estimate of future expenses needed to maintain BMPs constructed as part of Quality Improvement capital projects.

**CITY OF LYNCHBURG  
PROJECTED STATEMENT OF STORMWATER SOURCES & USES OF CASH**

	<b>Actual</b>	<b>Est.</b>	<b>Budget</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>
	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<b>Sources of Cash:</b>							
Beginning cash balance	\$ 1,419,613	\$ 2,012,843	\$ 1,473,479	\$ 2,481,085	\$ 3,705,274	\$ 6,921,729	\$ 8,719,259
Net revenue	1,178,833	1,385,735	966,173	863,714	721,455	400,030	291,160
LOC borrowing	-	-	-	-	-	-	-
SLAF grant drawdowns	-	-	805,750	899,525	-	-	-
VWFRF loan drawdowns (1)	-	-	1,685,138	2,610,000	4,730,000	5,452,500	5,000,000
total sources of cash	<b>2,598,446</b>	<b>3,398,578</b>	<b>4,930,539</b>	<b>6,854,324</b>	<b>9,156,729</b>	<b>12,774,259</b>	<b>14,010,419</b>
<b>Uses of Cash:</b>							
Capital Fund expenditures	463,005	1,424,688	2,293,720	3,149,050	2,235,000	4,055,000	6,255,000
Payment to Sewer Fund (2)	126,734	126,734	126,734	-	-	-	-
Vactor Truck	-	373,677	-	-	-	-	-
Departmental capital outlays	9,625	-	29,000	-	-	-	-
Working capital changes	(13,761)	-	-	-	-	-	-
total uses of cash	<b>585,603</b>	<b>1,925,099</b>	<b>2,449,454</b>	<b>3,149,050</b>	<b>2,235,000</b>	<b>4,055,000</b>	<b>6,255,000</b>
<b>Ending Cash</b>	<b>2,012,843</b>	<b>1,473,479</b>	<b>2,481,085</b>	<b>3,705,274</b>	<b>6,921,729</b>	<b>8,719,259</b>	<b>7,755,419</b>
Less Available cash in Capital Fund (3)	1,118,338	743,650	2,090,817	3,351,292	6,446,292	8,243,792	7,338,792
<b>Unrestricted Cash</b>	<b>\$ 894,505</b>	<b>\$ 729,829</b>	<b>\$ 390,268</b>	<b>\$ 353,982</b>	<b>\$ 475,436</b>	<b>\$ 475,466</b>	<b>\$ 416,626</b>
<b>Unrestricted cash as a % of budget</b>	34%	34%	16%	14%	15%	14%	11%

**Notes:**

1. VWFRF loans are assumed to be awarded in January of each fiscal year shown above.
2. Payments to the Sewer Fund are for reimbursement of stormwater related start-up expenses paid by the Sewer Fund prior to FY 2014.
3. Available Cash in Capital Fund excludes amounts expected to be reserved for specific project expenditures that will be funded from SLAF and VWFRF loans in the subsequent year.

**CITY OF LYNCHBURG  
STORMWATER CHARGES for SERVICES & DEPARTMENTAL EXPENSES**

	Actual	Est.	Budget	Proj.	Proj.	Proj.	Proj.
	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
<b>Charges for Services:</b>							
SFUs billed		65,300	65,300	65,300	65,300	65,300	65,300
Annual rate (1)		48	48	48	53	53	57
Annual billed revenue	3,107,774	3,134,400	3,134,400	3,134,400	3,460,900	3,460,900	3,722,100
Delinquent account charges	16,771	15,000	15,000	15,000	15,000	15,000	15,000
	<b>\$ 3,124,545</b>	<b>\$ 3,149,400</b>	<b>\$ 3,149,400</b>	<b>\$ 3,149,400</b>	<b>\$ 3,475,900</b>	<b>\$ 3,475,900</b>	<b>\$ 3,737,100</b>
<b>Departmental Expenses:</b>							
Personal services (2)	\$ 294,985	\$ 260,494	\$ 284,268	\$ 292,796	\$ 301,580	\$ 360,627	\$ 371,446
Fringe benefits	114,603	111,120	120,822	124,447	128,180	132,025	135,986
Contractual charges	85,203	97,520	157,087	161,800	166,654	171,653	176,803
Internal service charged	103,913	104,964	108,540	111,796	115,150	118,605	122,163
Water Adm. Services (3)	450,000	470,000	572,000	589,160	606,835	625,040	643,791
Indirect costs (4)	81,807	107,986	107,328	118,061	402,678	414,758	427,201
Community Development charges (5)	388,873	467,235	499,003	513,973	529,392	545,274	561,632
PW charges (6)	917,194	308,000	360,599	371,417	382,560	394,036	405,858
Other charges	128,324	197,260	265,578	273,545	281,752	290,204	298,910
Rental & leases	392	699	500	515	530	546	563
	<b>\$ 2,565,294</b>	<b>\$ 2,125,277</b>	<b>\$ 2,475,725</b>	<b>\$ 2,557,510</b>	<b>\$ 2,915,311</b>	<b>\$ 3,052,770</b>	<b>\$ 3,144,353</b>

**Notes:**

1. No change in \$4.00 monthly stormwater charge assumed through FY 2017. Thereafter an 8.3% increase is assumed in FY 2018 and 7.5% increase in FY 2020.
2. Personal services in FY 2016 assumes 7.05 FTE staff. Increase in FY 2019 is due to additional maintenance requirements on BMPs.
3. Water Adm. Services is based on Water Fund Engineering / Adm cost allocations to Stormwater Fund.
4. Indirect costs are based on actual cost but with a three year time delay per budget policy.
5. Community Development charges are for administration of the Erosion Sediment Control (ESC) and Virginia Stormwater Management Program (VSMP) programs which includes plan reviews, inspections and enforcement of new development and re-development.
6. Beginning with FY 2015, the reimbursement program for Public Works services was revised to included only engineering services and 50% leaf collection compared to previous years that included other maintenance activities.

**CITY OF LYNCHBURG  
STORMWATER NON-DEPARTMENTAL EXPENSES**

	<b>Actual</b>	<b>Est.</b>	<b>Budget</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>
	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
Financial audit	\$ 3,975	\$ 4,500	\$ 6,875	\$ 7,081	\$ 7,294	\$ 7,512	\$ 7,738
Allowance for doubtful accounts	21,676	17,300	17,300	17,300	17,300	17,300	17,300
OPEB / retirees health	4,767	6,000	8,250	8,498	8,752	9,015	9,285
Budget compensation adjustments (1)	-	-	7,355	7,576	7,803	8,037	8,278
	<b>\$ 30,418</b>	<b>\$ 27,800</b>	<b>\$ 39,780</b>	<b>\$ 40,454</b>	<b>\$ 41,149</b>	<b>\$ 41,865</b>	<b>\$ 42,601</b>

Notes:

1. Budget compensation adjustments include assumed pay increases for employees assigned to the Stormwater sub-department.

**CITY OF LYNCHBURG  
STORMWATER DEBT SERVICE**

	<b>Est.</b>	<b>Budget</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>	<b>Proj.</b>
	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
P&I on debt o/s @ 6/30/14	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Interest on LOC borrowing	-	-	-	-	-	-
VWFRF debt service on: (1)						
\$1,705,275 loan closed in FY 2015	-	-	-	85,264	85,264	85,264
\$1,665,000 loan closed in FY 2016	-	-	-	-	83,250	83,250
\$3,555,000 loan closed in FY 2017	-	-	-	-	-	177,750
	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 85,264</b>	<b>\$ 168,514</b>	<b>\$ 346,264</b>

Notes:

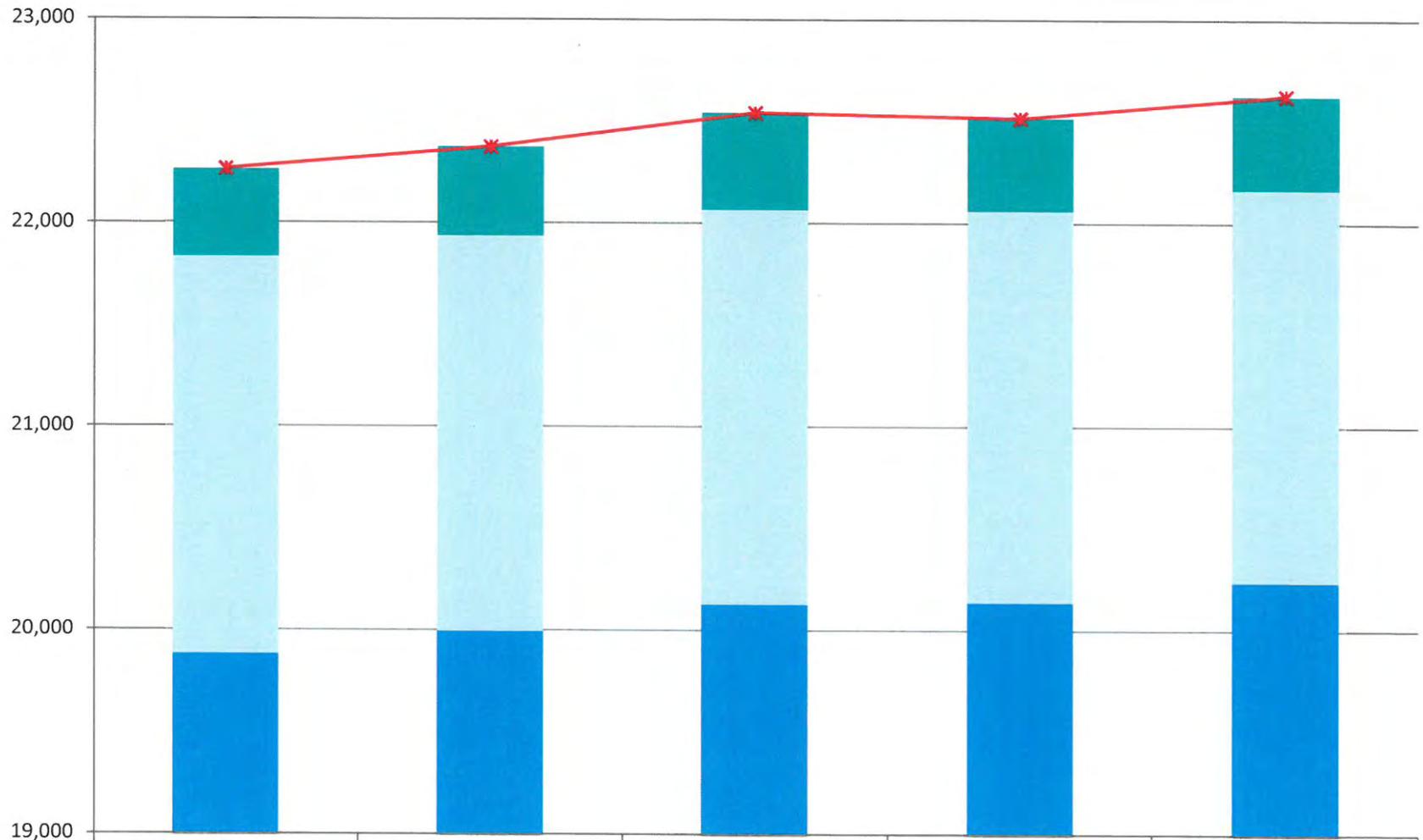
1. All debt service assumes that VWFRF loans will be closed at 0% interest with 20 year repayment terms. All VWFRF loans are assumed to be closed in the third quarter of the fiscal year shown.

