Department of Water Resources

FY 2014 Rate Study and Annual Report

This page left intentionally blank.

Table of Contents:

I. Letter to Council……3
II. Water Fund……6
III. Sewer Fund……10
IV. Stormwater Fund……17
V. Technology……20
VI. Declining Consumption……22
VII. Rate Analysis……24
VIII. Rate Comparisons……28
IX. Recommendations……31
X. Awards……32

Appendices

A. Projection Letter
B. Financial Projections
C. Statistical Data

Department of Water Resources

FY 2014 Rate Study and Annual Report

Mission Statement

Our Mission is to provide excellent water, wastewater, and stormwater services that promote the health, safety, and prosperity of the community.

Dear Mayor and Members of City Council:

The Department of Water Resources is pleased to submit the FY 2014 Rate Study and Annual Report for the water, sewer, and stormwater enterprise funds. This report provides statistical and narrative information related to daily operations, capital improvement projects, rates, and accomplishments. Detailed financial projections and statistical data for each fund are provided in the appendices.

This marks the end of a very eventful year. We have successfully implemented a stormwater utility. While not a popular decision, the utility provides an equitable mechanism to address growing regulatory and infrastructure demands. Many other localities are looking to Lynchburg as a model in their development of a utility. As a result of our public outreach and the approach used to develop the utility, we garnered the attention of the University of Maryland Environmental Finance Center from which we received a grant to explore various financial strategies to help minimize the financial impact of the various water quality regulations to the citizens of Lynchburg. Additionally, we are in the process of completing a three year effort to update our CSO Long Term Control Plan. This plan would implement a new approach and strategies to address the water quality issues created by combined sewer overflows. The result would be a savings of over $200 million and a goal of completing the largest capital program in the history of the City within the next decade.

Significant challenges still exist. Our water and sewer infrastructure is aging at a rate much faster than we are replacing it. Of 450 miles of waterline, over 74 miles is 100 or more years old and 38 miles are between 80 and 100 years old. If we assume a 100 year reliable service life then we should replace a minimum of 4.5 miles per year and we are already 74 miles behind. In addition to the sewers in the combined system, we have approximately 400 miles of sanitary sewer much of which is in need of rehabilitation or replacement. An example is the Burton Creek interceptor, a main sewer line serving Wards Road and much of Liberty's campus, is out of capacity and is in poor condition. Unless this line is soon replaced further development in this sewershed will need to be limited. Ongoing Sanitary Sewer Evaluation Studies (SSES) are needed in order to assess the condition and capacity of the existing sewer lines from which priority projects can be established.

Besides infrastructure we are faced with another dilemma, declining consumption. While we encourage stewardship of our water resources, the fact is that as consumption declines so

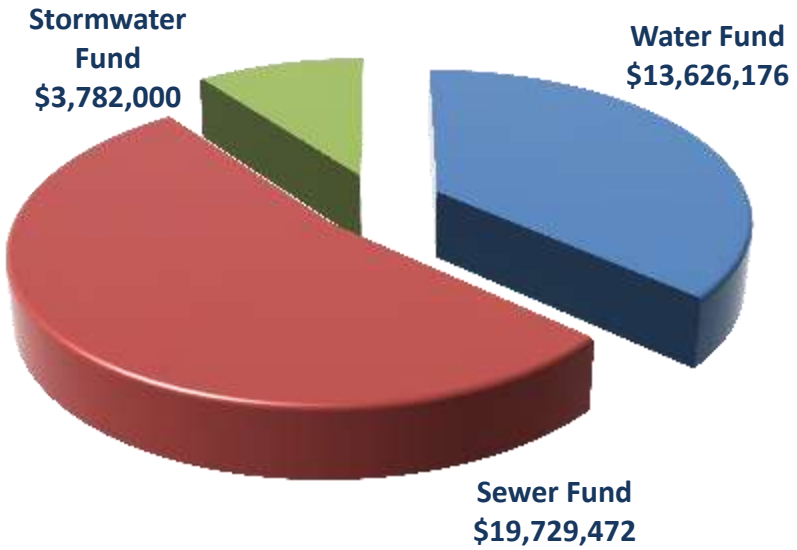
does revenue. With most of the operating costs being fixed costs, the associated savings of variable costs such as power and chemicals does not offset the loss of revenue. As a result, rates need to increase even more and effectively penalizing conservation. This has resulted in the need to explore other rate strategies that more effectively apportions the sources of revenue.

The Department of Water Resources is committed to maintaining the lowest possible rates while meeting our responsibility to invest in our infrastructure, comply with drinking water and environmental laws and regulations, and meet City Council's and CSO Consent Order financial requirements.

The services we provide are largely taken for granted but the fact is that water is essential for life and the prosperity of the community. Whether it is a mother preparing baby formula, a kidney patient on dialysis, or a water dependent industry, each one is dependent upon clean, safe, drinking water. We literally touch the lives of every citizen and visitor every day. The staff of the Water Resources is extremely dedicated and committed to ensuring that our drinking water is clean and safe and that the environment is protected as affordably as possible.

Timothy A. Mitchell, P.E.
Director

FY 2014 Revenue by Fund
Total Revenue = $37,137,648

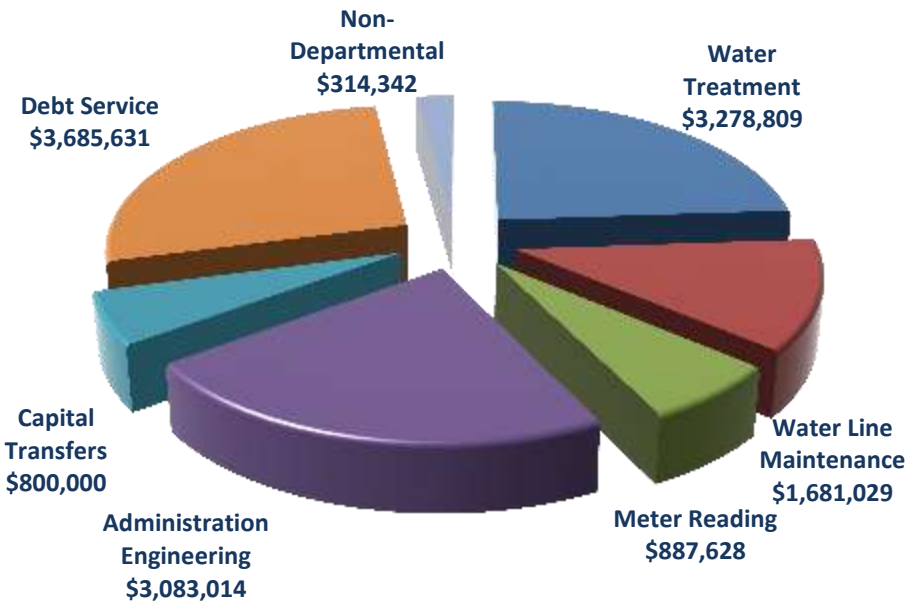


Rate Setting Guiding Principles

- Equitable sharing of water, sewer, and stormwater costs based on actual services provided.
- Ensure rates promote sustainable water and sewer operations and infrastructure.
- Minimize future rate spikes.
- Meet the financial obligations related to the CSO Consent Order.
- Meet Council's financial policies.

II. WATER FUND

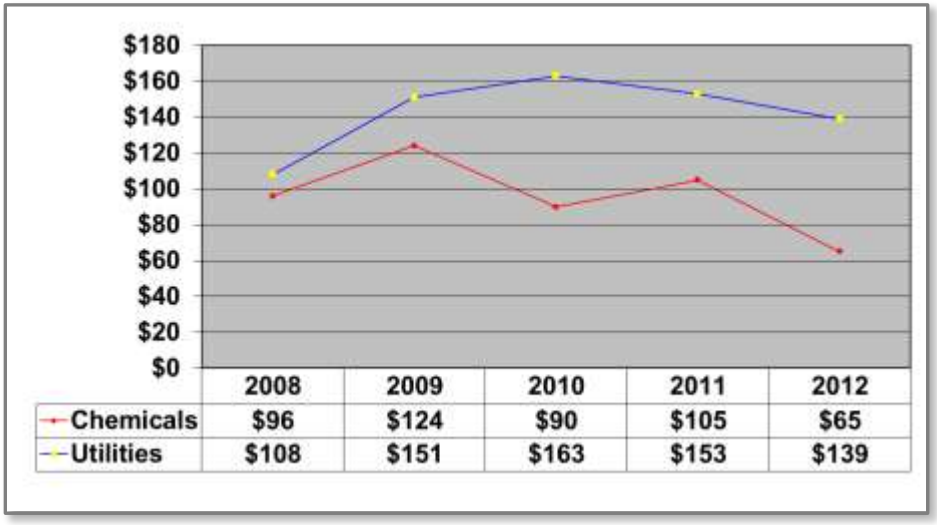
A. Water Fund – Expenses



The **Administrative Division** provides administrative functions for water, sewer, and stormwater and is funded in the water fund. Transfers are made from the sewer and stormwater funds to cover administrative costs associated with sewer and stormwater activities. The proposed FY 2014 Administrative Division budget is $3,083,014 and reflects an increase of $92,395 over the adopted FY 2013 budget primarily due to an increase in contractual services related to the New World Systems.Net software upgrade implementation and an increase in indirect costs associated with the realignment of two financial positions.

The **Water Treatment Division** is responsible for the operation and maintenance of the City's two water filtration plants, the Pedlar Reservoir, and numerous pump stations and water tanks. The proposed FY 2014 budget is $3,278,809 and represents a $13,566 increase above the adopted FY 2013 budget primarily due to capital outlay for various equipment replacements. As shown in *Figure II-1 – Water Treatment Variable Expenses per Million Gallons Treated,* while fluctuating each year the overall cost has remained about the same since FY 2008 at $204 per million gallons treated. This is primarily due to the combination of increasing chemical costs and less use of the James River as a result of declining consumption.