**APPENDIX C**

**STATISTICAL DATA**

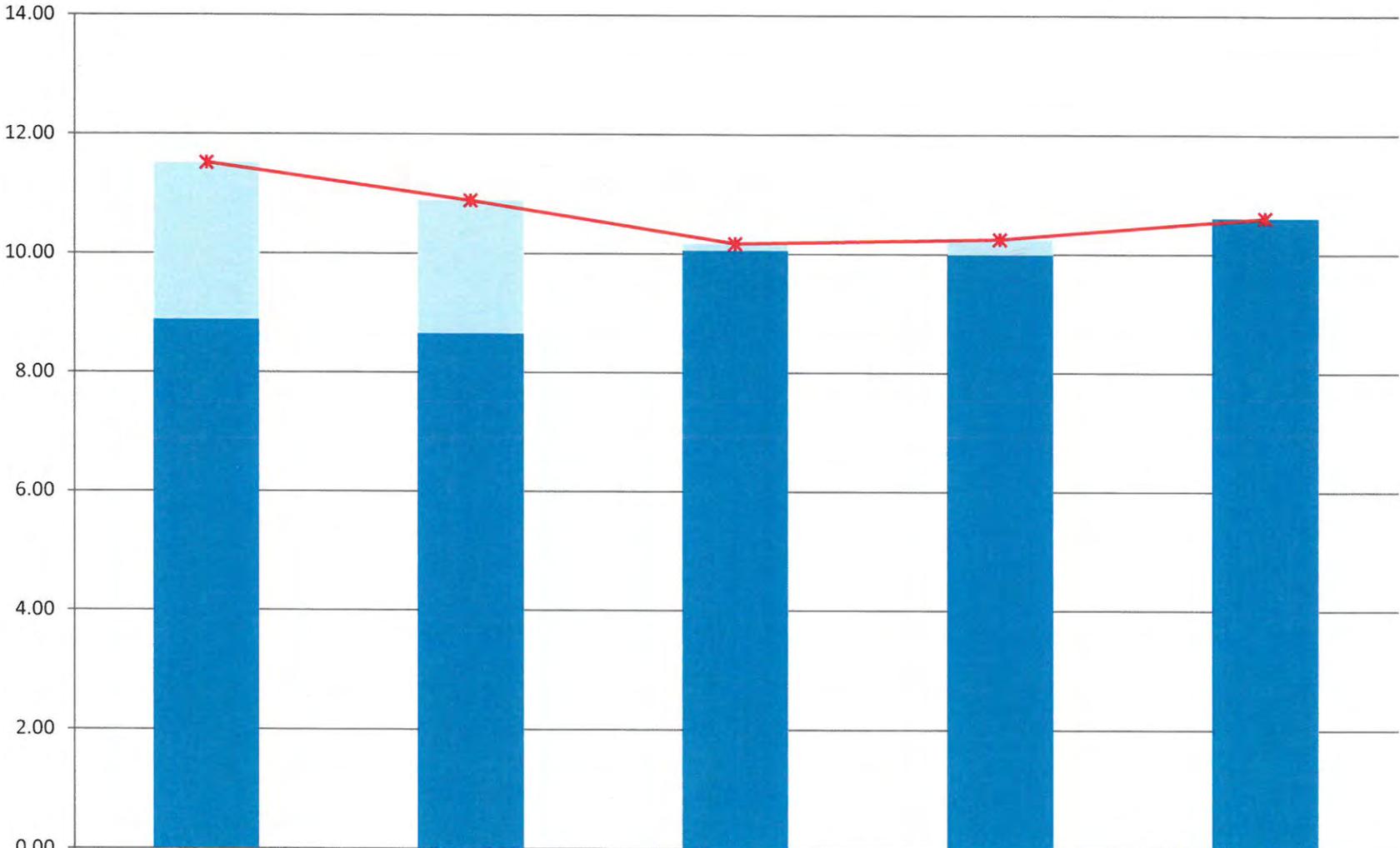
# Water Fund Statistics

# Number of Water Customers



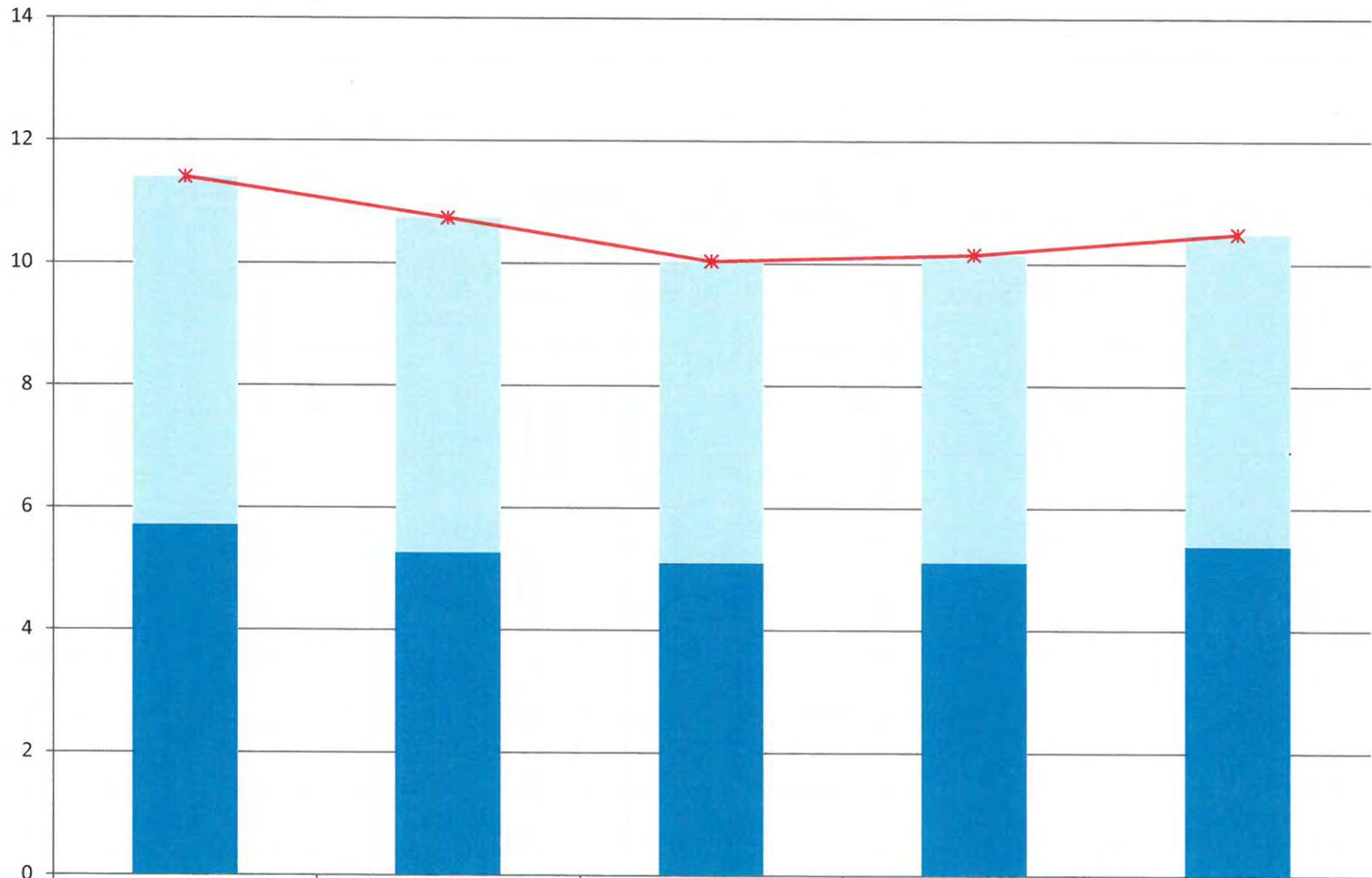
	1	2	3	4	5
Other	431	436	476	452	460
Business	1,951	1,945	1,942	1,925	1,928
Domestic	19,883	19,993	20,126	20,140	20,240
* Total	22,265	22,374	22,544	22,517	22,628

# Water Withdrawals in MGD



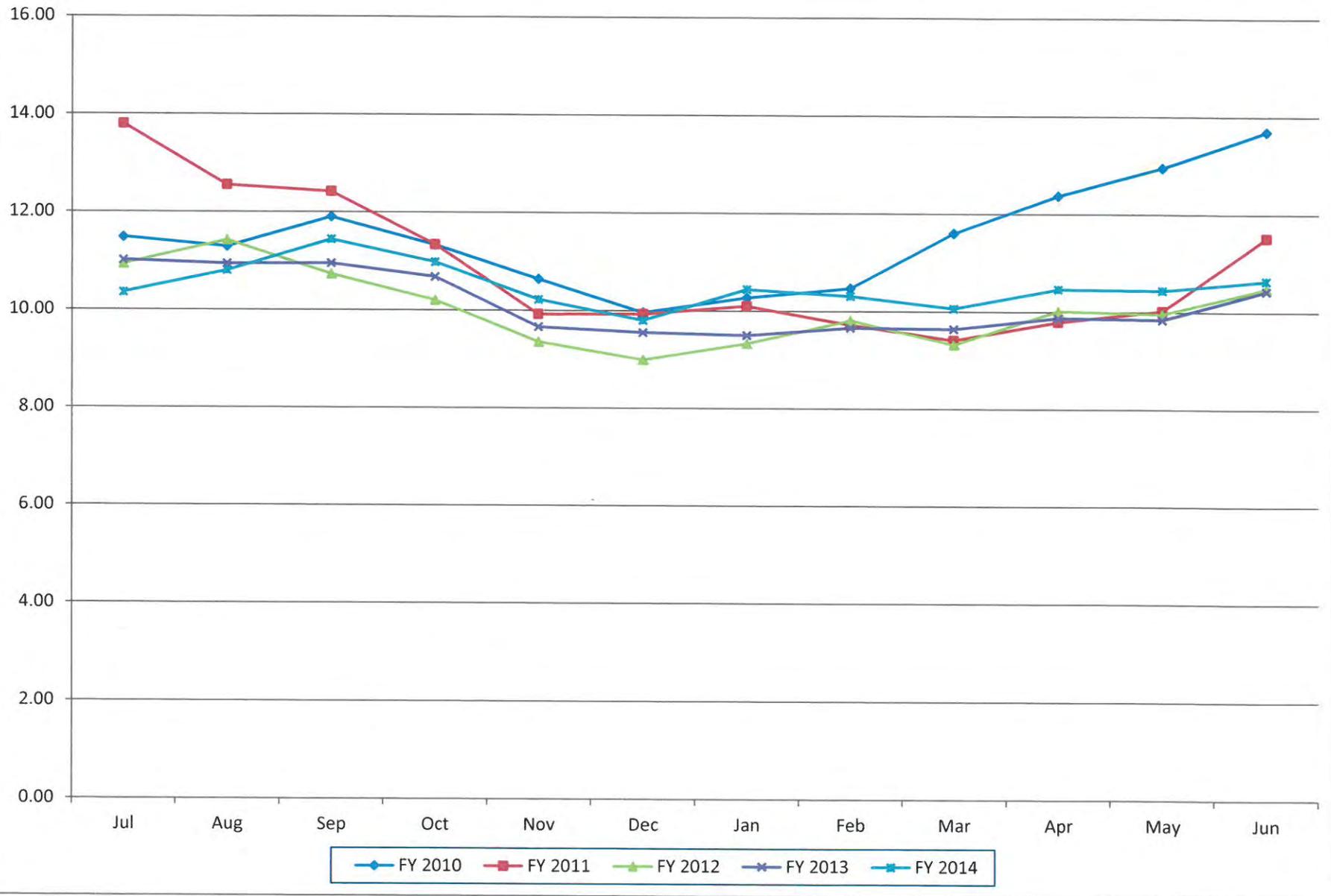
	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
James	2.64	2.24	0.12	0.26	0.00
Pedlar	8.88	8.65	10.05	9.99	10.61
Total	11.52	10.89	10.17	10.25	10.61

# Water Production in MGD

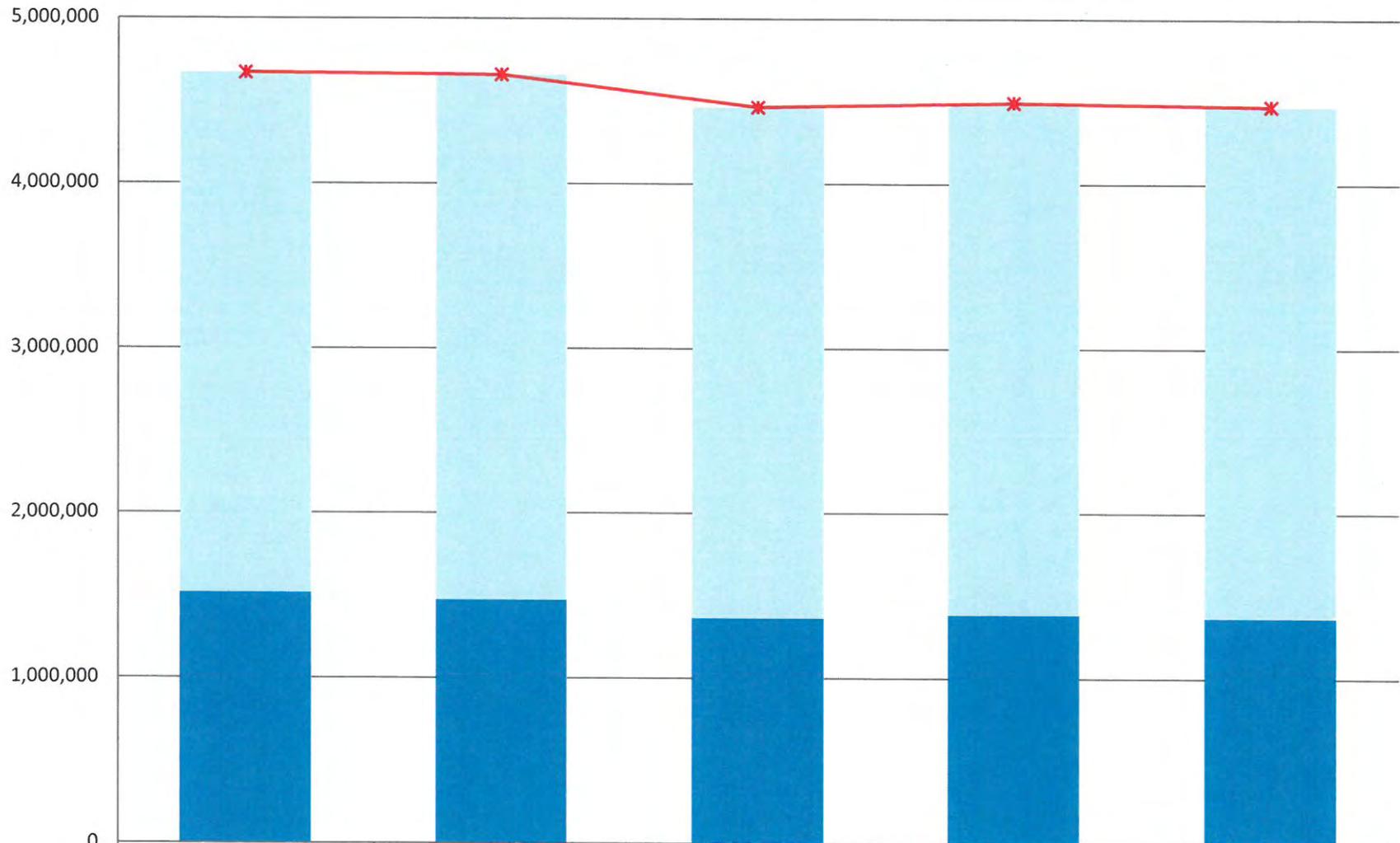


	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
Abert	5.69	5.48	4.94	5.04	5.11
College Hill	5.71	5.26	5.10	5.11	5.38
Total	11.40	10.74	10.04	10.15	10.49

# Monthly Production in MGD



## Water Sold in HCF

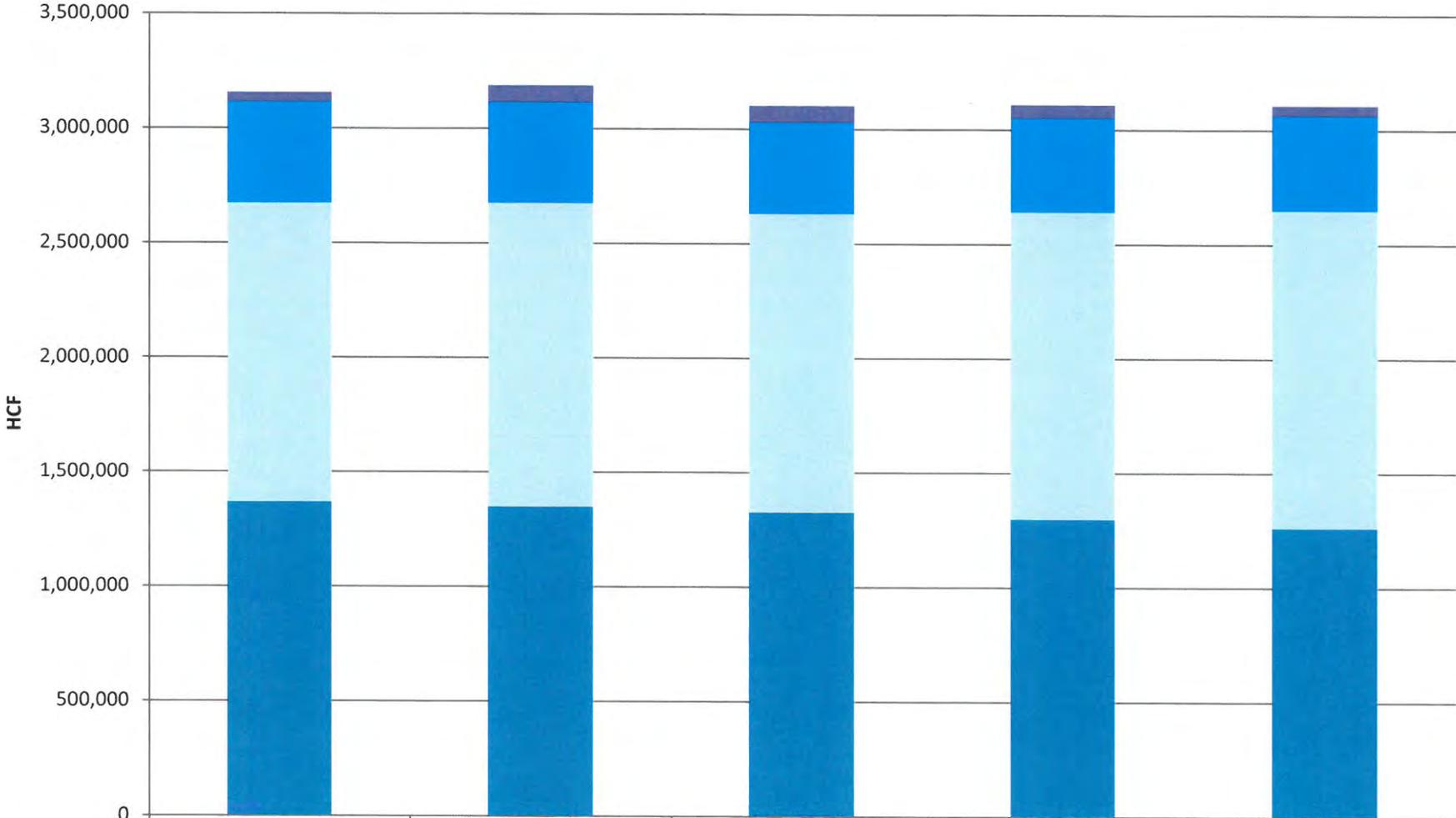


	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
All Other	3,155,289	3,187,335	3,101,321	3,108,070	3,106,066
Contracts	1,514,452	1,470,833	1,363,760	1,384,548	1,366,574
* Total	4,669,741	4,658,168	4,465,081	4,492,618	4,472,640