Figure II-1 – Water Treatment Variable Expenses per Million Gallons Treated

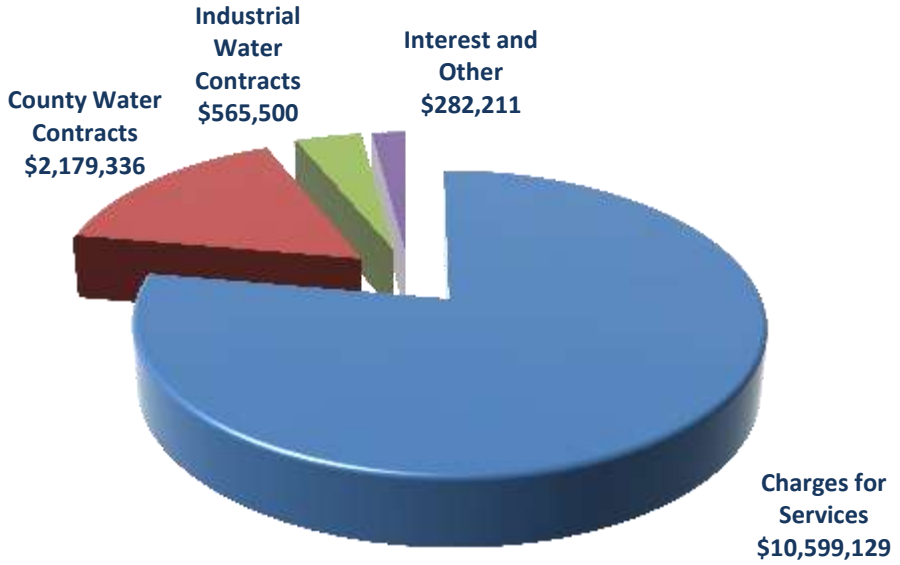


College Hill Coagulation Tanks

The **Water Line Maintenance Division** is responsible for the operation and maintenance of over 450 miles of water line and appurtenances within the City including: repairing main breaks, fire hydrant maintenance, service installations, etc. The proposed budget for FY 2014 is $1,681,029 and represents a $50,218 increase above the adopted FY 2013 budget. This increase is primarily due to increases associated with software maintenance, transfers to Fleet Services, capital outlay for machinery and tools, and increases in costs in pipe fittings associated with new requirements regarding reductions in the allowable lead content.

The **Meter Reading Division** is responsible for the reading, maintenance, replacement, of nearly 23,000 meters. Additionally, they are responsible for cut-offs / ons related to delinquent accounts. The proposed budget for FY 2014 is $887,628 which represents a $6,318 increase from the FY 2013 adopted budget. The primary reason for this increase is related to software maintenance and Fleet charges such as fuel and vehicle maintenance.

B. Water Fund – Revenues



Assuming the proposed rate increases are implemented the Water Fund revenues are expected to be $13,626,176 for FY 2014. While there has been a slow but steady increase in the number of customers, *Figure II-2 Number of Water Customers*, the overall water sold has decreased from 10.11 mgd to 9.15 mgd or 960,000 gallons per day, a 9.5% decrease. More importantly, the average household consumption has decreased from 6.39 hcf per month to 5.31 hcf per month, a 17% decrease. See *Figure II-3 – Residential Household Water Consumption.*

Figure II-2 Number of Water Customers

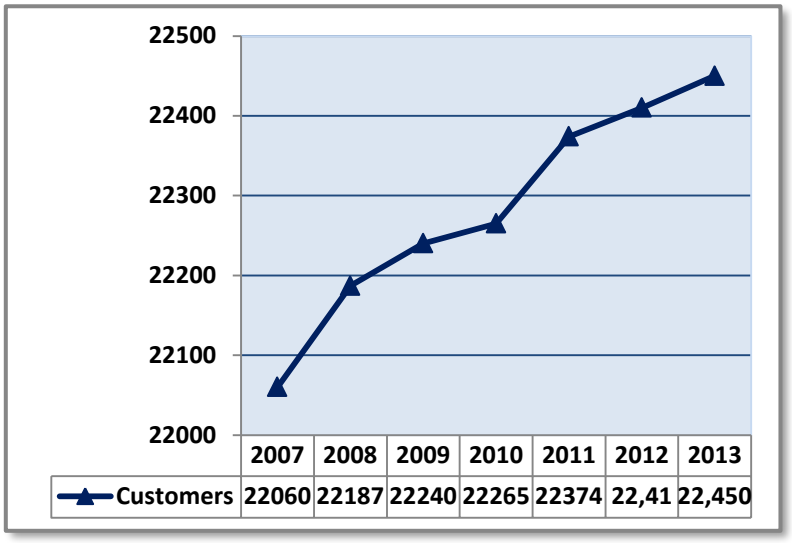
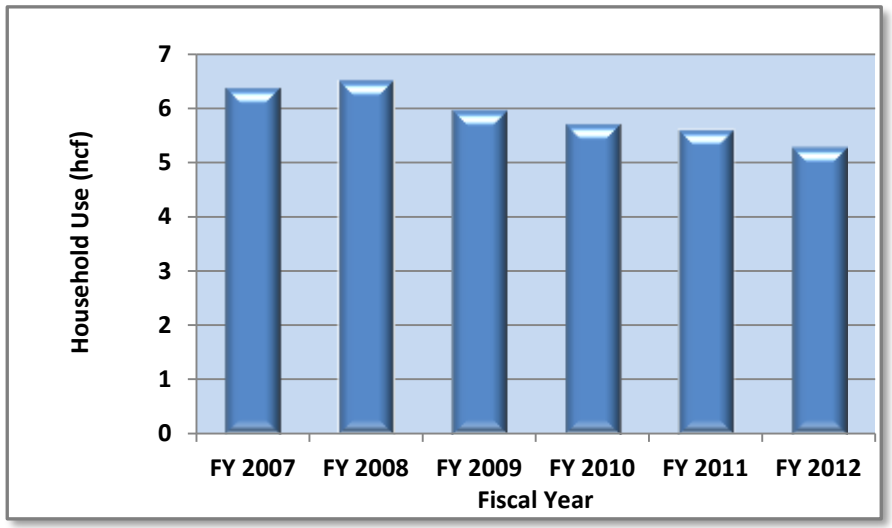
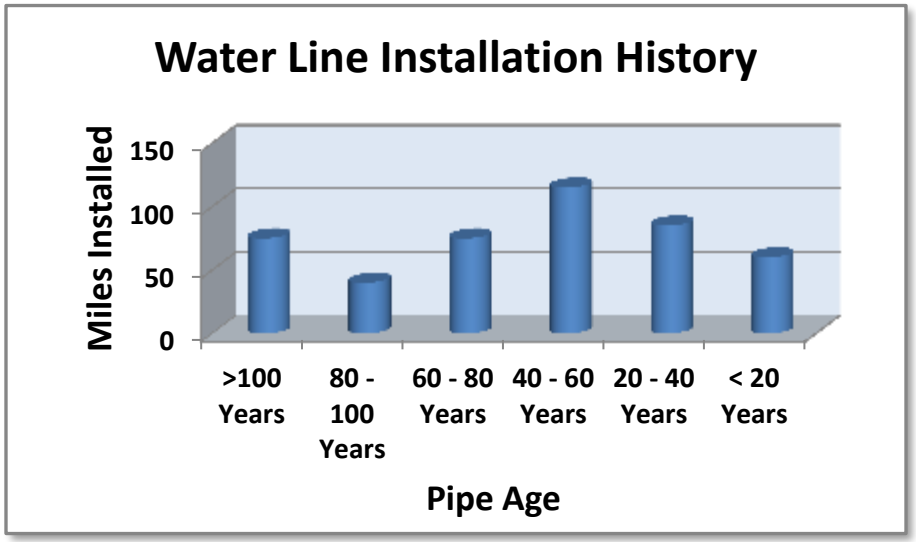


Figure II-3 – Residential Household Water Consumption



C. Water Fund – Capital

With over 450 miles of water line, a minimum of $3.5 million is needed annually for distribution system replacement in order to minimally sustain the existing infrastructure. However, we are already significantly behind an adequate renewal program. The Department of Water Resources has identified over 290 water line replacement projects totaling 246,200 feet (46.6 miles) of water line that should be replaced now. These lines are undersized, made of inferior materials and/or have exceeded their useful life. At $150 per foot, there are approximately $37 million in existing water infrastructure needs now. There are a total of 75 miles of pipe that are over 100 years old and another 40 miles that are between 80 and 100 years old. In fact one pipe that is still in service was installed in 1829 at the beginning of Andrew Jackson's presidency.



Currently only $2 million is budgeted annually for distribution system improvements. In the future, more significant rate increases will be needed in order to adequately fund water infrastructure needs.

Pedlar Raw Water Line Evaluation

A critical component of the water system infrastructure is the 80 year old, 36 inch diameter, 22 mile long raw water line from the Pedlar Reservoir to the Abert and College Hill Water Filtration Plants. Due to the age, criticality, and cost to replace this line, the Department of Water Resources hired Greeley and Hansen, a consulting engineering firm, to conduct an extensive evaluation of the raw water line. The goal of the study was to determine the current condition of the pipe line and to develop a strategy to replace or renew the pipe if necessary. Work included geotechnical soil studies, evaluation of a section of pipe that was removed

Top of the exposed cast iron pipe. Note that the manufacture's name is still visible on the pipe.

as a result of a break, and excavating and evaluating wall thickness at critical locations. The engineer also witnessed the most common type of pipeline failure, a leaking joint, and how the City handles the repair to get the water line back in to service. Had significant issues been discovered, an additional study would have been conducted to evaluate various pipeline replacement and rehabilitation methods versus other options

The study indicated that the Pedlar Raw Water Line is in excellent condition for an 80 year old cast iron water pipe. The pipeline that failed under the James River was analyzed and it was found that decreasing wall thickness and corrosion were not the cause of failure and that it was likely a structural flaw in that section of pipe. The soil conditions in

Amherst and Bedford County tend to be very non-corrosive to iron pipe.

The conclusion is that the existing pipeline does not appear to be suffering any significant corrosion and should be a valuable asset to the City for the next 100 years. The primary source of pipe failure will continue to be leaking joints, and the City's method of applying a point repair when a joint failure occurs is the most cost effective method for handling these failures.

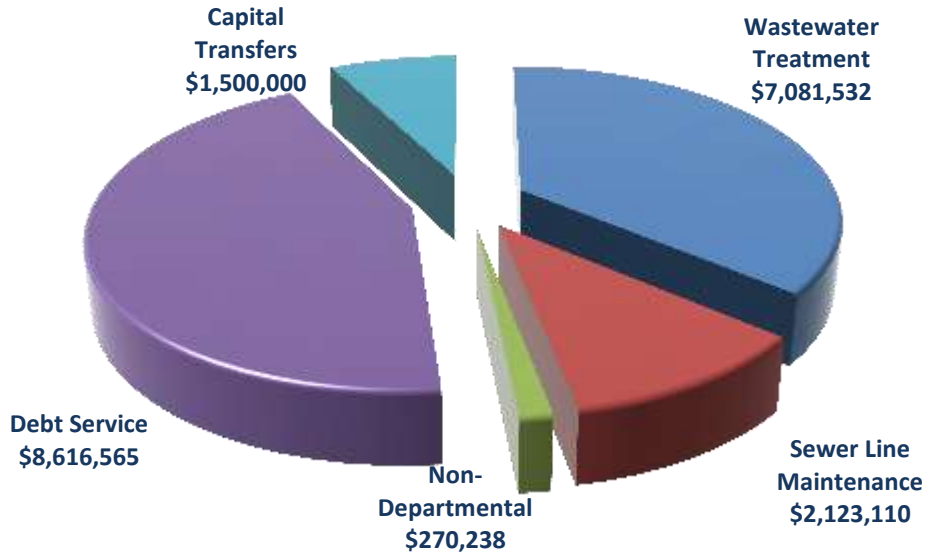
Corrosion engineer making pitting measurements.

III. SEWER FUND

A. Sewer Fund – Expenses

The Sewer Fund expenses for FY 2014 are proposed to be $19,591,445, a 0.6% increase above the adopted FY 2013 budget. Of this $10,116,565 (51.6%) is debt service and capital transfers. The Wastewater Treatment Division comprises 36.2% of the budget, Sewer Line Maintenance 10.8% and Non-Departmental the remaining 1.4% of the expenses.

Figure III-1 Sewer Fund Expenses

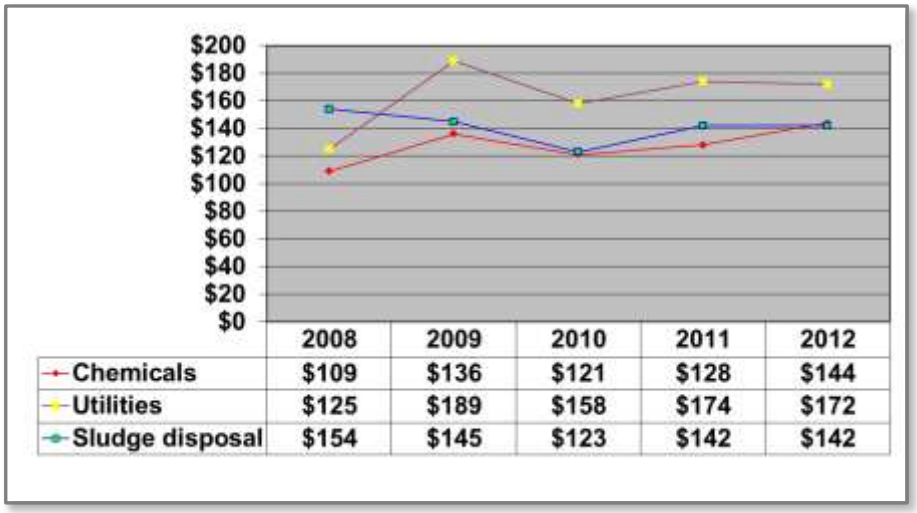


The **Wastewater Treatment Division** is responsible for the operation and maintenance of the Lynchburg Regional Wastewater Treatment Plant (RWWTP). The proposed FY 2014 budget is $7,081,532 and represents a $238,014 increase from the adopted FY 2013 budget. This increase is primarily the result of additional equipment and fleet expenses associated with hauling sludge to the Campbell County landfill and the Maplewood landfill in Amelia. Other significant increases are for overtime associated with covering shifts where turnover has resulted in a lack of adequate licensed operators.

RWWTP Secondary Clarifier

The variable expenses or the RWWTP, chemicals, power, and sludge disposal, as shown in *Figure III-1 – Sewer Treatment Variable Expenses per Million Gallons Treated,* have risen from $388 per million gallons treated to $458, an 18% increase since FY 2008.

Figure III-2 Sewer Treatment Variable Expenses per Million Gallons Treated

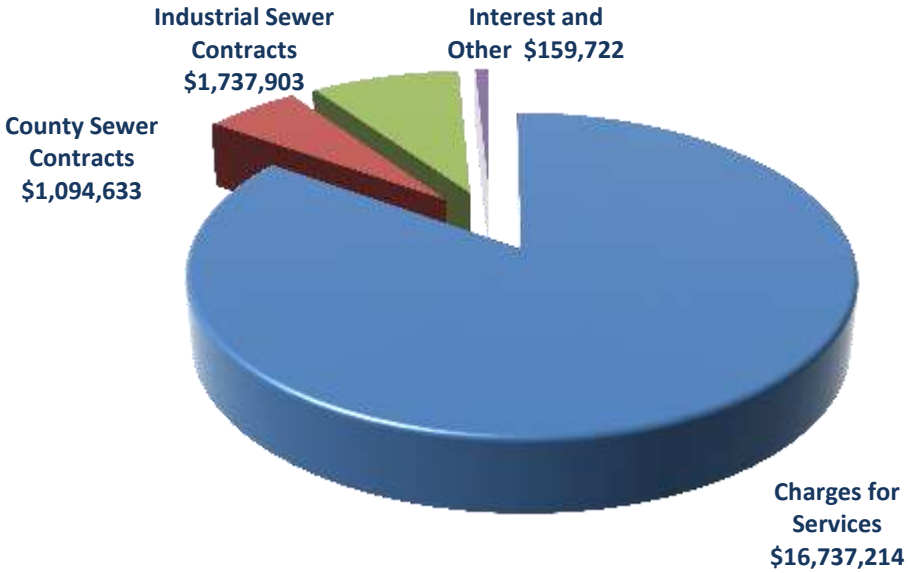


	2008	2009	2010	2011	2012
Chemicals	$109	$136	$121	$128	$144
Utilities	$125	$189	$158	$174	$172
Sludge disposal	$154	$145	$123	$142	$142

The **Sewer Line Maintenance Division** is responsible for the operation and maintenance over 450 miles of sanitary sewer lines in the City including: inspection, cleaning, repairing, installation of services, etc. The proposed budget for FY 2014 is $2,123,110 and represents a $206,172 decrease from the adopted FY 2013 budget. This decrease is primarily due to reductions in contractual services, indirect costs, and engineering costs.

Vac-con Sewer Cleaning Truck

B. Sewer Fund – Revenues



Assuming the proposed rate adjustments are implemented, the total Sewer Fund revenues are expected to be $19,591,445 in FY 2014. Despite a steady increase in the number of sewer customers, overall sewer sales have decreased by 13% since FY 2007 and by 2.6% in the last year alone. Refer to *Figure III-3 Sewer Sold* and *Figure III-4 Number of Sewer Customers*.