# Contract Water Use in HCF

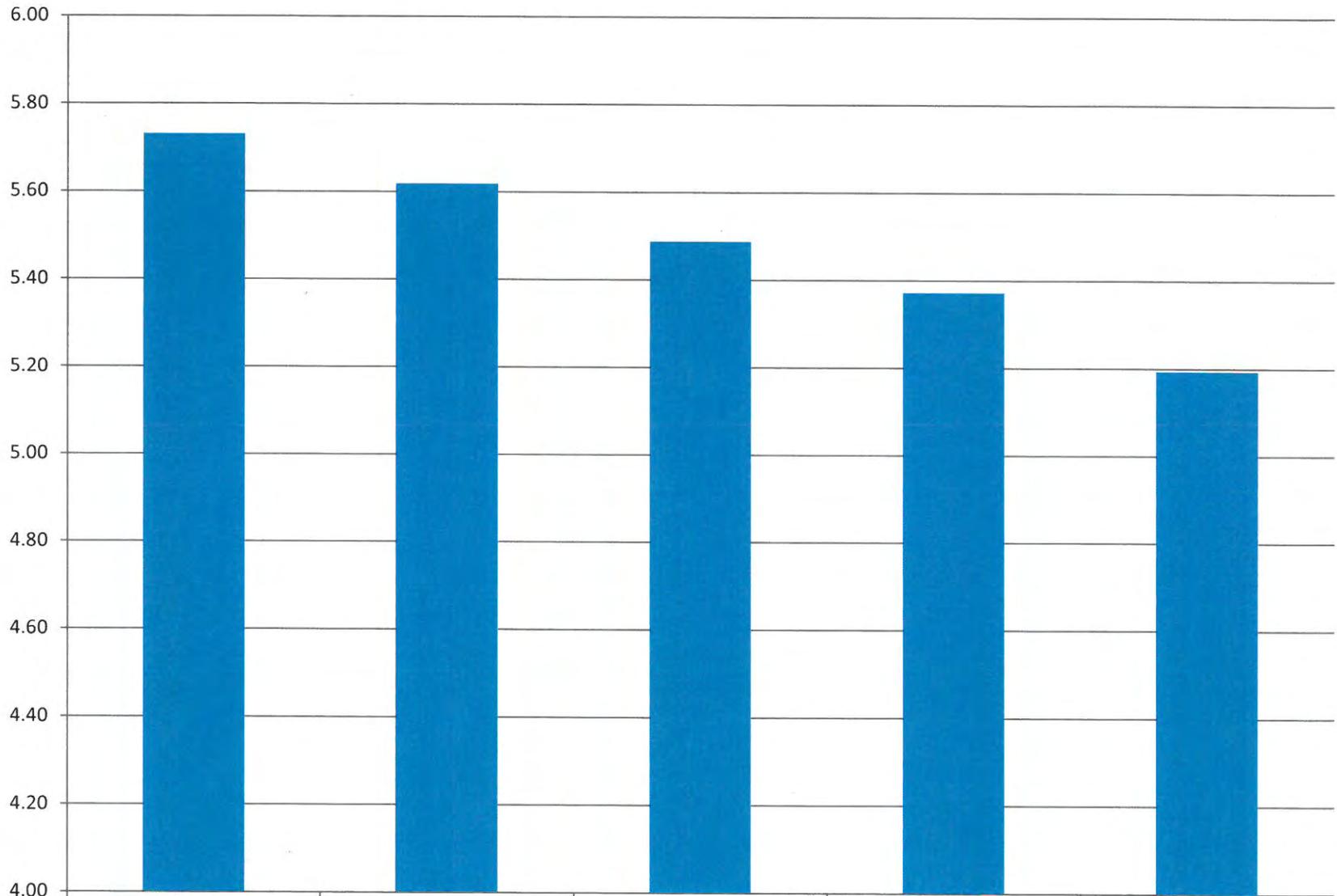
Water Customers	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
Amherst	49,805	54,080	43,305	42,130	43,960
Bedford	725,571	748,310	727,881	756,927	716,278
CCUSA	215,854	196,767	182,489	200,324	209,566
Frito-Lay	125,509	139,112	136,765	140,381	143,750
Rock Tenn	397,713	332,564	273,320	244,786	253,020
Total contract use	1,514,452	1,470,833	1,363,760	1,384,548	1,366,574
Non-contract use	3,155,289	3,187,335	3,101,321	3,108,070	3,106,066
Total use	4,669,741	4,658,168	4,465,081	4,492,618	4,472,640
Contract % of use	32.43%	31.58%	30.54%	30.82%	30.55%

# Non-Contract Water Sales in HCF



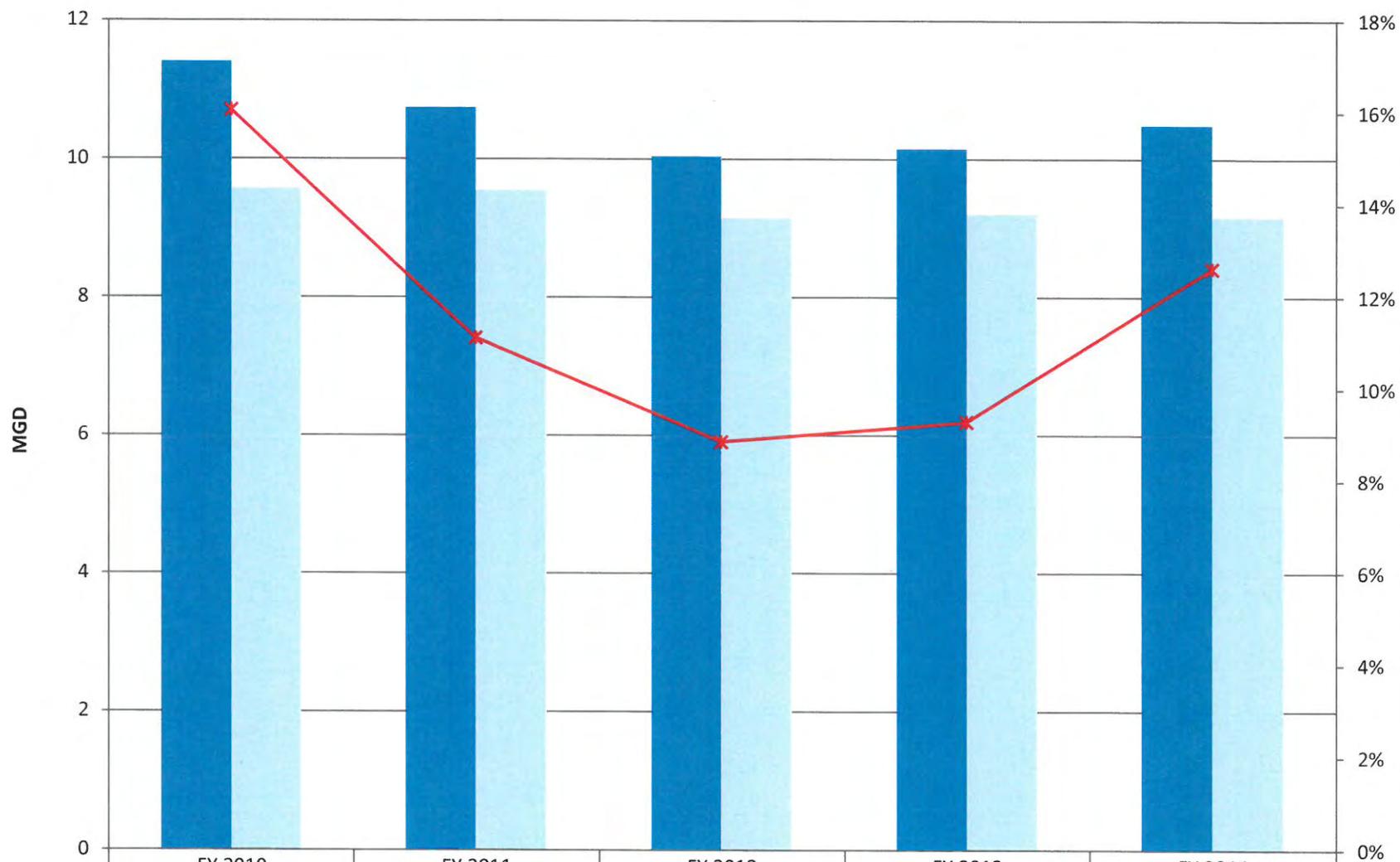
	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
All Other	41,346	72,543	71,086	55,641	42,194
Institutional	440,810	440,575	399,277	411,055	414,671
Business	1,305,771	1,326,344	1,305,666	1,342,981	1,387,819
Domestic	1,367,362	1,347,873	1,325,292	1,298,393	1,261,382

# Average Monthly Water Sold Domestic Customers



	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
HCF/Month	5.73	5.62	5.49	5.37	5.19

# Non-Revenue Water



Production	11.40	10.74	10.04	10.15	10.49
Sales	9.57	9.55	9.15	9.21	9.17
NRW %	16.1%	11.1%	8.9%	9.3%	12.6%

# Water Complaints

Type of Complaint	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
1. Discolored water	140	123	53	62	52
2. Odor / taste	2	11	6	7	8
3. No water	40	15	13	15	65
4. High / low pressure	86	95	67	54	47
5. Service line leaks	133	98	85	72	73
6. Main breaks	46	30	39	22	13
7. Meter related	75	75	71	41	71
8. Unclassified	-	255	232	239	293
Total complaints	522	702	566	512	622
Number of water customers	22,265	22,374	22,544	22,517	22,628
Complaints / 1,000 customers	23	31	25	23	27

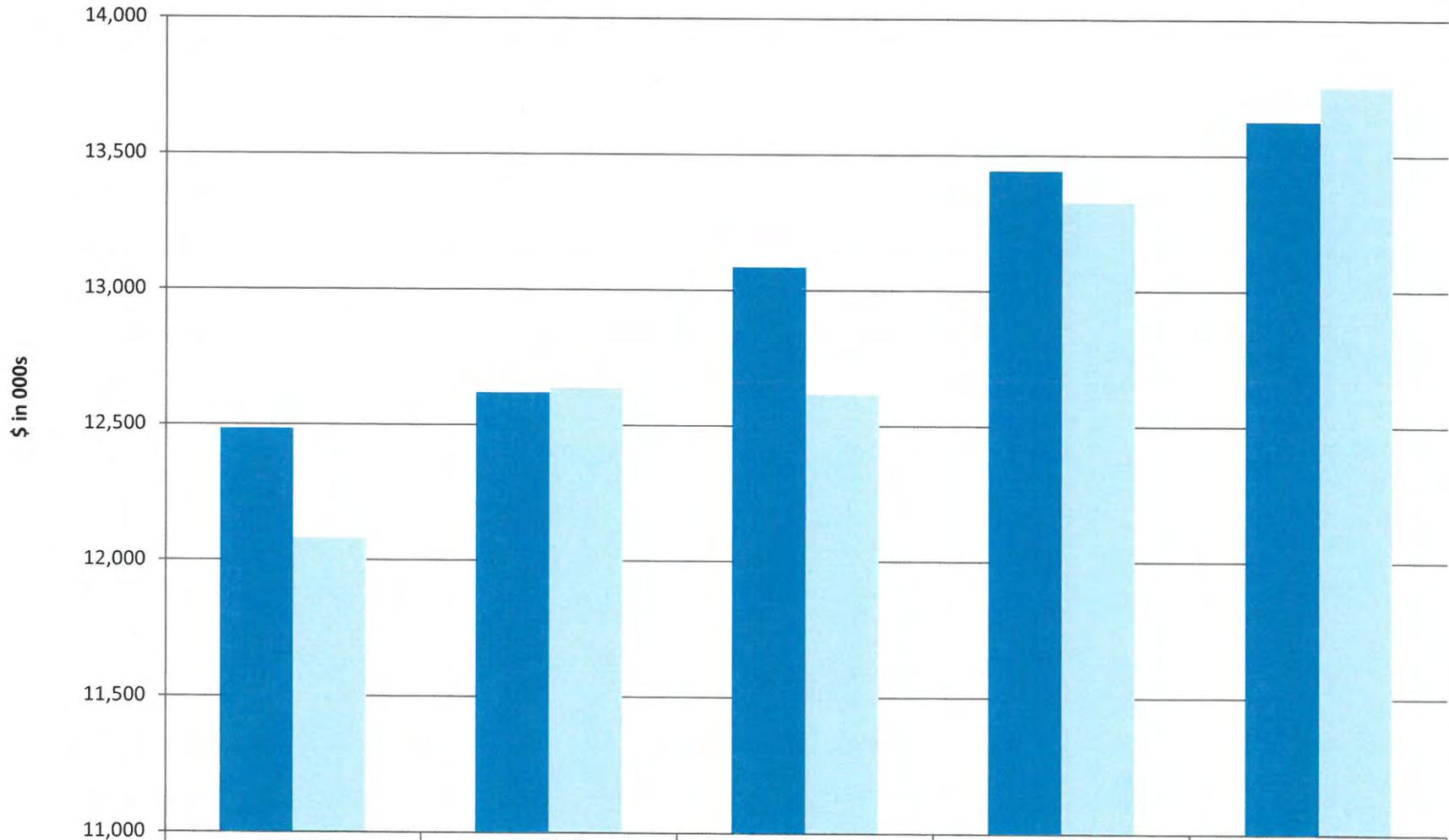
# Water Fund Financial Data

## Water Fund Debt Coverage

(\$ in 000s)

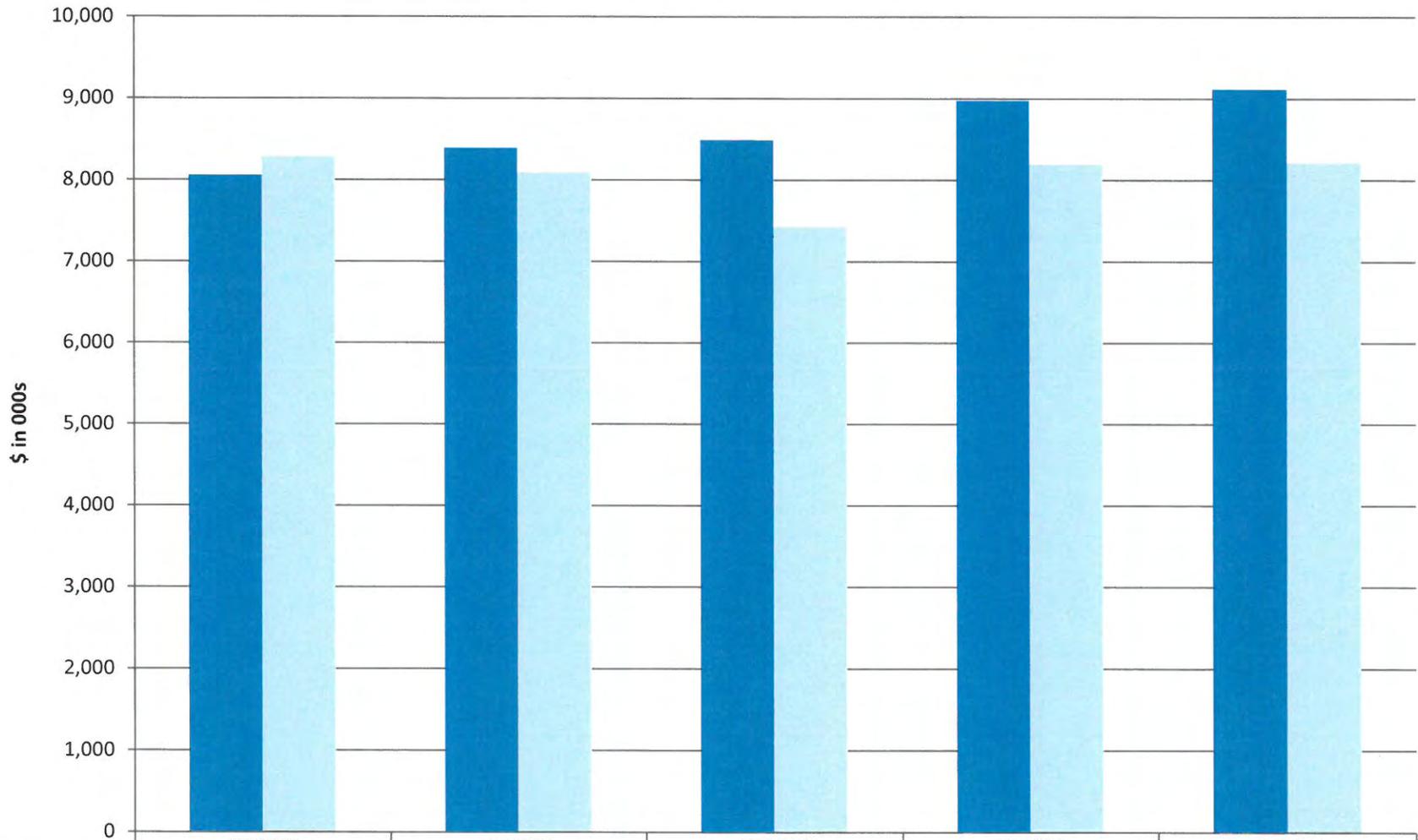
	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
Revenues:					
Charges for services	\$9,309	9,792	9,791	10,549	10,920
Water contracts	2,720	2,670	2,518	2,432	2,555
Interest & other	52	176	309	347	279
	12,081	12,638	12,618	13,328	13,754
Expenses:					
Water treatment	2,863	2,767	2,390	2,727	2,741
Water line maintenance	1,603	1,627	1,469	1,378	1,592
Meter reading	861	836	885	787	796
Administration	2,448	2,793	2,647	2,967	2,982
Non-departmental	113	164	119	195	176
Expenses paid by Capital Fund	397	14	21	285	100
Capitalizable Expenses	0	(110)	(103)	(145)	(171)
	<b>8,285</b>	<b>8,091</b>	<b>7,428</b>	<b>8,194</b>	<b>8,216</b>
Operating income	3,796	4,547	5,190	5,134	5,538
Debt service	2,999	3,677	3,650	3,617	3,586
Debt coverage	1.27	1.24	1.42	1.42	1.54

## Water Revenues Adopted Budget vs. Actual



	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
Adopted Budget	12,484	12,620	13,086	13,443	13,626
Actual	12,081	12,638	12,618	13,328	13,754

## Water Operating Expenses Adopted Budget vs. Actual



	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
Adopted Budget	8,052	8,391	8,487	8,974	9,115
Actual	8,285	8,091	7,428	8,194	8,216