Figure III-3 Sewer Sold

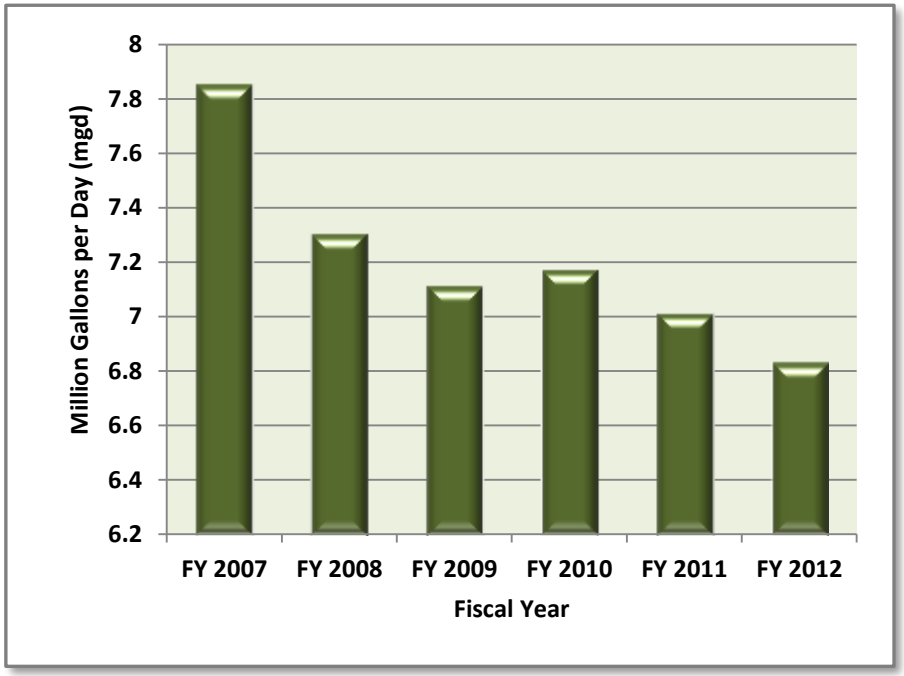
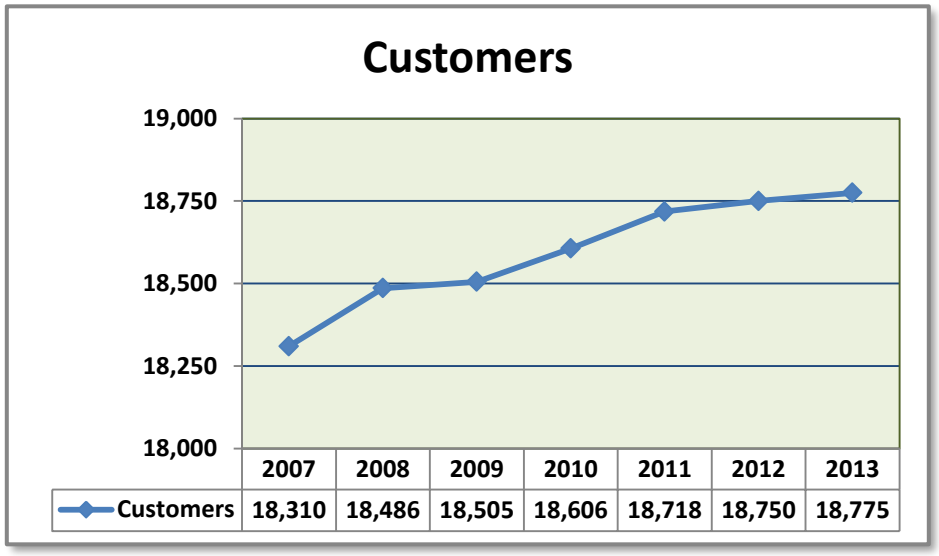


Figure III-4 Number of Sewer Customer



The Sewer Fund has very limited debt capacity for the next 4 or 5 years. As a result, capital projects have been significantly scaled back over the projection period. Unless state funding is made available for CSO, the CSO program will stop for the next several years except for the projects that are currently under construction. A significant new project that needs to be completed immediately is the replacement of the Burton Creek Interceptor at an estimated cost of $4.5 million. This critical sewer line serves the Wards Road area and much of Liberty University and is out of capacity. Future growth in this area would need to be restricted without replacement of this sewer line.

While CSO has been a priority over the last two decades there are still another 400+ miles of sewer lines that need to be maintained and renewed. The Sanitary Sewer Evaluation Study (SSES) is an ongoing effort to clean, inspect, identify deficiencies, and to renew and replace the sewer system. In order to renew the system once every 100 years we would need to replace over four miles of sewer lines annually. Older lines are subject to blockages from grease, debris, and roots, and often have offset joints or structural defects. Failure to adequately maintain these lines results in basement back-ups and sewer overflows which are violations of the Clean Water Act. It is estimated that over $3 million is needed annually for asset renewal and another $1 million annually for the SSES program. Due to limited debt capacity, we are only budgeting $500,000 annually for the SSES Program.

Infiltration

Regional Wastewater Treatment Plant

We are currently in the process of finishing a $7 million upgrade to the Regional Wastewater Treatment Plant (RWWTP)which included improvements to the headworks screening, primary clarifiers, aeration basins, secondary clarifiers including the return activated sludge system. These upgrades improved the RWWTP wet weather flow capacity from approximately 36 million gallons per day (mgd) to nearly 55 mgd. This was another key project that has enabled us to modify the CSO Long Term Control Plan. Additionally, while this was not a nutrient removal project, it will still improve the plants nutrient removal efficiency.

RWWTP Secondary Clarifier

Additional investments of $500,000 to $1 million are needed annually in order to keep the RWWTP operating efficiently. Due to the limited available debt capacity only $250,000 to $350,000 is budgeted annually for RWWTP improvements.

RWWTP Secondary Clarifier

RWWTP Aeration Basins

CSO Progress

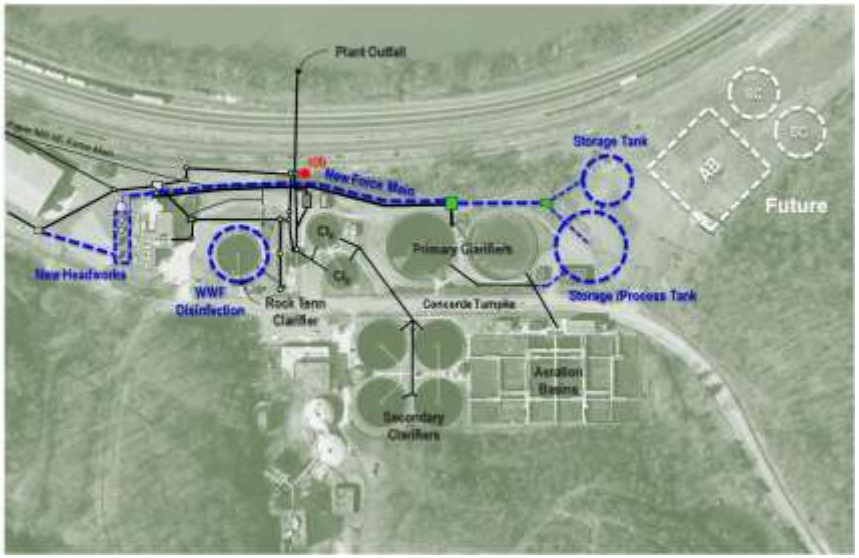
Over the last 20 years, we have made significant progress in eliminating combined sewer overflows (CSOs). As of 2013, we have spent $233 million, closed 112 of 132 overflow points, separated 67% of the CSO Area, replaced 26 miles of interceptors, disconnected 70% of rooftops connected to sanitary sewers, and reduced 80% of the annual average overflow volume. However, many of the remaining combined sewers were in Lynchburg's central business district, where separation construction would be particularly disruptive and expensive. The City could spend another $280 million over the next 30+ years to complete remaining work in its existing CSO Long-Term-Control Plan (LTCP).

Implementation of the proposed plan will potentially enable Lynchburg to complete its CSO program within the next decade contingent upon anticipated state funding and save over $200 million.

More than 50 CSO control scenarios were evaluated and cost-performance analyses were conducted to select the final proposed plan. The proposed plan will comply with the TMDL requirements and reduce more than 50% of current annual overflow volume by maximizing capacity of existing facilities, applying cost-effective green infrastructure, treating

additional wet-weather flows at the wastewater plant, separating selected sewers, disconnecting additional rainleaders from rooftops, and providing additional temporary flow storage.

Wastewater Treatment Plant Improvements



Maximizing the wet weather treatment capacity at Lynchburg's wastewater treatment plant will significantly reduce the discharge of untreated combined stormwater and sanitary sewage to the James River. It will also reduce nutrient and sediment loads to the Chesapeake Bay and contribute to Lynchburg and Virginia's commitment to achieving compliance with the Chesapeake Bay TMDL.

Benefit of Proposed Plan – Closing two CSO Outfalls in Downtown

CSO 125 Outfall

CSO 59 Outfall

The proposed plan will close two major outfalls in downtown Lynchburg, which will improve aesthetics, and reduce odor and discharge of pathogens and other pollutants to the James River.

Pipe for James River Interceptor Division 3A

IV. STORMWATER FUND

A. Stormwater Fund – Expenses

The Stormwater Fund expenses for FY 2014 are proposed to be $3,952,787. Of this $750,000 (19%) is a capital

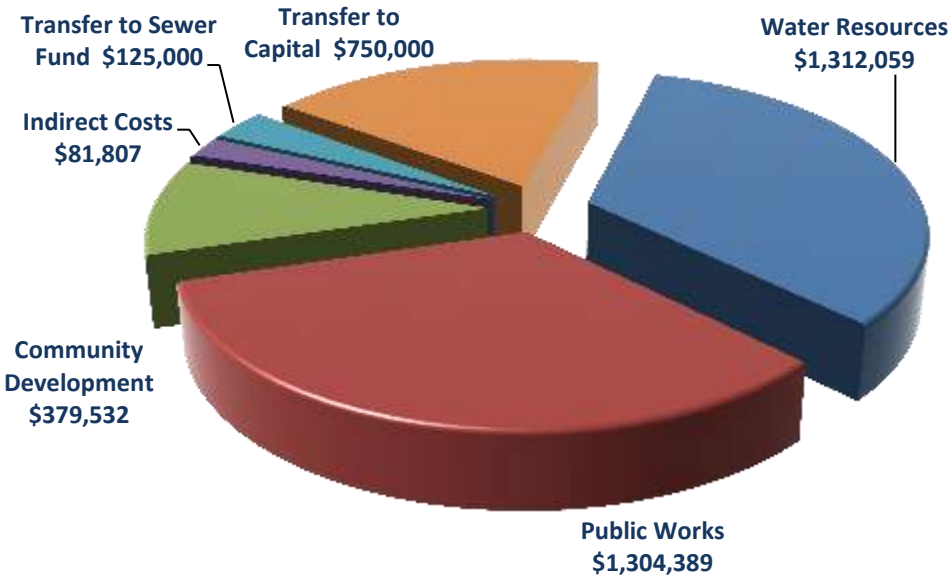
transfer to be used for master planning, condition assessment, mapping, and infrastructure repairs and replacement. $125,000 is to reimburse the Sewer Fund for stormwater utility startup expenses. A total of $1,765,728 is transferred to the General Fund for stormwater activities in Public Works and Community Development and as an Indirect Cost payment for other support activities.