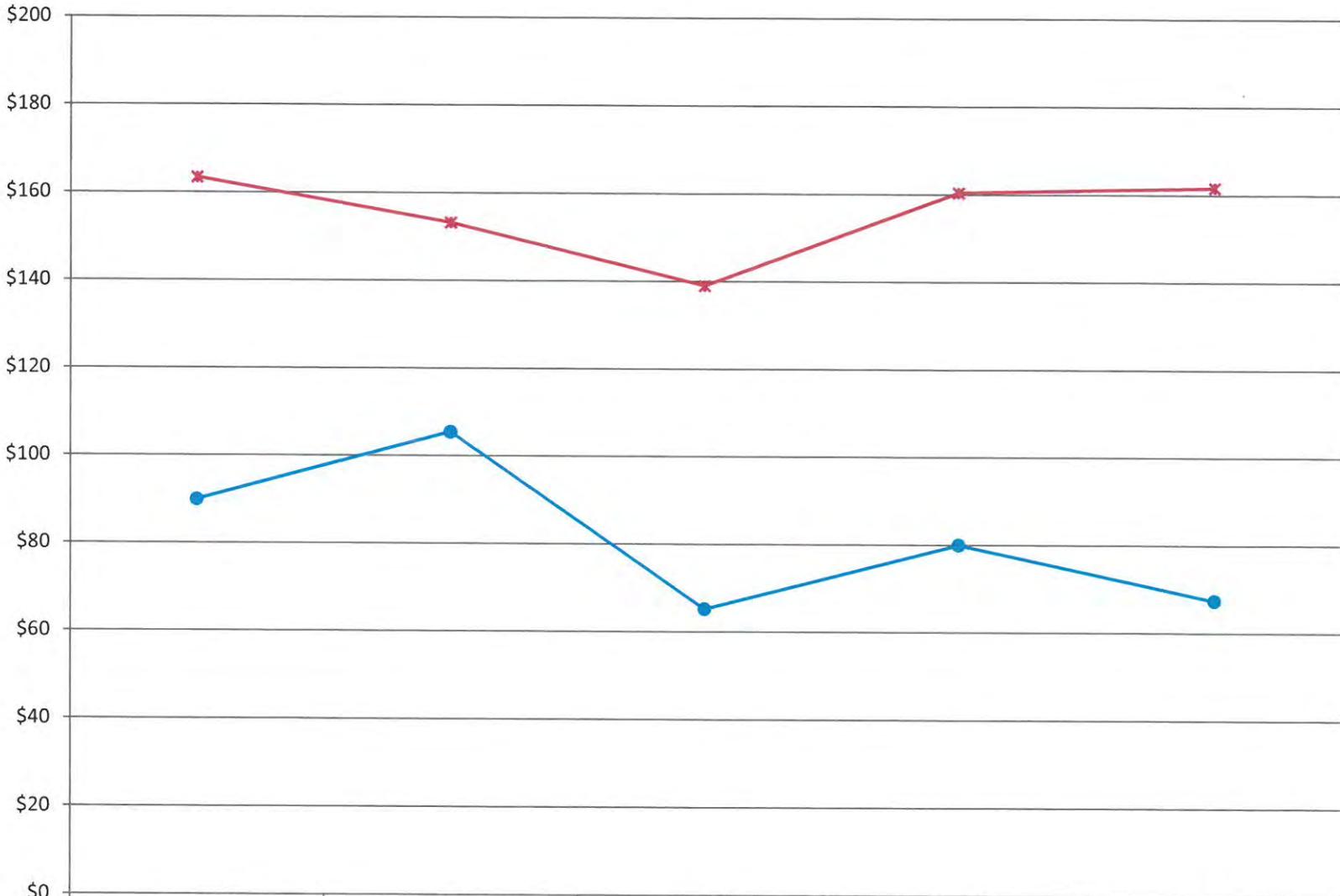
## Largest Water Customers (\$ in 000s)

<b>Customer</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014</b>
1. Bedford County	\$1,537	\$1,487	\$1,406	\$1,354	\$1,432
2. CCUSA	465	509	543	515	517
3. Rock Tenn	460	396	324	313	326
4. Liberty University	233	269	303	355	404
5. Frito-Lay	149	170	168	176	193
6. Azdel	143	150	126	193	288
7. Centra Health	124	137	262	246	243
8. Griffin Pipe	115	135	148	187	185
9. Amherst County	110	107	77	74	86
10. Kroger / Westover	108	105	107	109	88
11. Tri-Tech	106	133	154	179	191
12. RR Donnelley	102	135	112	115	111
Total top 12	3,652	3,733	3,730	3,816	4,064
Total water revenues	12,081	12,638	12,618	13,328	13,754
Top 12 % of total	30%	30%	30%	29%	30%

## Water Expenses by Object (\$ in 000s)

Expenses by object	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
Personal services	2,828	2,976	2,770	3,084	3,093
Fringe benefits	1,052	1,151	979	1,294	1,137
Supplies & materials	974	1,052	1,051	908	957
Contractual services	582	419	472	420	582
Utilities, including natural gas	687	609	516	600	626
Chemicals	378	419	242	299	262
General Fund allocations	905	1,004	1,003	1,013	1,053
All other, including project expenses	879	461	395	576	508
Total excluding capitalized expenses	8,285	8,091	7,428	8,194	8,218
% increase	4.4%	-2.3%	-8.2%	10.3%	0.3%

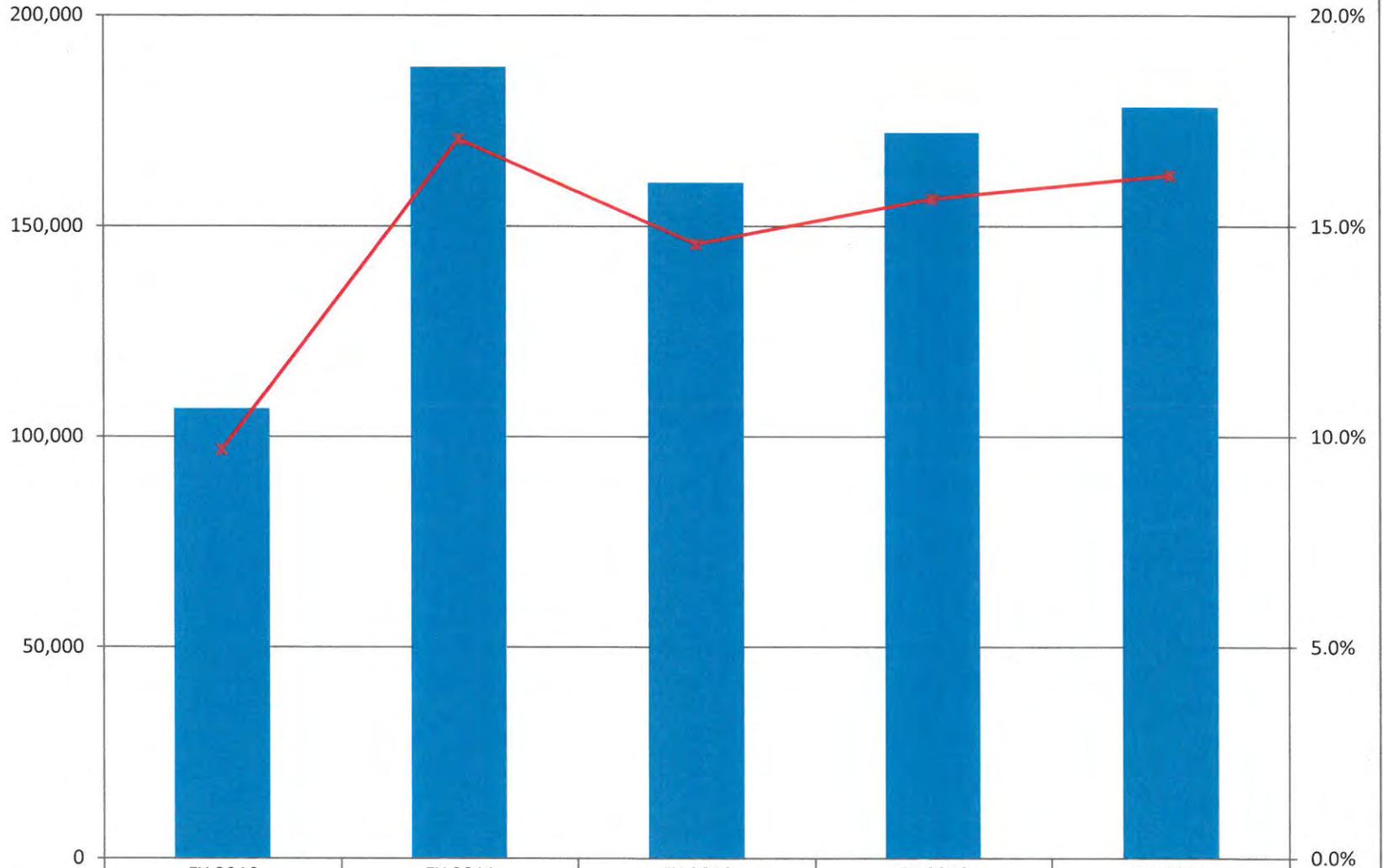
# Water Variable Expenses/MG



	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
● Chemicals	\$90	\$105	\$65	\$80	\$67
* Utilities / MG	\$163	\$153	\$139	\$160	\$162

## Water Vehicle Costs

### Total cost of all vehicles (\$1.1 million)

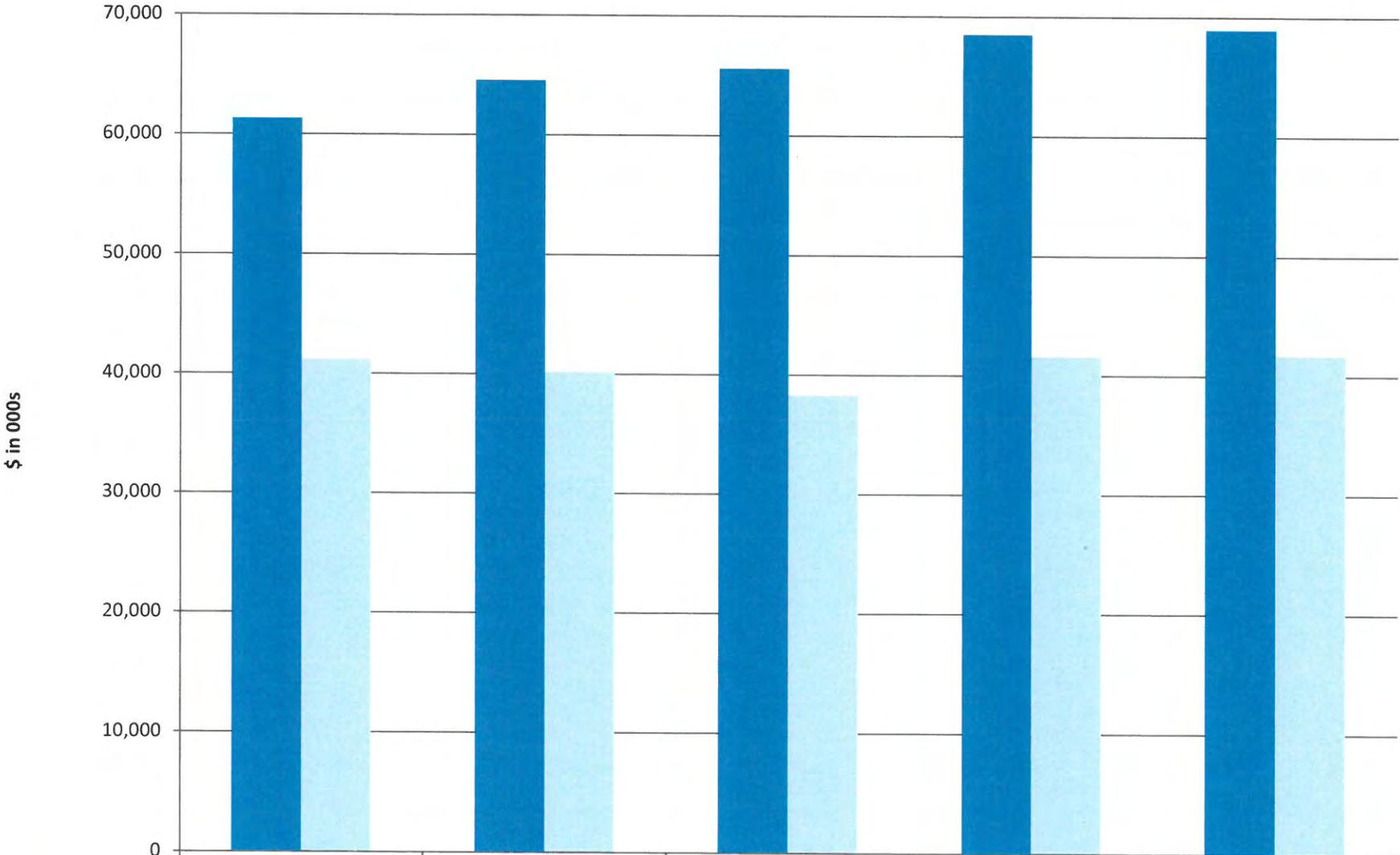


Payments	106,658	187,737	160,386	172,187	178,266
Replacement %	9.7%	17.1%	14.6%	15.7%	16.2%

## Water Capital Expenditures (\$ in 000s)

<b>Capital Expenditures</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014</b>
Source of supply	463	1,202	103	206	464
Treatment plants	83	494	298	209	527
Storage tanks	98	603	22	26	48
Petitions & extensions	239	304	111	121	68
Distribution & CSO improvements	1,795	2,435	2,920	5,245	2,000
Other	778	364	0	0	0
<b>Total</b>	<b>3,456</b>	<b>5,402</b>	<b>3,454</b>	<b>5,807</b>	<b>3,107</b>

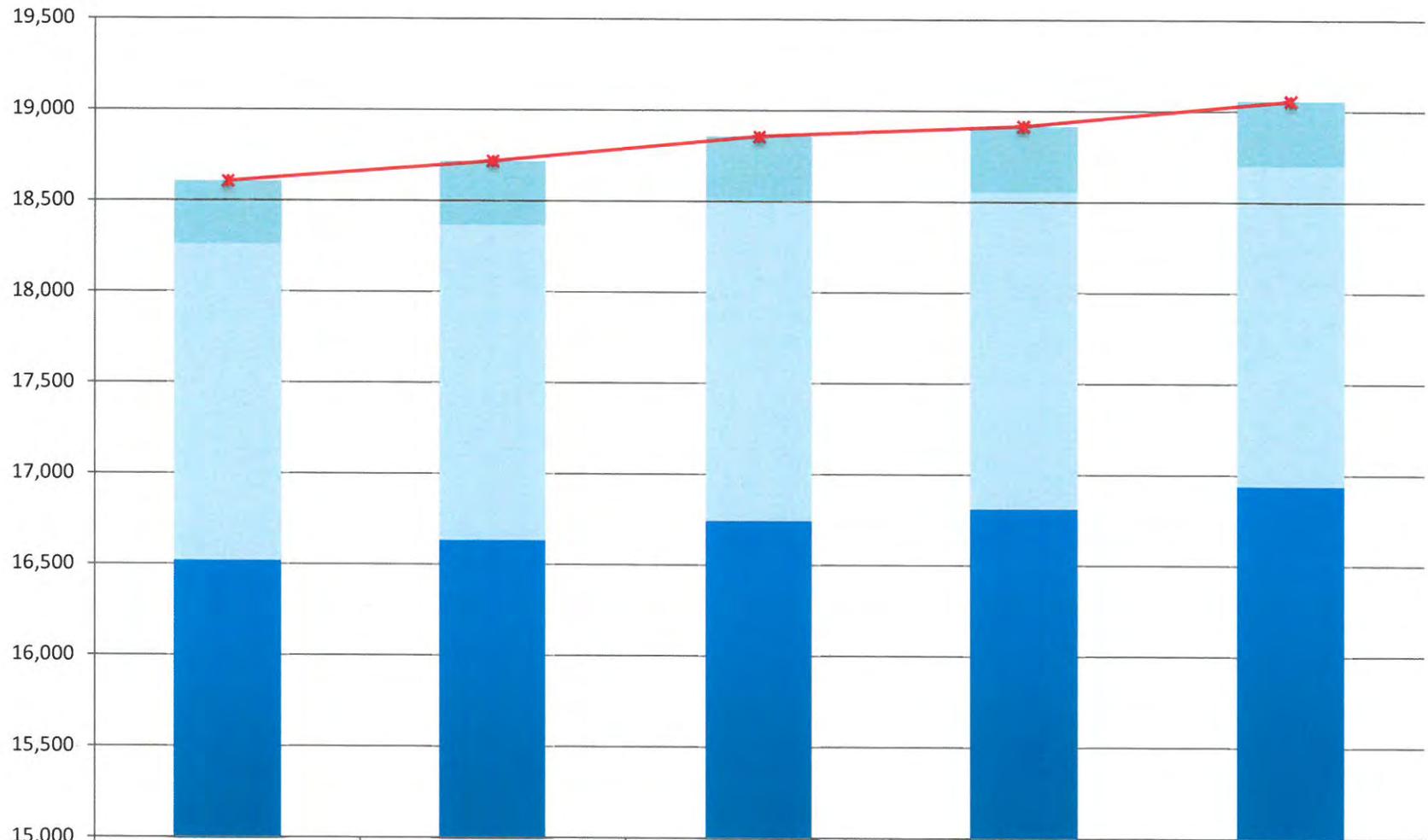
# Net Water Capital Assets



	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
Net Fixed Assets	61,294	64,545	65,579	68,495	68,923
Bonds & Notes	41,164	40,166	38,293	41,608	41,747