The most significant changes from the current year budget includes $146,069 for two positions one of which is an existing IT position in the General Fund that was moved to the Stormwater Fund primarily due to the total amount of IT support provided to the entire Water Resources Department.

In future years this position will be evaluated to determine whether it should remain in the Stormwater Fund or be split between each enterprise fund. The other position is a Public Outreach & Education Coordinator which is needed to comply with new provisions in the City's Municipal Separate Storm Sewer System (MS4) permit.

Other increases include a new $81,807 indirect cost payment to the General Fund for services such as financial, human resources, etc.

Figure IV-1 Stormwater Fund Expenses



B. Operations

The Departments of Water Resources, Public Works and Community Development are the core departments implementing the components of the City's Municipal Separate Storm Sewer System (MS4) permit and overall stormwater program.

The Department of Water Resources is responsible for the overall management of the permit and coordination among all departments to ensure compliance with the six minimum control measures as dictated by our MS4 permit. Additionally, the department performs any necessary maintenance or repair work to the storm system network and stormwater BMPs, manages the Illicit Discharge Detection and Elimination (IDDE) program and manages compliance of stormwater maintenance agreements for stormwater BMPs. The department is also responsible for maintenance of the stormwater GIS system. Additionally, more and more sophisticated stormwater quality devices are being installed throughout the City which are labor intensive and expensive to maintain.

The Department of Public Works is responsible for managing the leaf collection and street sweeping programs. The department is also responsible for operation and maintenance work on culvert, storm ditch-line and stormwater BMPs.

The Department of Community Development is responsible for the enforcement of the erosion and sediment control program for public and private land disturbing activities and the stormwater management ordinance for adequate channel and water quality management of development projects. The divisions of Zoning and Natural Resources and Building Inspections assist with the Illicit Discharge Detection and Elimination Program.

C. Regulatory

The City's new MS4 permit is scheduled to be effective July 1, 2013. The new permit will result in a significant increase in effort for each of the six minimum control measures. The permit will incorporate the new State Stormwater Management Regulations as well as special conditions for the Chesapeake Bay and other TMDLs.

The Chesapeake Bay special conditions will require the City to achieve 5% towards our pollution reduction goals during the upcoming five year permit cycle. The second permit cycle and additional 35% would need to be achieved, and finally 60% in the third permit cycle. With our current estimate of approximately $110 million needed to comply with the urban stormwater requirements divided based on the reduction goals in each permit cycle the estimated cost for each five year permit cycle is as follows: first permit cycle

= $5.5 million; second permit cycle = $38.5 million; and the third permit cycle = $66 million. It is anticipated that some of these costs could potentially be mitigated through the expanded nutrient trading program, good planning and management, and low interest revolving loans or grants.

Other requirements will result in greater requirements in each of the six minimum controls with more emphasis on quantitative results.

MS4 Six Minimum Control Measures

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

Recently, we received the EPA Report from the EPA MS4 inspection conducted on March 5 and 6, 2012. This report identified various areas of the City's stormwater program that need improvement. Some of these include:

- Increase construction site inspection frequency.
- Update and enhance the Illicit Discharge Detection and Elimination Program.
- Enforcement and documentation of maintenance activities related to private stormwater maintenance facilities.
- Improvements to good housekeeping controls on municipal properties.

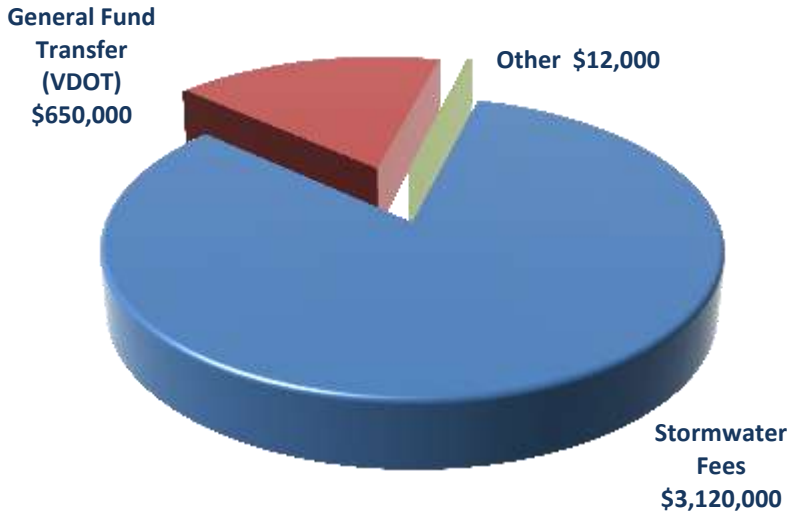
We are currently reviewing this report and determining the appropriate next steps related to responding to EPA and addressing the items noted in the report. At present, we have not received notice of any civil penalties associated with the findings in the report.

D. Infrastructure

Besides just complying with new and strengthened regulations, it is also critical that we devote adequate resources to maintaining our existing stormwater infrastructure. Currently, very little is even known about the location, condition, or even extent of our stormwater infrastructure. As with other infrastructure, deferring maintenance usually ends up costing more in the long run. We are recommending that at least $300,000 annually be devoted to pay-as-you-go capital for general system repairs.

It is recommended that beginning in FY 2014 that at least $200,000 per year be devoted to mapping, condition assessment, master planning and design in order to determine the most cost effective and efficient way to not only meet the new regulatory requirements, but also properly manage our stormwater infrastructure. The actual needs for this are actually far greater.

E. Revenues



It is recommended that the stormwater fee remain at $4.00 per s.f.u. per month. The total revenues generated by the fee, VDOT reimbursable expenses, and other miscellaneous revenue is anticipated to be $3,782,000. Even though the revenue generated by this fee is somewhat greater than anticipated, the needs associated with MS4 permit compliance and infrastructure are far greater.

V. Technology

The Department of Water Resources utilizes technology to monitor several different elements of the water distribution and sewer collection system in order to operate these systems more efficiently and enhance emergency response. Those elements are:

- Pressures within our distribution pressure zones
- Hydrant pressures
- Rain fall
- Sewer collection flow elevation
- Sewer odor (hydrogen sulfide)

Several water distribution pressure zones in the City are controlled by pressure reducing valves (PRV) which regulate the flow and pressure within the zone. Too much pressure and water lines can rupture. Too low pressure and industries, fire sprinkler systems and residences are affected. With the assistance of wireless technology, both the inlet and outlet pressures of the PRVs can be monitored. If pressure variations occur outside of a specific set of parameters, department staff are notified. These alerts enable staff to investigate any abnormalities within a few minutes of them occurring, as opposed to after a main breaks and/or customer complaints. Historical data is also available to verify and validate consumption and flow through the PRVs.

Through the use of hydrant pressure gauges, Water Resources can also monitor pressures within any pressure zone in the water distribution system. Hydrant pressure

gauges can be installed at specific locations where there is a concern or need to verify pressures. Pressure data is then recorded either by the hour, minute or second to be downloaded and evaluated later. Because these devices are portable, they can easily be installed throughout the City.

Rain fall is recorded via three rain gauges located throughout the City. The data is connected at each device for a 24 hour period. Once a day, the device, using a cellular modem, transfers the data into a central database. The rain fall data is used monthly to model any potential sewer discharge at the remaining CSO overflow points. Alarms are also in place to notify staff if a certain threshold of rain has been received within a specific period of time. For example, if we receive more than an inch of rain in a one hour time period.

In the case of the sewer collection system, a key element to monitor is flow elevation within a sewer main. A flow elevation sensor has been installed near an overflow point to validate actual sewer overflows versus sewer modeled or predicted overflows. A sensor records the level of flow in the sewer main, periodically transferring the data into the central database. When the flow reaches specific levels, alerts are sent to staff notifying them of the event. Additionally, alerts are set to notify staff that these levels have receded back to normal operating conditions. When this data is coupled with the information received from the rain gauges, one can visually see the effect of a rain storm on the sewer collection system.

Technology is also used to help monitor hydrogen sulfide within the sewer collection system. Sewer odors can be caused by hydrogen sulfide forming inside the sewer main. As the level of hydrogen sulfide rises, so does the level of odors. Logging devices can be attached to a sewer manhole lid and lowered to the level of the sewer main. Again, using cellular modem, the recorded levels of hydrogen sulfide can be transferred to a central database for staff to review and monitor. This data is used to determine the amount of chemical treatment needed at specific locations in order to suppress the formation of hydrogen sulfide production within the sewer main, therefore reducing the amount of odor emitted from the sewer collection system. The department currently has two devices deployed in the City.

H. EDWIN OVERCAST

Is it time for water utilities to rethink pricing?