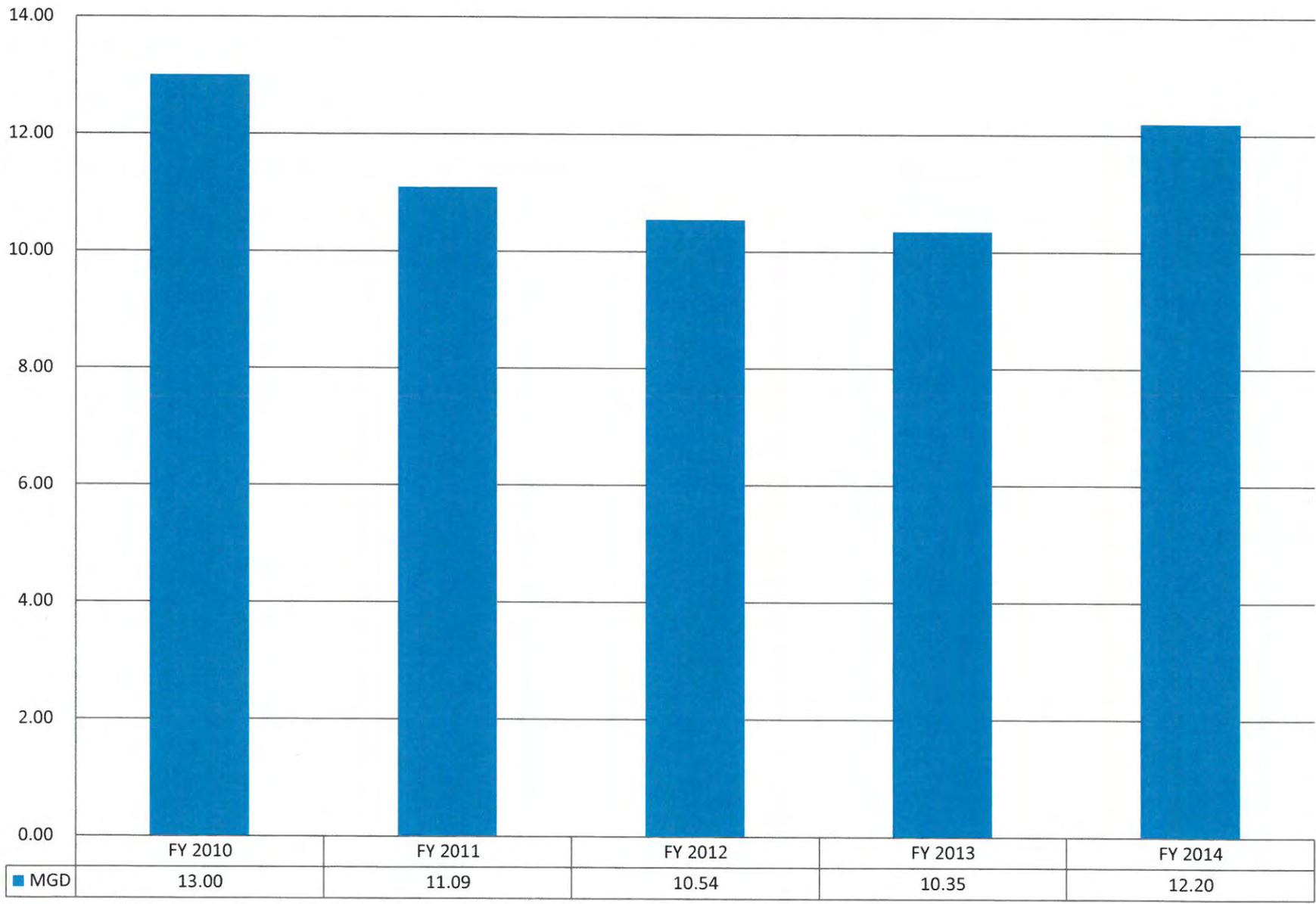
# Wastewater Statistics

# Number of Sewer Customers

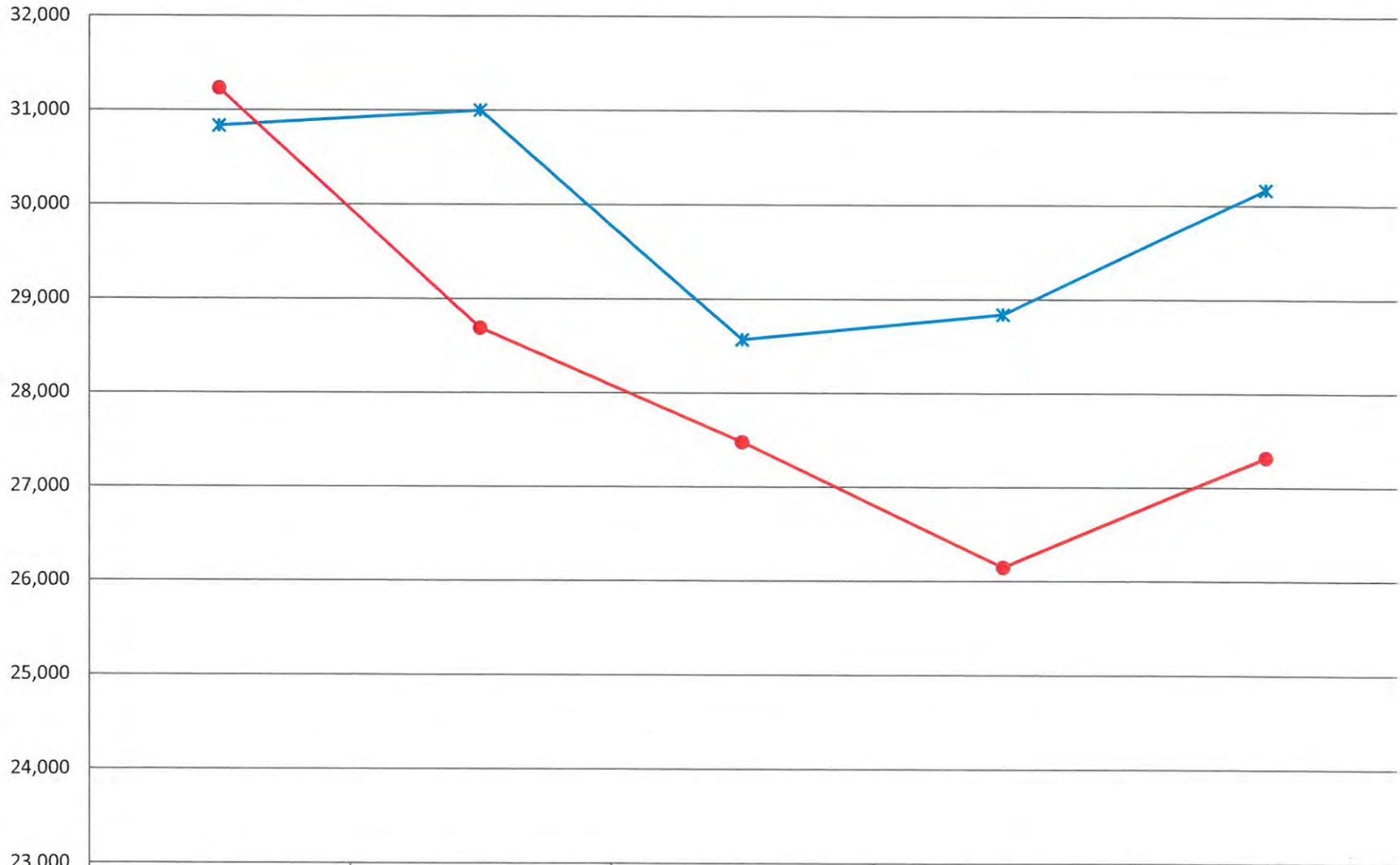


	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
Other	345	350	348	360	358
Business	1,743	1,736	1,765	1,745	1,759
Domestic	16,518	16,632	16,745	16,811	16,940
<b>Total</b>	<b>18,606</b>	<b>18,718</b>	<b>18,858</b>	<b>18,916</b>	<b>19,057</b>

# Wastewater Effluent in MGD

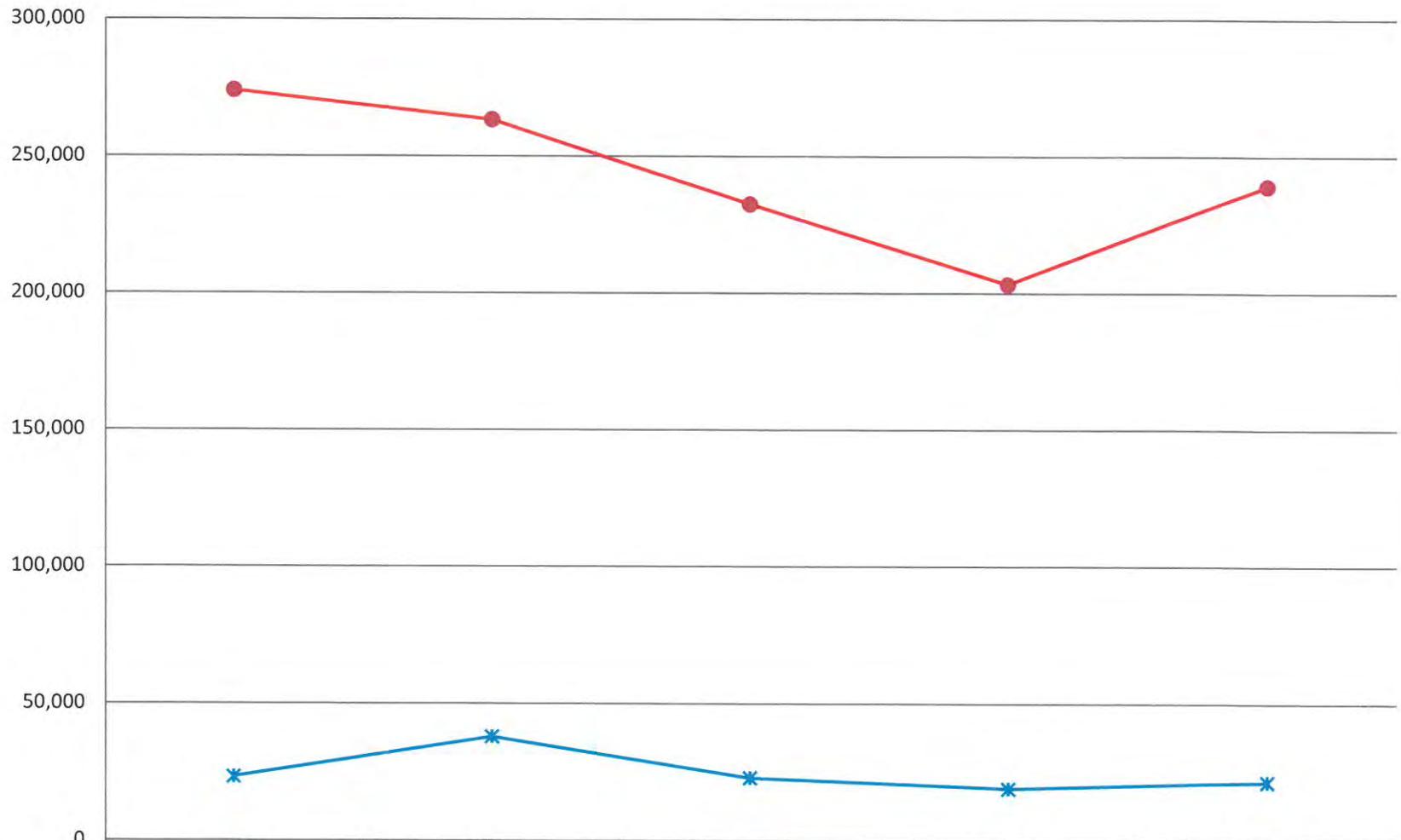


## BOD/TSS Loadings in Lbs/Day



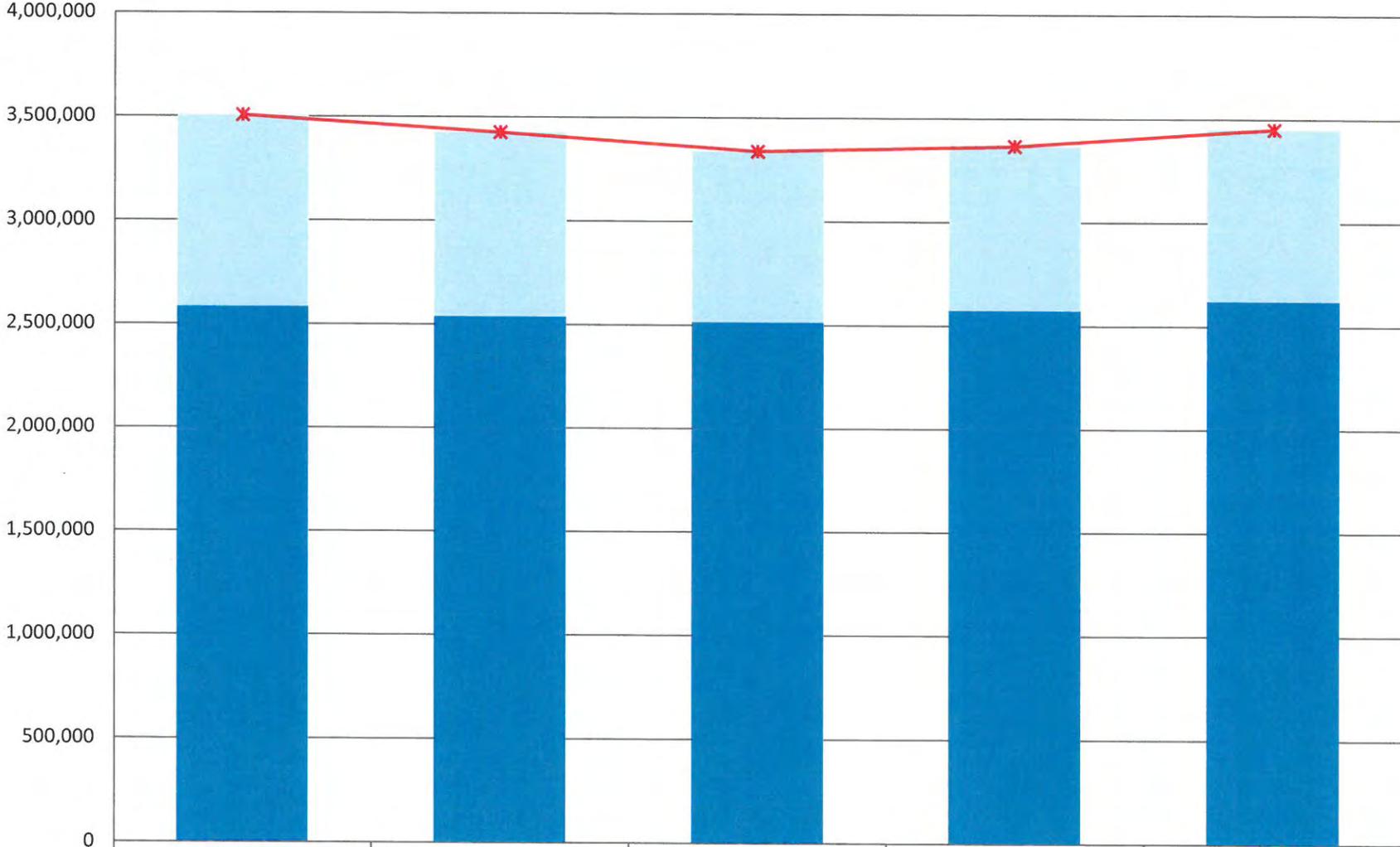
	1	2	3	4	5
* BOD	30,832	30,998	28,567	28,839	30,166
● TSS	31,232	28,689	27,477	26,149	27,317

## Nitrogen/Phosphorous Annual Discharge in Lbs



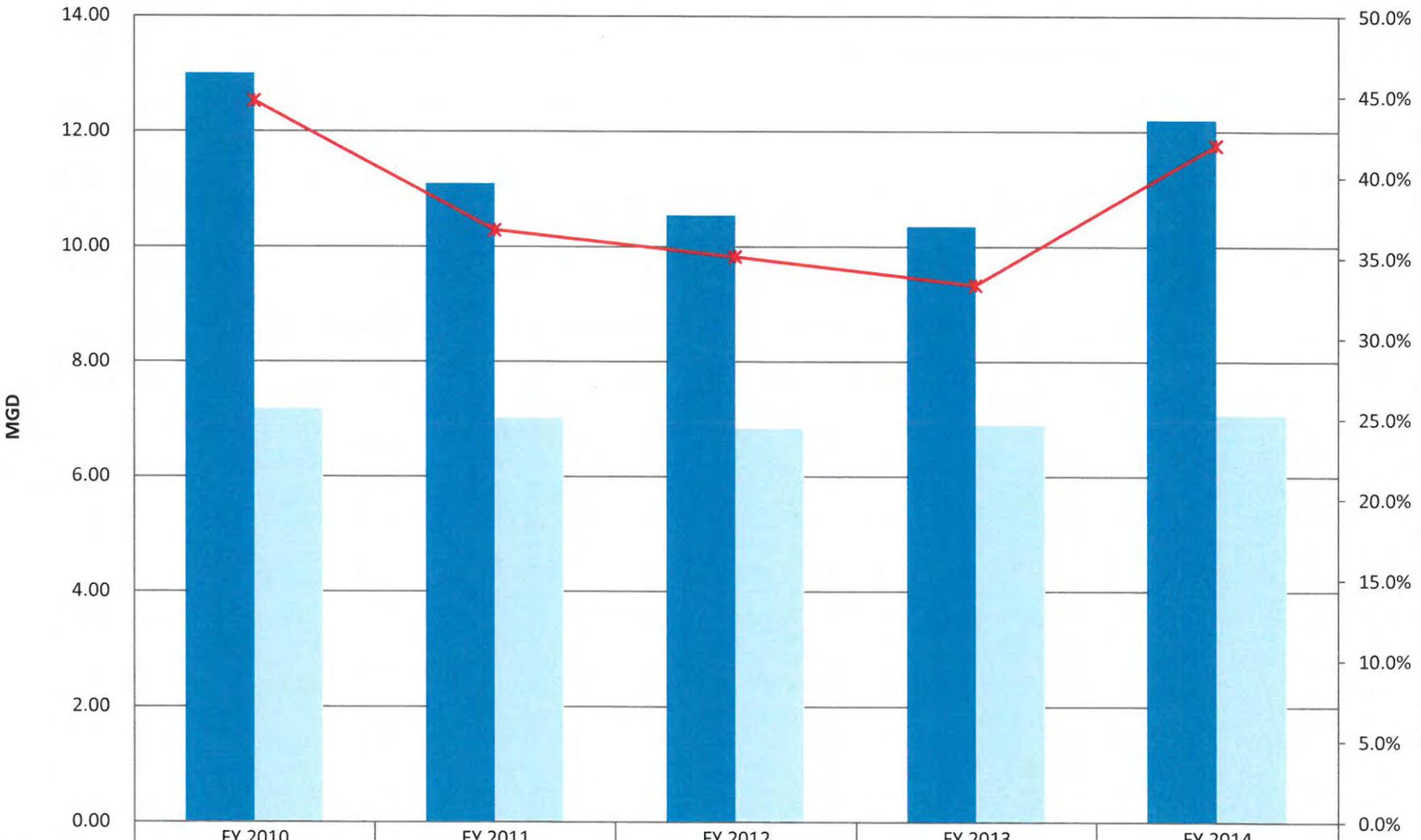
	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
Phosphorous	23,319	37,923	22,949	19,156	21,565
Nitrogen	273,963	263,308	232,563	203,280	239,208

# Sewer Sold in HCF



	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
Contracts	923,196	888,742	825,100	793,790	829,664
All Other	2,582,089	2,536,205	2,513,335	2,573,269	2,621,921
Total	3,505,285	3,424,947	3,338,435	3,367,059	3,451,585

# Sewer Sales to Influent



Influent	13.00	11.09	10.54	10.35	12.20
Sales	7.18	7.02	6.84	6.90	7.07
%	44.7%	36.7%	35.1%	33.3%	42.0%

# Sewer Complaints

Type of Complaint	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
1. Cave-in / broken sewer line	25	-	-	-	-
2. Sewer odor	45	72	30	32	15
3. Sewer overflow / backups	183	138	10	18	18
4. Stormwater related	203	219	154	178	201
5. All other	78	122	217	197	220
Total complaints	534	551	411	425	454
Number of sewer customers	18,606	18,718	18,858	18,916	19,057
Complaints / 1,000 customers	29	29	22	22	24

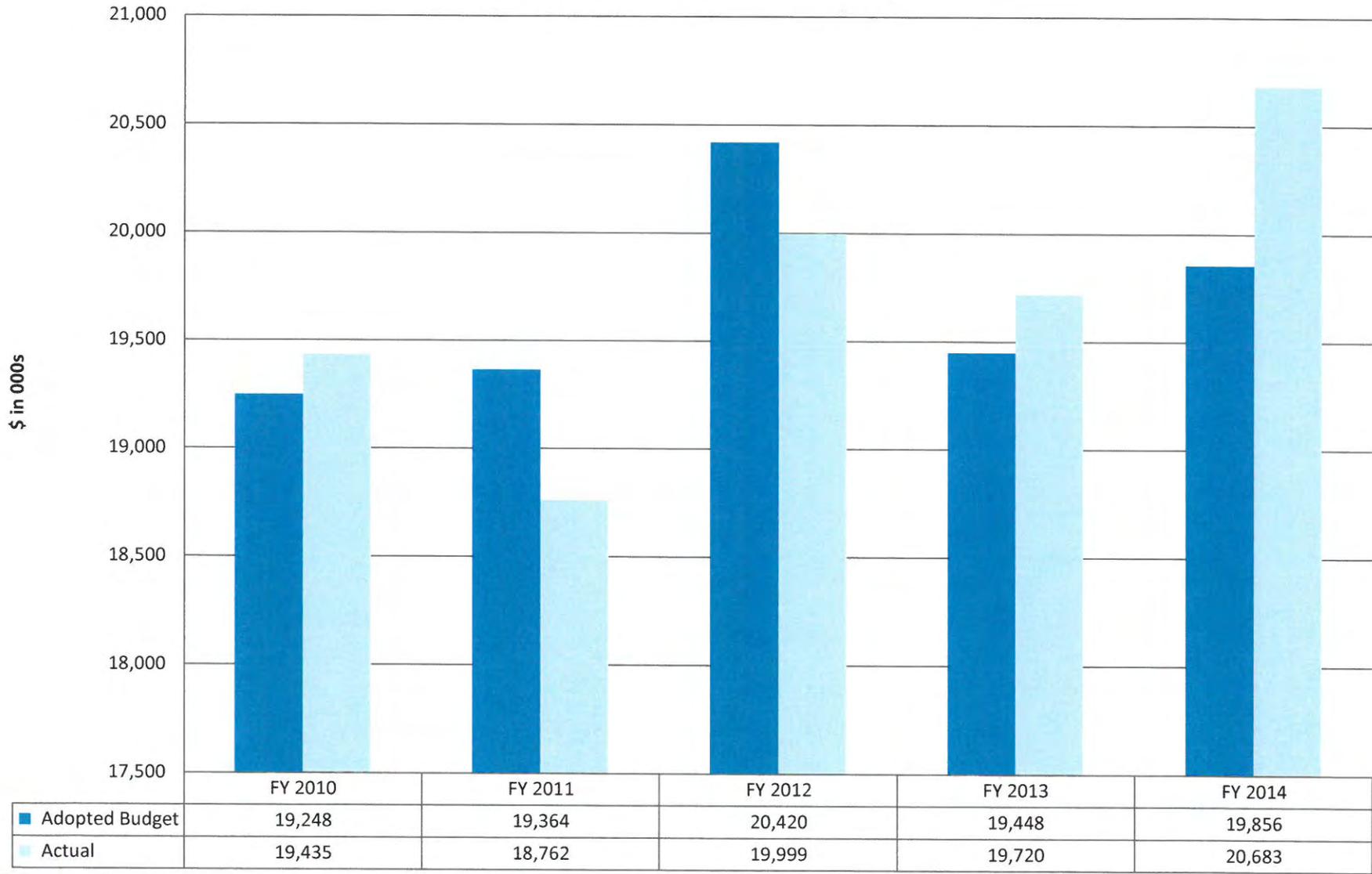
# Sewer Fund Financial Data

## Sewer Fund Debt Coverage

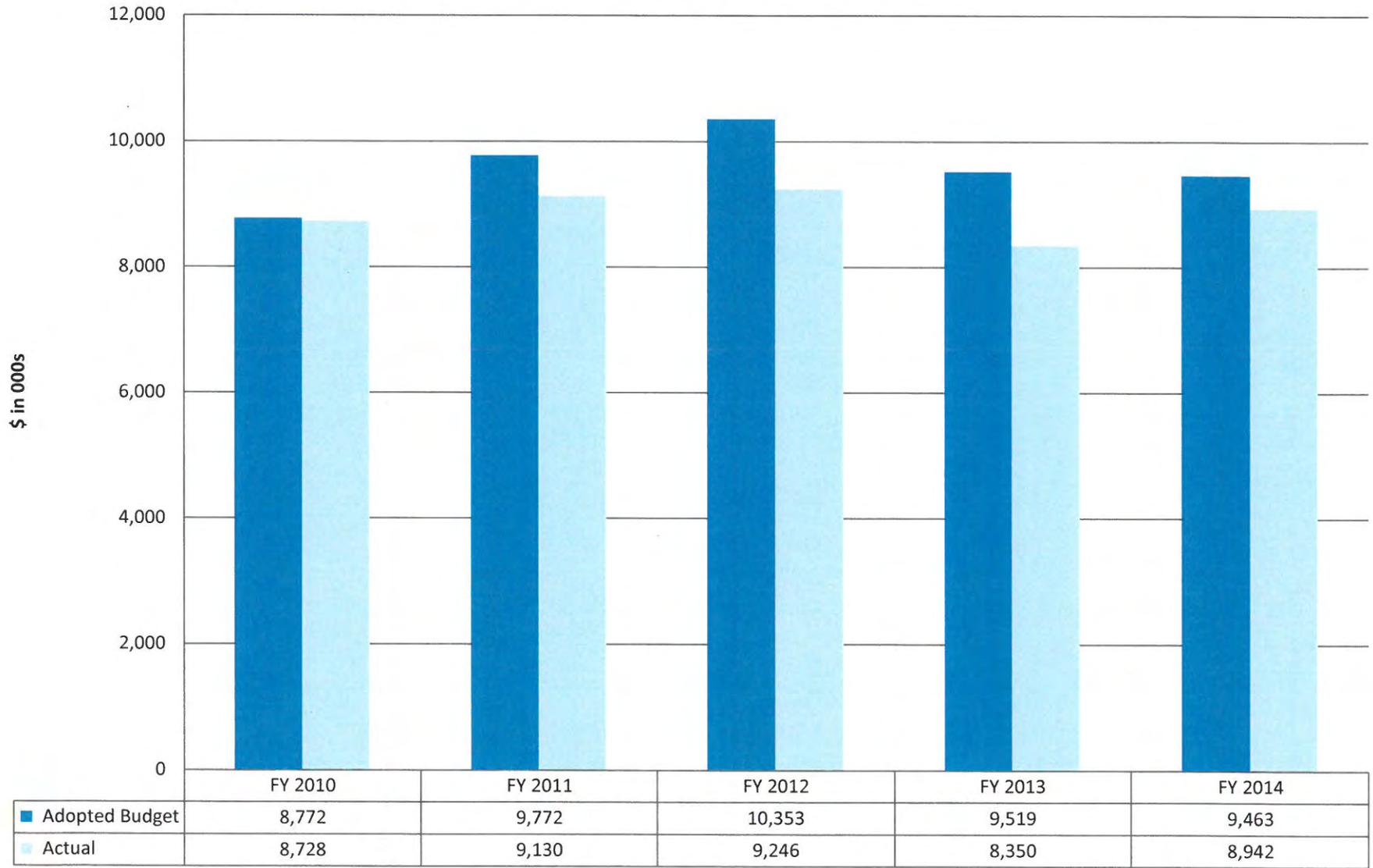
(\$ in 000s)

	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
Revenues:					
Charges for services	16,085	15,757	16,267	16,573	17,235
Sewer contracts	2,991	2,806	2,802	2,909	3,220
Interest & other	359	199	930	238	228
	19,435	18,762	19,999	19,720	20,683
Expenses:					
WWTP	6,007	6,310	6,104	6,448	6,773
Sewer line maintenance + sw	2,305	2,665	2,598	1,952	2,022
Non-departmental	250	250	462	156	172
Project expenses	166	135	380	15	134
Capitalizable expenses	0	(230)	(298)	(221)	(159)
	8,728	9,130	9,246	8,350	8,942
Operating income	10,707	9,632	10,753	11,370	11,741
Debt service, net of IRS rebate	7,107	7,573	8,067	8,412	8,625
Debt coverage	1.51	1.27	1.33	1.35	1.36

## Sewer Revenues Adopted Budget vs. Actual



## Sewer Operating Expenses Adopted Budget vs. Actual



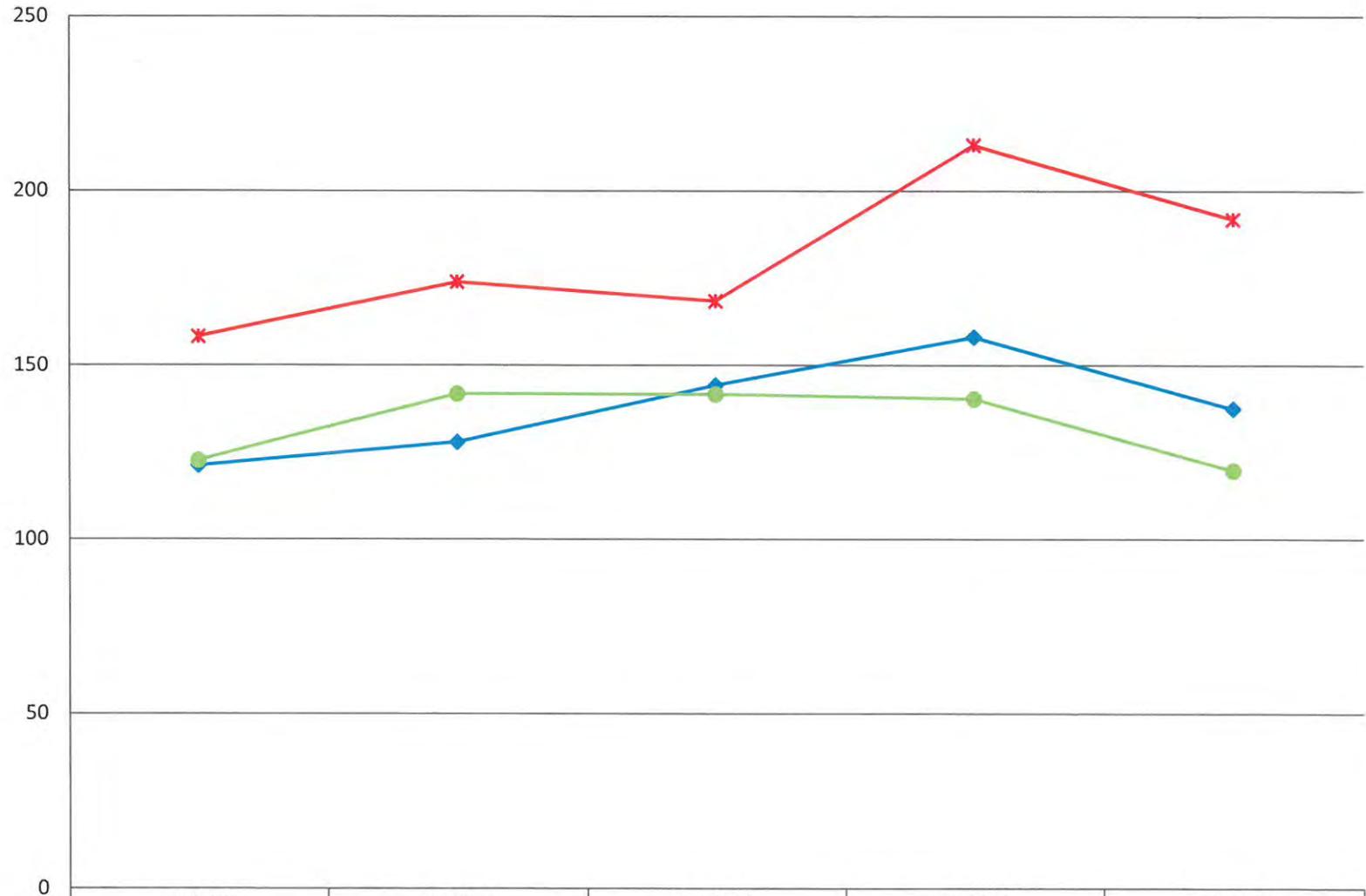
## Ten Largest Sewer Customers (\$ in 000s)