AWWA Journal – June 2012

VI. DECLINING CONSUMPTION

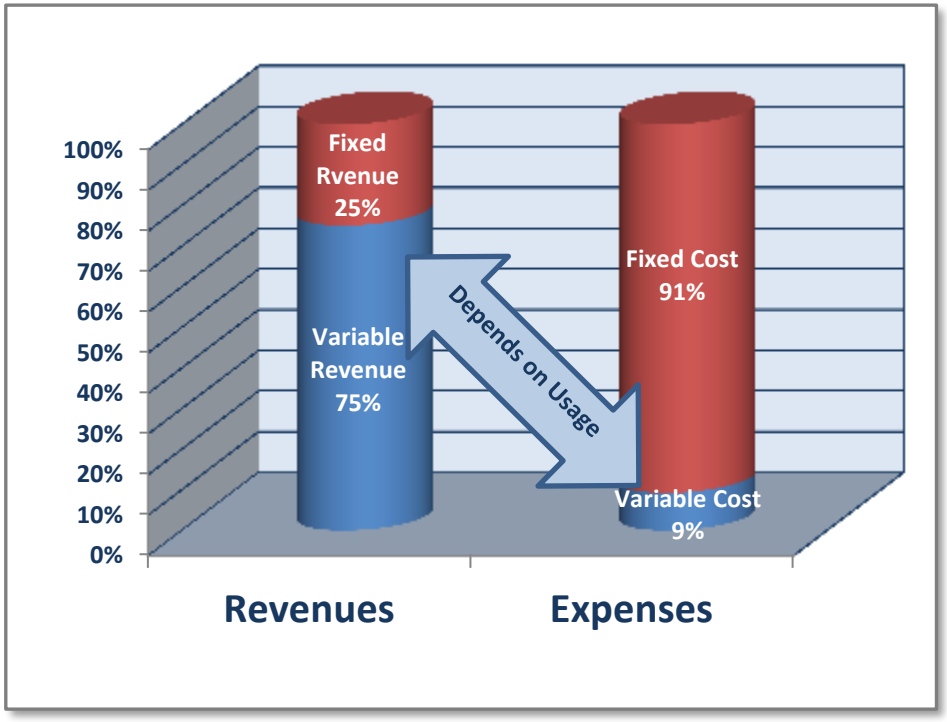
Over the last 5 years alone there has been a 17% decrease in average household consumption and a 9.4% overall decrease in water sales. Lynchburg is not unique in this phenomenon; water utilities across the country are experiencing similar declines. A 2010 study by the Water Research Foundation found that an average household in 2008 used 11,678 gallons less annually as an identical household in 1978. This trend has accelerated even more in the last several years. As a result, water utilities are looking for alternate price structures to help alleviate the revenue issues associated with the lower consumption while still promoting conservation.

There are a number of reasons for the declining consumption. The National Energy Policy Act of 1992 mandated the installation of low-flow toilets. Water efficient toilets that use 1.6 gallons per flush instead of six gallons per flush are being installed in new homes and as replacements in older homes. Water Sense and Energy Star Programs promote the use of water efficient appliances such as washers and dishwashers. Even shower heads use much less water. Additionally, the public overall has become more conservation focused through education and the environmental movement. Increasing water prices also serve as a motivation to reduce consumption. As a result, raising the volumetric rates and promoting conservation further exacerbate the problem.

One approach to improve revenue stability is to shift more of the revenue to a fixed monthly charge. Most of operational expenses of both the water and sewer funds are fixed regardless of consumption. As a result, as consumption decreases the volumetric rates not only have to be increased to cover the lower consumption but also other inflationary increases as well. Increasing the fixed monthly charge helps to stabilize the revenue while keeping the volumetric charge low. There are a number of rate models that can be used to determine the appropriate fixed charge. The fixed charge can be designed to recovered capital expenditures (debt service), or in more extreme models it can be designed to recover all fixed expenses. In some cases it is more closely related to the cost of maintaining the water meters. But in almost all cases it is a

function of meter size. In any case, the shift needs to be gradual in order to not disproportionately impact the rate payers.

Fixed Revenue vs. Fixed Costs



The theory behind this approach is that the larger the meter the larger the potential demand on the system. Therefore the larger the pipelines, pump stations, and storage facilities need to be to serve that customer. Additionally, the cost to maintain, test and replace a large 6" meter used by an industry is much greater that a 5/8" meter for a typical household. The American Water Works Association (AWWA) has developed equivalent meter ratios which are utilized by most utilities for the purpose of calculating the fixed cost.

For FY 2014 we are recommending adding a $2.00 per month per equivalent meter size fixed charge to the $3.69 account charge in lieu of increasing the water and sewer volumetric rates. This will result in a typical monthly bill increase of between 2 and 4%. Actual increases will vary based upon consumption. The additional revenue will be divided between the water and sewer fund proportionate to the amount of debt service in each fund with the long term goal of these revenues more closely recovering the actual debt service. This will eliminate or at least minimize the need to increase the volumetric rates for the near future.

Recommended Service Charge

Meter Size	Exist. Account Charge	Meter Factor	Fee per Equivalent Meter	Fee per Meter Size	Total Service Charge	Number of Accounts Impacted
5/8"	$3.69	1.0	$2.00	$2.00	**$5.69**	21,245
3/4"	$3.69	1.5	$2.00	$3.00	**$6.69**	0
1"	$3.69	2.5	$2.00	$5.00	**$8.69**	536
1-1/2"	$3.69	5.0	$2.00	$10.00	**$13.69**	207
2"	$3.69	8.0	$2.00	$16.00	**$19.69**	336
3"	$3.69	15.0	$2.00	$30.00	**$33.69**	93
4"	$3.69	30.0	$2.00	$60.00	**$63.69**	31
6"	$3.69	60.0	$2.00	$120.00	**$123.69**	24
8"	$3.69	90.0	$2.00	$180.00	**$183.69**	13
10"	$3.69	150.0	$2.00	$300.00	**$303.69**	1

This will generate approximately $250,000 revenue in the Water Fund and $500,000 revenue in the Sewer Fund compared to a 3.5% volumetric rate increase that would generate $258,230 and $504,262 respectively.

VII. RATE ANALYSIS

The rate adjustments proposed in this report will result in a typical composite monthly water and sewer bill increase for a residential customer using 7 hcf of water per month of approximately 3.35%. *"Table VII-1 Monthly Bill Impact"* provides a comparison of typical monthly water and sewer bills for a cross section of the customer base.

Table VII-1 Monthly Bill Impact

Customer Type	Monthly Volume	Current Bill	**Proposed Bill**	% Increase
Residential (5/8" meter)	7 hcf	$59.76	**$61.76**	3.35%
Commercial (2" meter)	60 hcf	$484.29	**$500.29**	3.30%
Industrial (8" meter)	1000 hcf	$8,013.69	**$8,193.69**	2.25%

Account Charge

The account charge was originally designed to recover the cost associated with meter reading and maintenance and billings and collections. The $3.69 fee has not been increased in over 20 years and therefore does not adequately recover the functions in which it was originally designed. The actual cost of providing these services equates to $5.26 per account per month. Based upon the declining consumption discussion above, the following changes in the monthly account charge are recommended.

Table VII-2 Monthly Service Charge per Meter Size

Meter Size	Lynchburg Proposed
5/8"	**$5.69**
3/4"	**$6.69**
1"	**$8.69**
1-1/2"	**$13.69**
2"	**$19.69**
3"	**$33.69**
4"	**$63.69**
6"	**$123.69**
8"	**$183.69**
10"	**$303.69**

Water Volume Rate

There is no water rate increase proposed for FY 2014.

Sewer Volume Rate

There is no sewer rate increase proposed for FY 2014. The City's CSO Special Order dictates that we maintain the average annual sewer bill at 1.25% of the Median Household Income (MHI). As of July 1, 2012 the sewer rate was 1.27% of the MHI, slightly above the minimum required by the CSO Consent Order. *Table VII-3, MHI Calculation*, includes the calculation for the MHI requirement as of July 1, 2013. Indications are that the CPI which is used to update the MHI has slightly increased.

Table VII-3 MHI Calculation

Annual Sewer Bill	
Sewer volume rate	$5.65
Avg. monthly use in HCF	x 7
Volume charge	39.55
Meter charge	3.19
Total monthly sewer bill	42.74
	x12
Annual sewer bill	$512.88
MHI Calculation	
Estimated MHI	$39,900
Annual sewer Bill as a % of MHI ($512.88 / $39,900)	1.29%

In order to estimate the FY 2014 MHI based on slight increases in the national median household income, we have assumed a 2% annual increase in MHI for FY 2013 and FY 2014. The calculation includes an increase in the meter charge attributable to sewer accounts of $1.34 per month. DEQ has also expressed concern over the declining consumption, aurguing that 7 hcf does not accurately represent the actual usage and that if the actual usage was used, the volume rates would need to be raised significantly in order to satisfy the MHI requirement of the Consent Order.

Sewer Only Rate

It is recommended that $1.34, the portion of the fixed charge attributable to the sewer fund, be added to the current sewer only rate. The proposed new sewer only rate would be $44.58 which is a 3.1% increase.

Stormwater Rate

As discussed above it is recommended the stormwater rate remain at $4.00 per sfu per month.

Industrial Surcharges

These charges are designed to recover the cost of treating high strength sewerage which is measured in pounds of biological oxygen demand (BOD) or total suspended solids (TSS) over the amounts assumed to be included in domestic sewerage. There a total of 19 industrial pretreatment permits of those, seven are currently billed for high strength BOD and TSS. Rock Tenn and Frito-Lay are billed based on contract rates. Additionally, as a result of recent Industrial Pretreatment Memorandum of Understanding with each of the surrounding counties, we will begin billing Barr Labs for high strength waste.

A comparison between the current rates and the actual cost of treating BOD and TSS is shown in *Table V-3 Pretreatment Cost Analysis*.

Table VII-4 Pretreatment Cost Analysis

	Current Rate	**Actual Cost**	**% Difference**	**Proposed Rate (+5%)**
BOD charge / 100 lbs.	$21.33	$27.79	30.3%	**$22.40**
TSS charge / 100 lbs.	$24.12	$25.47	5.6%	**$25.33**

Note: Actual cost estimates are assumed to have increased by 3% per year since the last detailed cost study.

Continuing with the proposed strategy from last year, we recommend that the current BOD and TSS rates be increased 5% to more closely recover the actual cost of service. Additional 5% annual increases are recommended through FY 2015 and then 3% per year thereafter.

Septic Hauler Charges

There are currently 22 permitted septic haulers that dispose of septic material at the Wastewater Treatment Plant plus approximately 40 large companies that have contracts with the City to dispose their septic material at the plant. Currently the septic hauler rates do not recover the actual cost of providing this service.