Customers	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
1. Rock Tenn	\$1,154	\$1,019	\$921	\$982	\$1,043
2. Frito-Lay	1146	1276	1102	1,230	1,445
3. Centra Health	450	537	516	601	414
4. Liberty University	476	518	614	722	691
5. Azdel	519	417	368	567	872
6. Tri-Tech	433	523	525	615	586
7. Bedford County	484	388	441	443	437
8. Amherst County	396	365	400	413	497
9. Griffin Pipe	280	316	283	502	446
10. Kroger / Westover Dairy	203	308	290	325	206
11. CCUSA	264	262	350	308	352
Total top 11	5,805	5,929	5,810	6,708	6,989
Total sewer revenues	19,435	18,762	19,999	19,720	20,683
Top 11 % of total	30%	32%	29%	34%	34%

## Sewer Expenses by Object (\$ in 000s)

Expenses by object	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
Personal services	1,844	1,886	2,087	1,898	2,020
Fringe benefits	699	729	737	723	752
Supplies & materials	544	624	517	436	544
Contractual expenses	888	1,059	964	866	1,029
Sludge disposal	582	574	545	530	533
Utilities	751	704	648	805	854
Chemicals	575	518	555	597	612
General & Water Fund Allocations	1,979	2,360	2,136	2,118	2,091
All other	866	676	1,057	377	507
Total excluding capitalized expense	\$ 8,728	\$ 9,130	\$ 9,246	\$ 8,350	\$ 8,942
% Increase -total	-1.9%	4.6%	1.3%	-9.7%	7.1%

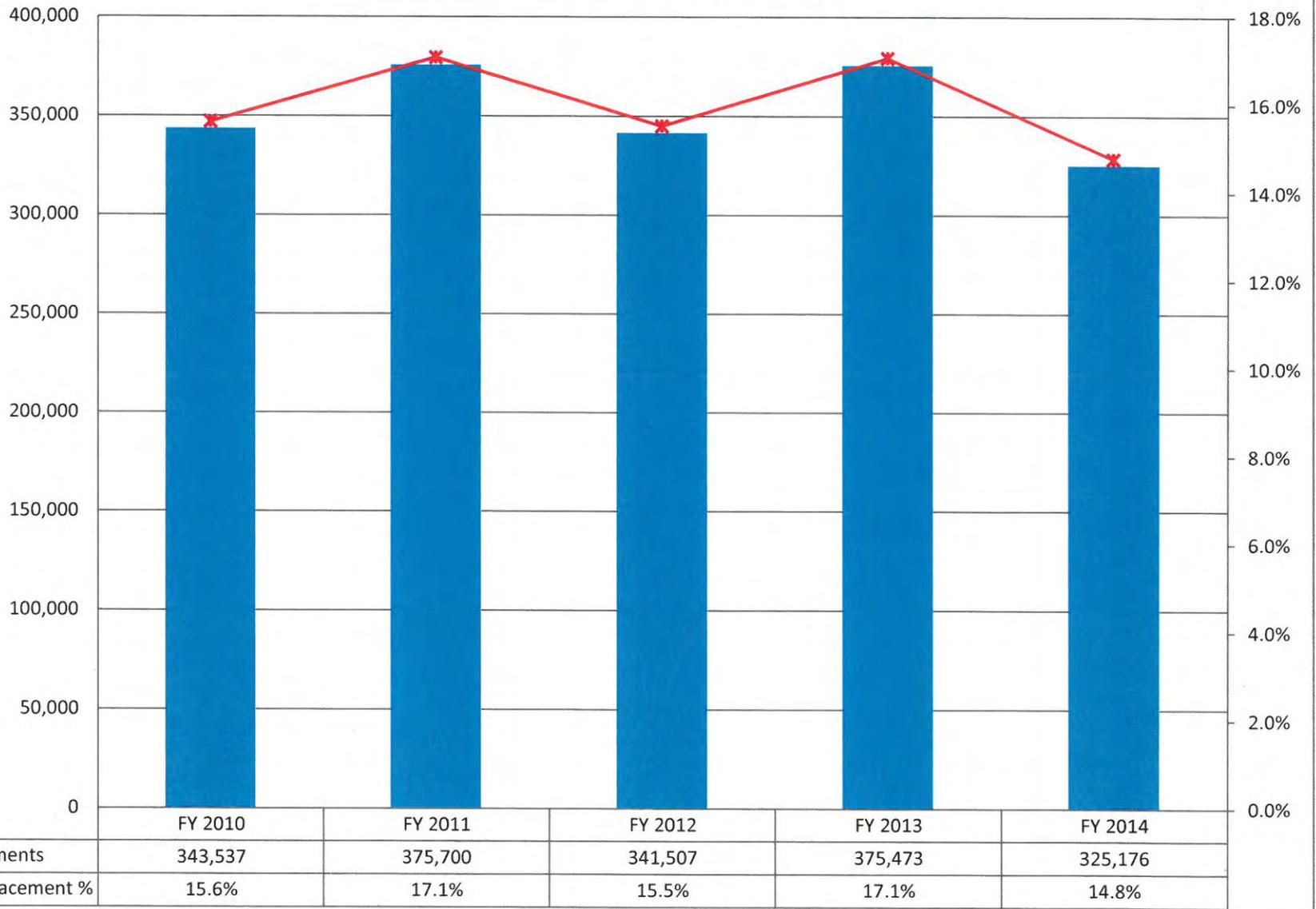
## Sewer Variable Expenses/MG



	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
◆ Chemicals	121	128	144	158	137
* Utilities	158	174	168	213	192
● Sludge Disposal	123	142	142	140	120

# Sewer Vehicle Costs

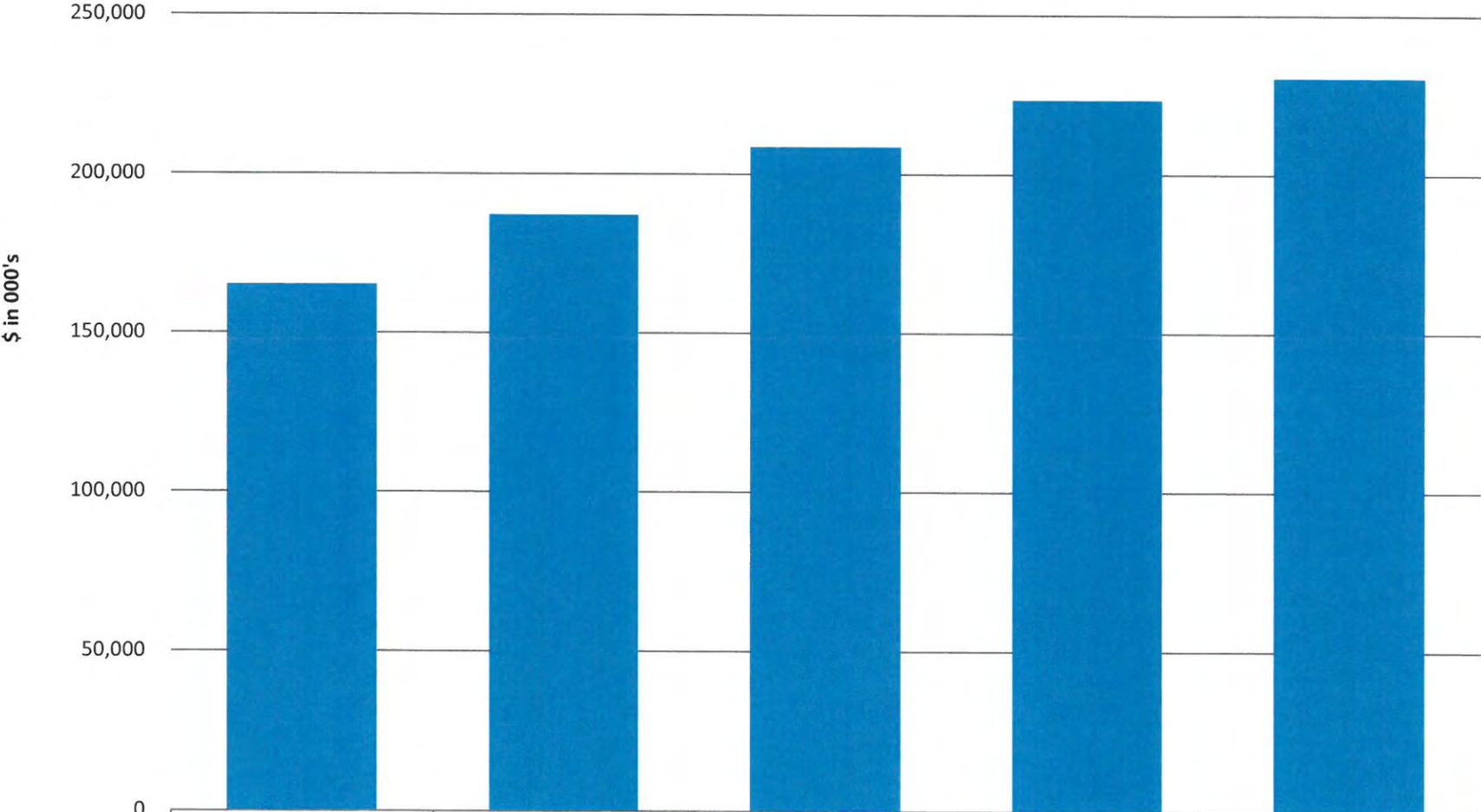
Total cost of all vehicles (\$2.2million)



## Sewer Capital Expenditures (\$ in 000s)

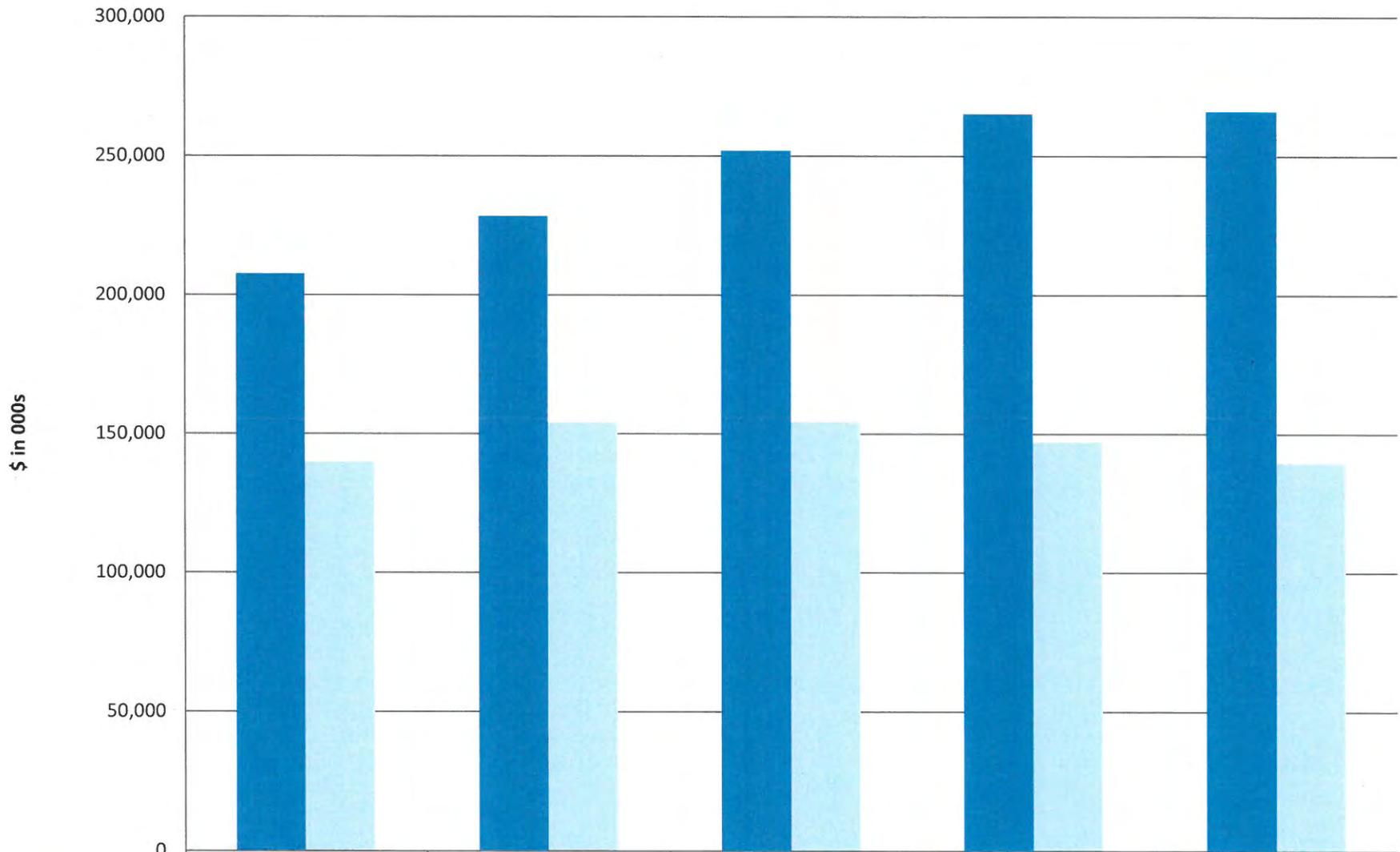
<b>Capital Expenditures</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014</b>
Sewer extensions	596	193	258	69	108
Treatment plant	1,612	1,164	5,572	3,377	452
Collection system repairs	464	997	1,667	1,402	303
CSO - separation & RDP	7,387	9,423	5,194	5,497	3,524
Interceptors	14,003	12,549	15,639	8,846	3,222
Stormwater	0	284	92	77	0
Other	1,092	1,177	1,132	183	249
<b>Total</b>	<b>25,154</b>	<b>25,787</b>	<b>29,554</b>	<b>19,451</b>	<b>7,858</b>

# Cumulative CSO Expenditures



	2010	2011	2012	2013	2014
	165,132	187,103	208,599	223,478	230,376

## Net Sewer Capital Assets



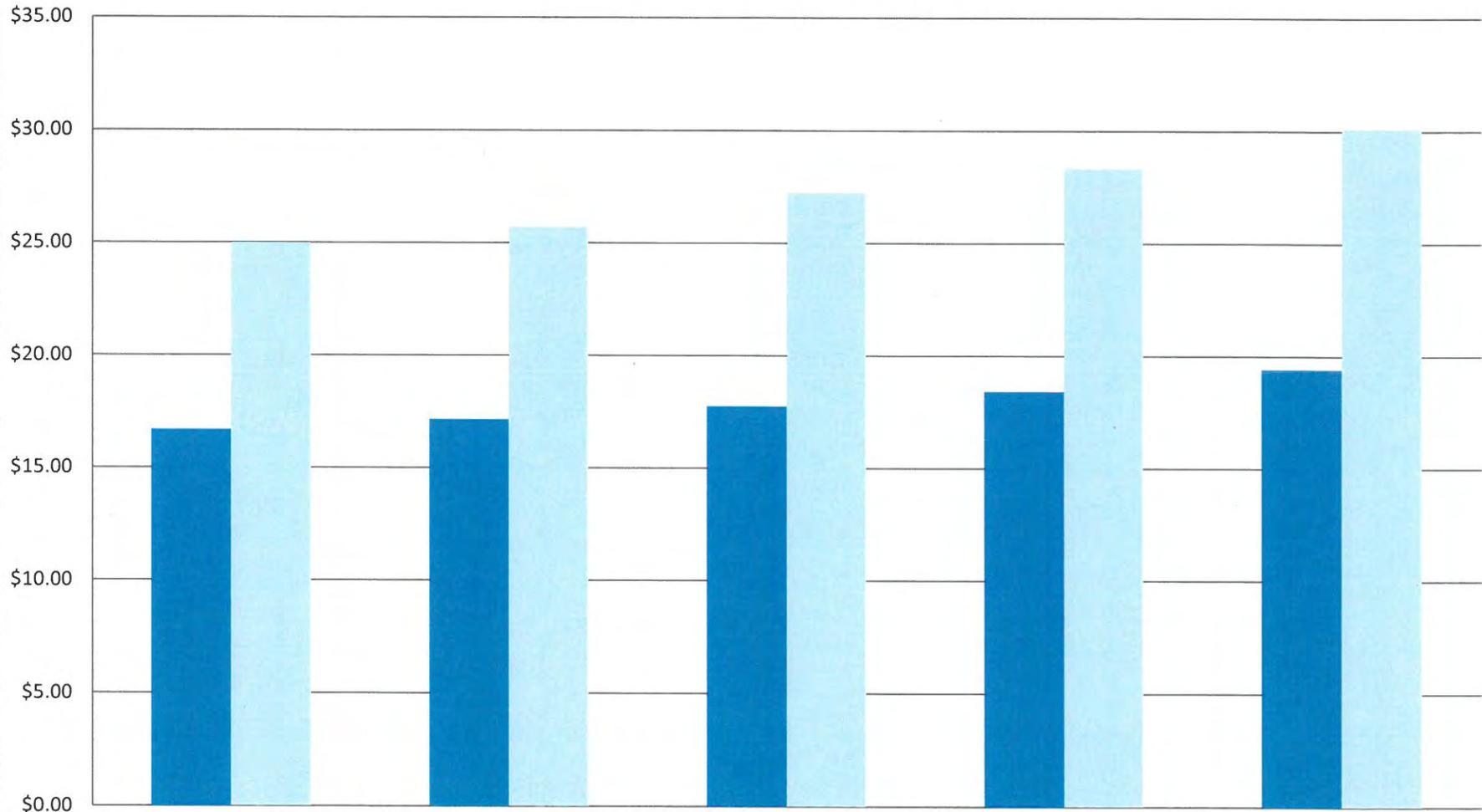
■ Net Fixed Assets	207,611	228,252	251,930	265,057	266,012
■ Bonds & Notes	139,951	154,132	154,374	147,154	139,627