If the charges are based on the average concentrations of BOD and TSS in septic material that are treated in the wastewater plant, the charge for a 2,500 gallons truck load of septic material would be as follows in *Table V-4 Actual Septage Disposal Costs*

Table VII-5 Actual Septage Disposal Costs

	Lbs.	Rate / lb.	Charge
BOD	155	$.2779	$43.07
TSS	730	$.2547	$185.93
Administration[i]			$50.00
Total for a 2,500 gallon truck load			**$279.00**
Charge for each additional 500 gallons[ii]			$45.80

Administration includes approximately 4 hours of City time to register a septic hauler at the wastewater plant, take PH samples, and record information for billing purposes.

The BOD and TSS rates included in the above table are based on a cost of service analysis that was used to determine the contract rates charged to Frito-Lay and Rock Tenn Company.

Revenues from septic haulers and customers with contracts that dispose of waste in the Wastewater Treatment Plant have averaged $350,000 over the past five years. The current minimum septic hauler charge is $195.14 and applies to all trucks that carry up to 2,500 gallons of septic material. The current septic hauler charge increases by $33.08 for every 500 gallon increase in the septic carrying capacity of a truck.

Continuing with the proposed strategy from last year, we recommend that current septic hauler charges be increased 5% per year until FY 2015 then 3% per year thereafter to more closely recover the actual cost of providing the service. The resulting rate for FY 2014 would be $204.90 for a 2,500 gallon truck load and $34.74 for each additional 500 gallons.

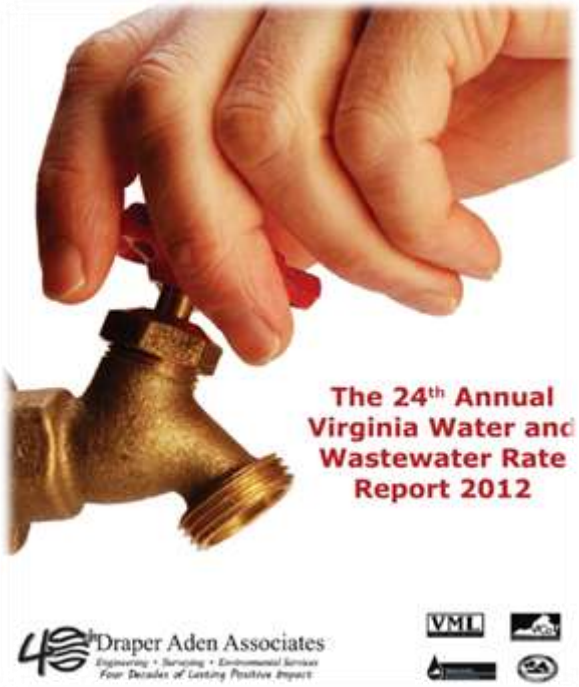
Connection Fees

The purpose of connection fees is to recover the costs associated with installing water and sewer services. The current water connection fee is $950 while the average cost to install a ¾" water service last year was $1,584. The current sewer connection fee is $1,100 while the average cost to install a 4" sewer service last year was $2,004. It is recommended that all the connection fees increase by 10% to more closely recover the actual cost to install the services and minimize the amount subsidized by the rate payers.

"Table VII-6 Water and Sewer Rates", provides a comparison of the current water and sewer rates to the rates proposed for City Council approval, effective July 1, 2013.

Table VII-6 Water and Sewer Rates

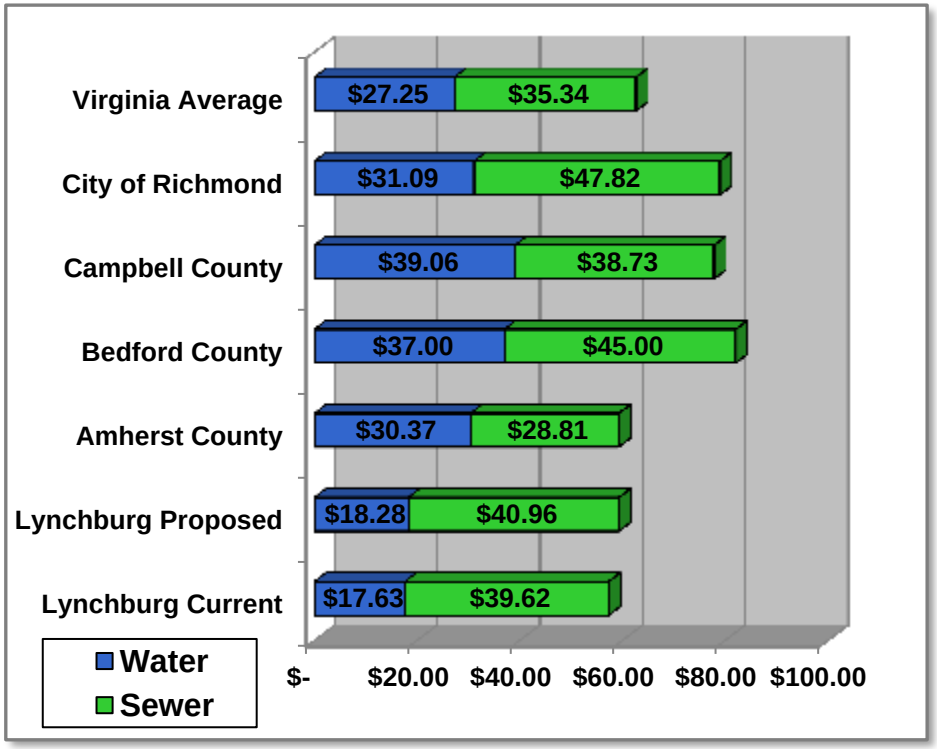
		Proposed	%
	FY 2013	FY 2014	**Increase**
Water			
Volume charge / hcf	$2.38	$2.38	**0%**
Sewer			
Volume charge / hcf	5.65	5.65	**0%**
BOD charge / 100 lbs	21.33	22.40	**5%**
TSS charge / 100 lbs.	24.12	25.33	**5%**
Septic hauler charge	195.14	204.90	**5%**
Industrial permit fee	varies	varies	**0%**
Sewer only	43.24	44.58	**3.1%**
Stormwater			
Rater per sfu per month	$4.00	$4.00	**0%**
Fire Protection			
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%**
Availability Fees			
Water	1220.00	1220.00	**0%**
Sewer	1950.00	1950.00	**0%**
Water Connection Fees			
¾" & 5/8" meters	950.00	**1045.00**	**10%**
1" service – 5/8' meter	1000.00	**1100.00**	**10%**
1" service – 1" meter	1150.00	**1265.00**	**10%**
Greater than 1"-minimum	1150.00	**1265.00**	**10%**
Sewer Connection Fees			
4" sewer line	1100.00	**1210.00**	**10%**
Greater than 4"-minimum	1200.00	**1320.00**	**10%**
Other Charges			
Account charge	3.69	(See Table VII-2)	**(See Table VII-2)**
Cut-on charge	15.00	15.00	**0%**
Cut-off charge	25.00	25.00	**0%**
Delinquent account fee	5%	5%	**0%**



VIII. RATE COMPARISONS

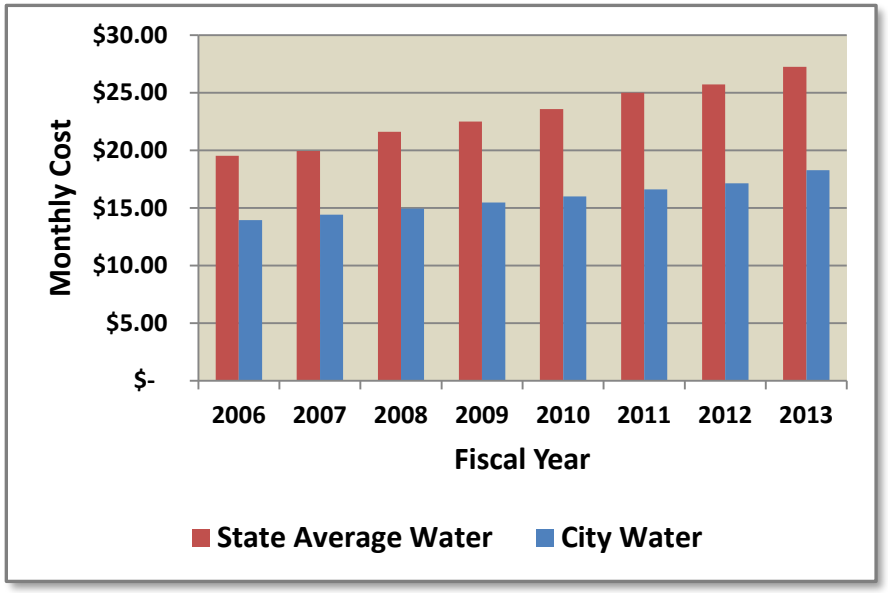
A comparison of the City's water and sewer bills for a customer using 5,000 gallons (6.68 hcf) of water per month to other communities is shown in "*Figure VIII-1 Bill Comparisons"*. (Information from other localities and the statewide average is based upon the "*24th Annual Virginia Water and Wastewater Report 2012*", prepared by Draper Aden Associates.)