# Rate & Bill Data

# Water, Sewer & Stormwater Rates

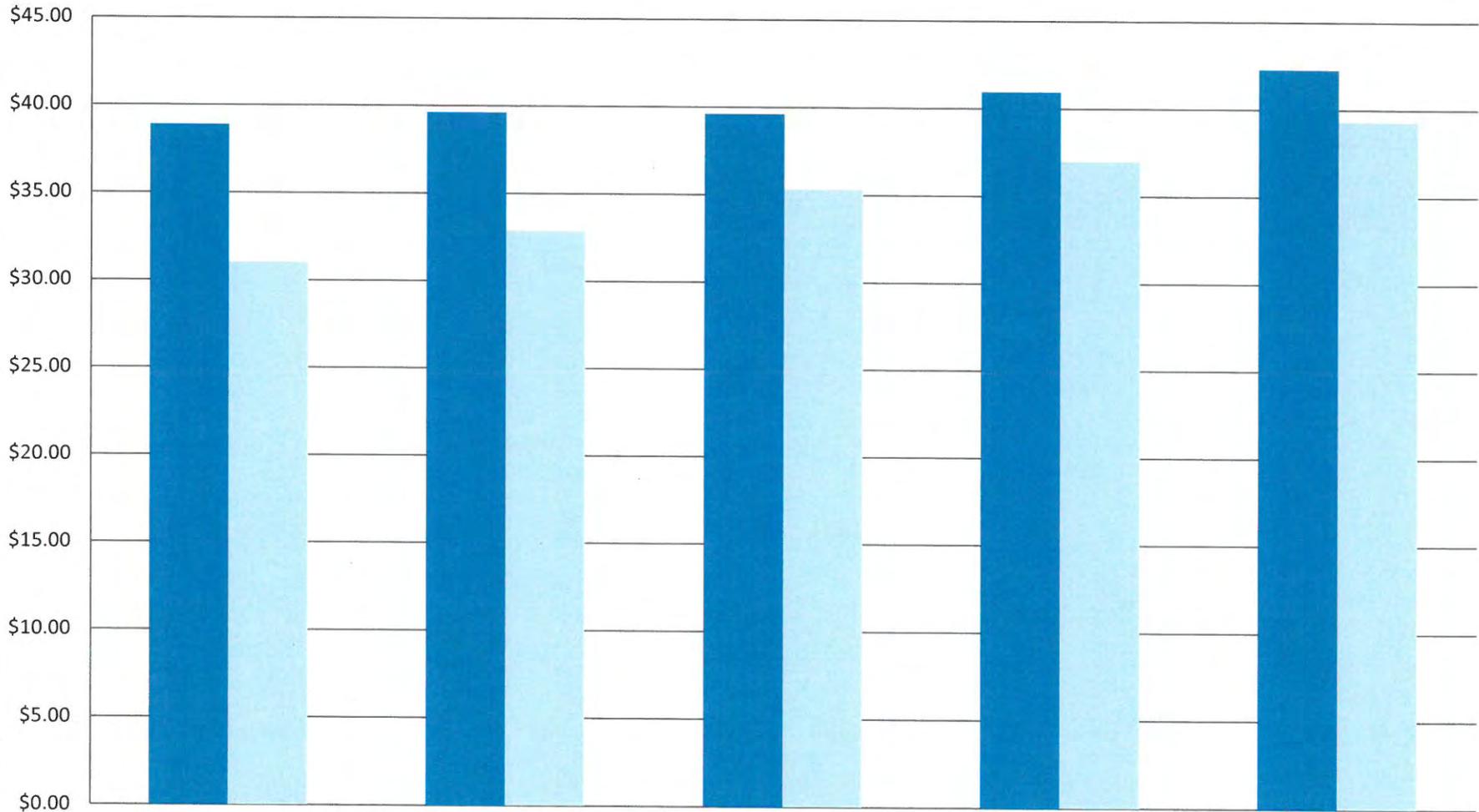
	7/1/2010	7/1/2011	7/1/2012	7/1/2013	7/1/2014
Water volume charge / hcf	\$ 2.22	\$ 2.29	\$ 2.38	\$ 2.38	\$ 2.43
<b>Sewer</b>					
Volume charge / hcf	5.54	5.65	5.65	5.65	5.65
BOD / 100 lbs	20.31	20.31	21.33	22.40	23.52
TSS / 100 lbs.	22.97	22.97	24.12	25.33	26.60
Septic hauler charge	185.50	185.50	195.14	204.90	204.90
Avg. industrial pre-treatment / permit fee	1,606.00	1,606.00	1,606.00	1,606.00	1,606.00
Sewer only	42.27	43.24	43.24	44.58	45.92
<b>Account charge for Water and or Sewer</b>					
	3.69	3.69	3.69	5.69	7.69
<b>Stormwater</b>					
Rate per sfu per month (1,301- 4,300 sq. ft)			4.00	4.00	4.00
<b>Water Connection fees</b>					
3/4" & 5/8" meters	950	950	950	1,045	1,045
1" service - 5/8" meter	1,000	1,000	1,000	1,100	1,100
1" service - 1" meter	1,150	1,150	1,150	1,265	1,265
Greater than 1" minimum	1,150	1,150	1,150	1,265	1,265
<b>Sewer Connection Fees</b>					
4" line	1,100	1,100	1,100	1,210	1,210
Greater than 4" - minimum	1,200	1,200	1,200	1,320	1,320
<b>Availability fee</b>					
Water	1,220	1,220	1,220	1,220	1,220
Sewer	1,950	1,950	1,950	1,950	1,950
<b>Fire protection fees (monthly)</b>					
Hydrants & 8" fire lines	19.79	19.79	19.79	19.79	19.79
10" fire line	35.53	35.53	35.53	35.53	35.53
12" fire line	56.38	56.38	56.38	56.38	56.38
<b>Cut-on charge</b>					
	15	15	15	15	15
<b>Cut-off charge</b>					
	30	30	30	30	30

## Water Bill Comparison @ 5,000 gallons/month



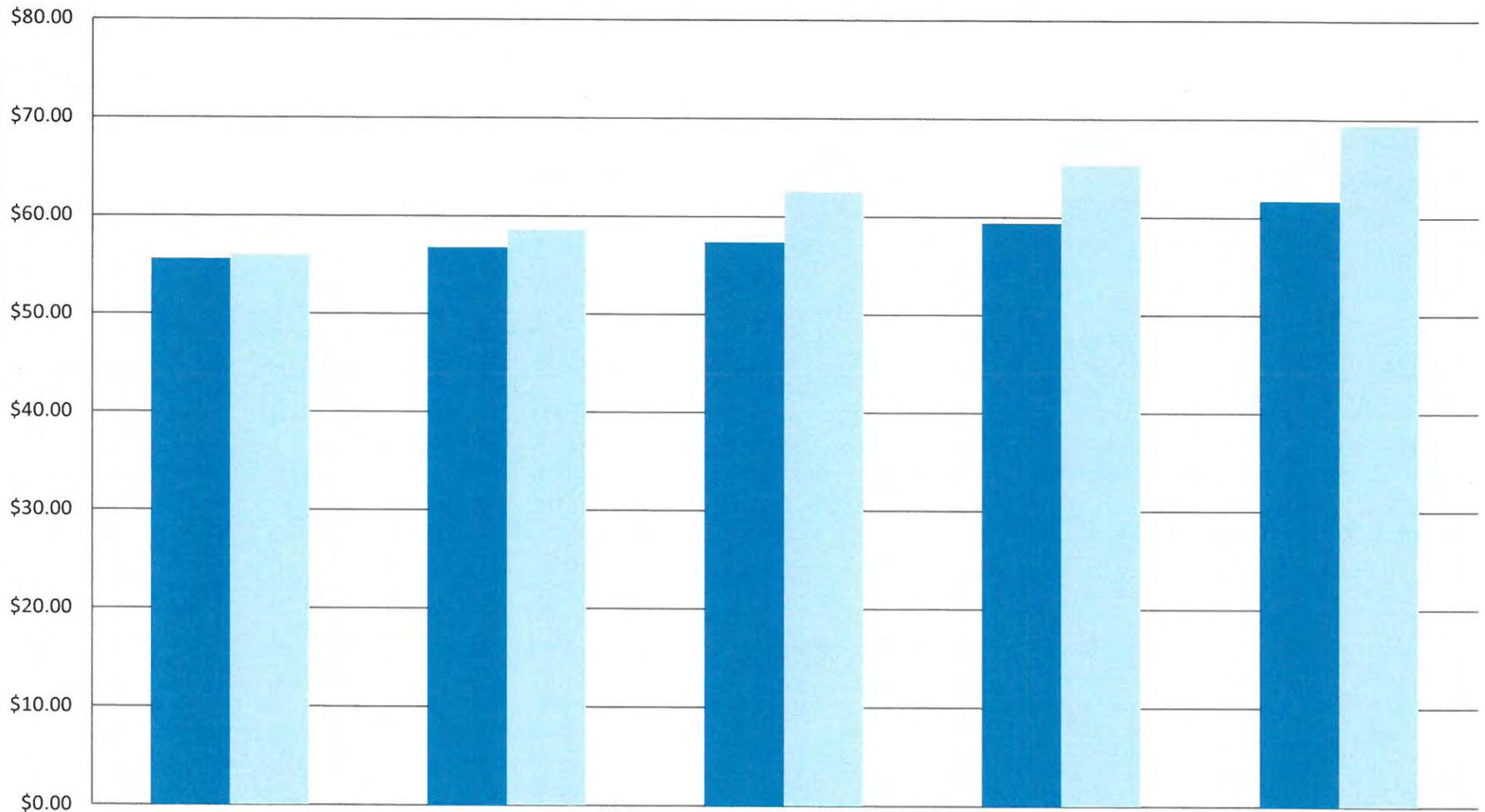
	7/1/2010	7/1/2011	7/1/2012	7/1/2013	7/1/2014
■ Lynchburg	\$16.68	\$17.15	\$17.75	\$18.42	\$19.41
■ State Average	\$25.00	\$25.70	\$27.25	\$28.34	\$30.11

## Sewer Bill Comparison @ 5,000 gallons/month



	7/1/2010	7/1/2011	7/1/2012	7/1/2013	7/1/2014
■ Lynchburg	\$38.88	\$39.62	\$39.62	\$40.95	\$42.29
■ State Average	\$31.03	\$32.88	\$35.34	\$37.00	\$39.33

## Water & Sewer Bill Comparison @ 5,000 gallons/month



	7/1/2010	7/1/2011	7/1/2012	7/1/2013	7/1/2014
■ Lynchburg	\$55.56	\$56.76	\$57.37	\$59.37	\$61.70
■ State Average	\$56.03	\$58.58	\$62.59	\$65.34	\$69.44

## Contract Rate History

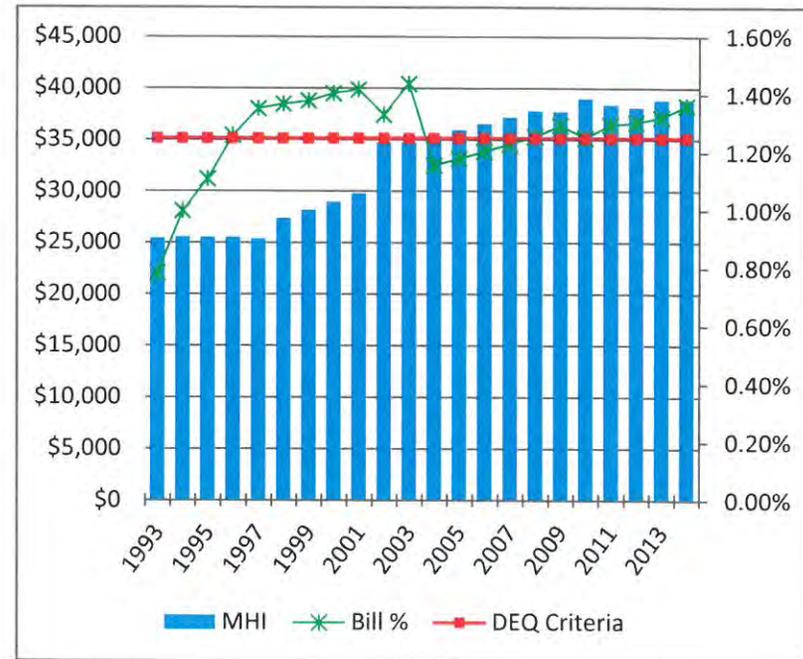
	FY2010	FY2011	FY2012	FY2013	FY2014
<b>Water Contract rates / HCF</b>					
Amherst	1.99	1.89	1.84	1.98	2.04
Bedford	2.00	1.90	1.84	1.98	2.05
CCUSA	1.98	1.89	1.82	1.97	2.03
Frito-Lay	1.18	1.21	1.24	1.27	1.30
Rock Tenn	1.18	1.21	1.24	1.27	1.30
<b>Sewer Contract rates / 1,000 gallons</b>					
Amherst (1)	1.27	1.61	1.60	1.73	1.53
Bedford (1)	1.27	1.61	1.60	1.73	1.53
CCUSA (1)	1.27	1.61	1.60	1.73	1.53
Frito-Lay	2.51	2.65	2.82	2.87	3.03
Rock Tenn	1.84	1.89	2.01	2.01	2.08

1. Volume rate only base on WWTP flows of fiscal year.

# Annual Sewer Bill as a % of MHI

## Annual Sewer Bill

FY	Bill	MHI	%	DEQ Criteria
1993	\$199.08	\$25,437	0.78%	1.25%
1994	\$255.00	\$25,539	1.00%	1.25%
1995	\$282.96	\$25,523	1.11%	1.25%
1996	\$321.36	\$25,527	1.26%	1.25%
1997	\$342.96	\$25,370	1.35%	1.25%
1998	\$374.28	\$27,370	1.37%	1.25%
1999	\$388.32	\$28,168	1.38%	1.25%
2000	\$406.68	\$28,965	1.40%	1.25%
2001	\$421.80	\$29,762	1.42%	1.25%
2002	\$461.76	\$34,716	1.33%	1.25%
2003	\$499.56	\$34,756	1.44%	1.25%
2004	\$408.33	\$35,340	1.16%	1.25%
2005	\$423.72	\$35,934	1.18%	1.25%
2006	\$439.68	\$36,537	1.20%	1.25%
2007	\$456.48	\$37,151	1.23%	1.25%
2008	\$473.92	\$37,775	1.25%	1.25%
2009	\$487.56	\$37,710	1.29%	1.25%
2010	\$487.56	\$38,983	1.25%	1.25%
2011	\$496.80	\$38,353	1.30%	1.25%
2012	\$496.80	\$38,126	1.30%	1.25%
2013	\$512.76	\$38,823	1.32%	1.25%
2014	\$528.72	\$38,842	1.36%	1.25%



Note (1) - MHI based on 9 hcf of monthly use up to 2003; 7 hcf thereafter.