Figure VIII-1 Bill Comparisons (5000 Gallons per Month)



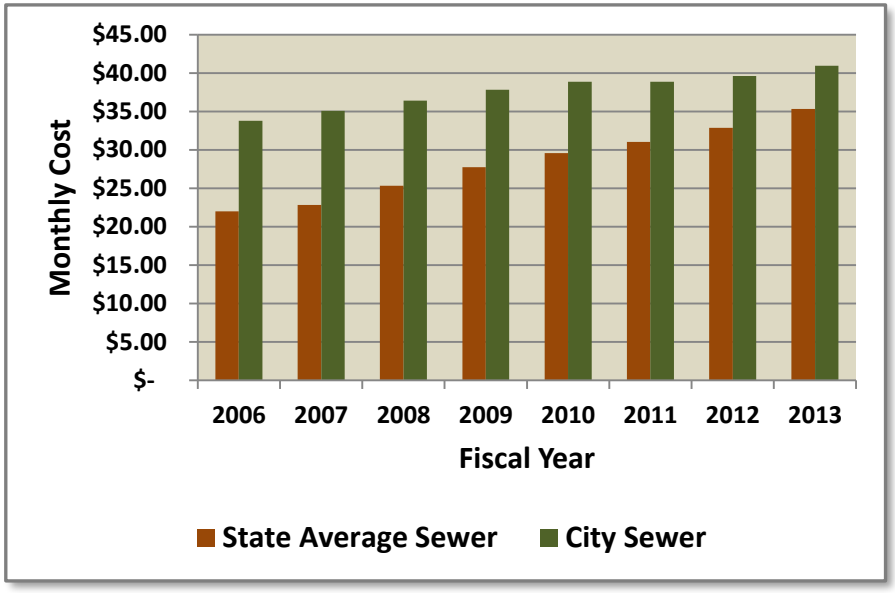
The City of Lynchburg's current combined water and sewer rates are the lowest in the region including those of Amherst, Bedford, and Campbell Counties. Also, Lynchburg's rates for water and sewer are lower than the City of Richmond, the State's other CSO city.

Figure VIII-2 Water Increases (5000 Gallons per Month)



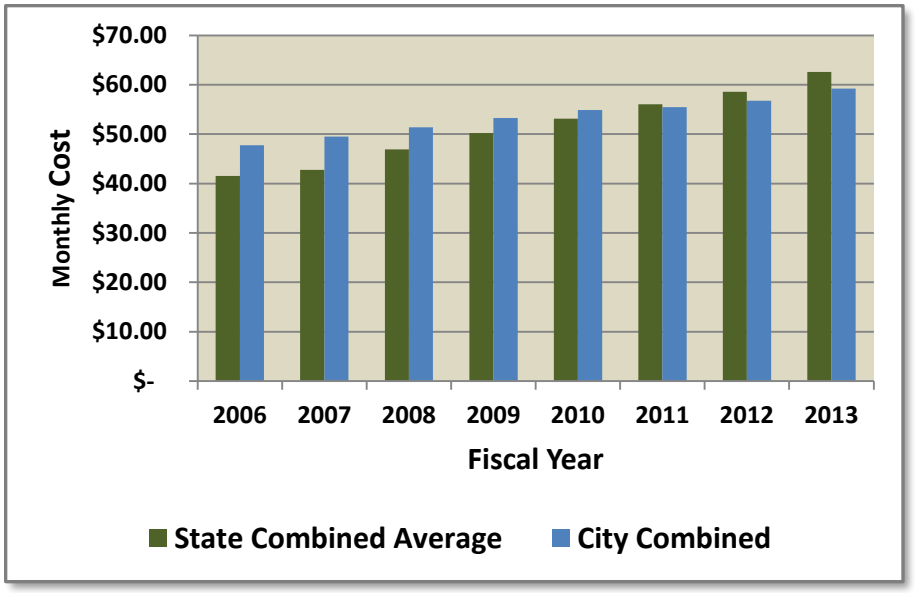
The City of Lynchburg's water rate is 49.1% below the statewide average when considering communities of all sizes and is 42.2% below those communities with the number of connections between 5,000 and 50,000. Since 2006 statewide water rates have increased by 42.2% while the City of Lynchburg's water rates have increased by only 31.1%

Figure VIII-3 Sewer Increases (5000 Gallons per Month)



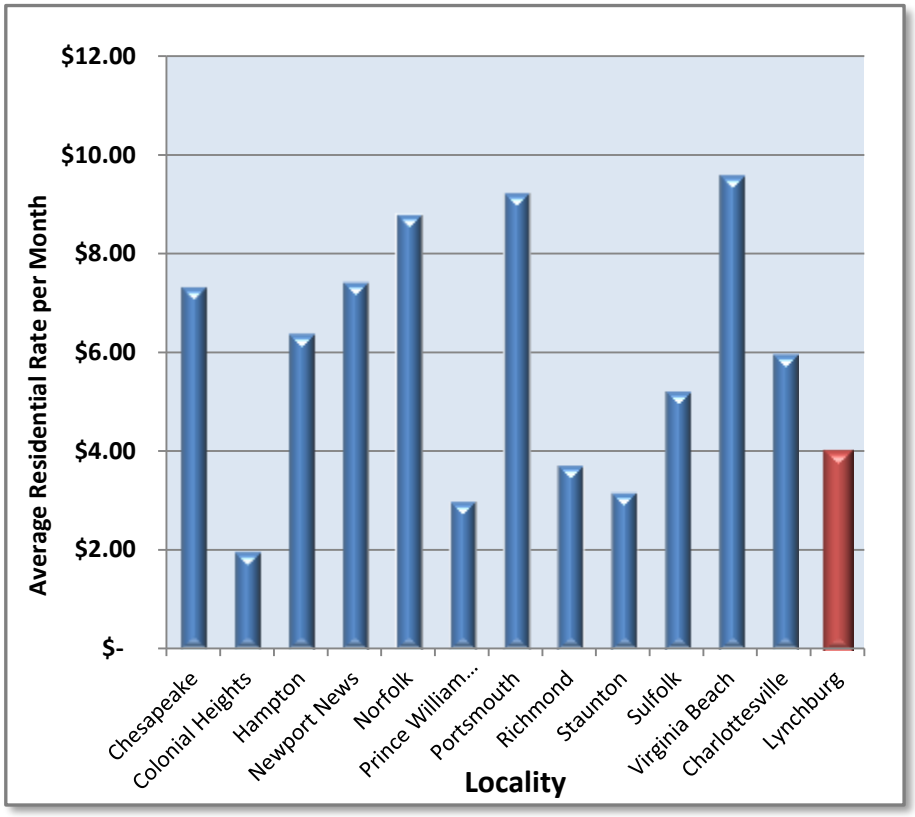
The City of Lynchburg's sewer rate is 15.9% above the statewide average when considering communities of all sizes compared to last year's 20.5% and is 20.8% above those communities with the number of connection between 5,000 and 50,000. Since 2006 statewide sewer rates have increased by 60.6% while the City of Lynchburg sewer rates have increased by only 21.2%.

Figure VIII-4 Combined Water and Sewer Increases (5000 Gallons per Month)



Last year the City of Lynchburg's water rate increased by 3% and there was no increase in the sewer rate. During the same period statewide water rates increased by over 6% and sewer rates increased by 7.5%. For the third year in a row our combined rate has been below the statewide average and the gap continues to widen. Overall our combined rate this year is over 5.7% below the state average. As a comparison, last year our rates were 3% below the statewide average. Since 2006 the average statewide combined rate has increased 50.7% while the City of Lynchburg combined rate has increased by only 24.1%.

Figure VIII-5 Average Residential Stormwater Rates



Comparatively Lynchburg's stormwater rate is among the lowest in the state. The City of Charlottesville just approved a new stormwater utility fee based on $1.20 for every 500 square feet of impervious area for a typical house in Lynchburg their rate would average $6.00 per month. Other localities such as the city of Alexandria and the counties of Fairfax and Arlington have a portion of their taxes ranging from 0.5 cents to 2.0 cents dedicated to stormwater

Figure VIII-6 Monthly Service Charge Comparison

Meter Size	Roanoke Total	Richmond Total	Lynchburg Proposed
5/8"	$ 20.90	$ 49.40	$ 5.69
3/4"	$ 31.38	$ 74.11	$ 6.69
1"	$ 52.28	$ 123.51	$ 8.69
1-1/2"	$ 104.50	$ 247.01	$ 13.69
2"	$ 167.20	$ 395.21	$ 19.69
3"	$ 313.50	$ 741.03	$ 33.69
4"	$ 627.00	$ 1,235.04	$ 63.69
6"	$ 1,254.00	$ 2,470.09	$ 123.69
8"	$ 1,881.00	$ 3,952.13	$ 183.69
10"	$ 3,135.00	$ 5,681.19	$ 303.69

Comparatively, even with the proposed increases in the Monthly Service Charge, Lynchburg's fixed monthly rate is significantly below that of most water and wastewater utilities. Roanoke and Richmond's fixed monthly rates are provided as a comparison.

X. RECOMMENDATIONS

It is recommended that the monthly service charge of $2.00 per equivalent meter size per month be added to the existing account charge. Additionally it is recommended that the industrial surcharges (BOD and TSS) and septic hauler charges be increased by 5% each. Further it is recommended that the water and sewer connection fees be increased by 10% each to more closely recover that actual costs of providing those services.

"One hundred and fifty years after the City's founding and more than a century after the first water works was established, Lynchburg can pay no adequate tribute to the originators of the proposal and the advocates of the project. There remains, only, the hope that present generations may catch the spirit, endeavoring to pass on to our successors, some tangible good in this and other lines."

—from *The Saga of a City*, Lynchburg's Sesquicentennial Association, 1936

IX. AWARDS

The Department of Water Resources is proud to highlight some recent awards.

Alvin Rucker, Wastewater Treatment Plant Superintendent recently was awarded the William D. Hatfield Award by the Water Environment Federation. The William D. Hatfield Award is presented to operators of wastewater treatment plants for outstanding performance and professionalism. The award was established in honor of Dr. William D. Hatfield, Superintendent of the Decatur, Illinois Sanitary District, who was President of the Central States Sewage Works Association in 1944-45 and served as President of the Water Environment Federation in 1958-59. Congratulations Alvin!

Once again both the College Hill and Abert Water Filtration Plants have received the Virginia Department of Health's Excellence in Waterworks Performance Award. The is only given to the few plants that continuously produced water that is at least three times cleaner that EPA requires. This year both plants received the Silver Award.

The Department of Water Resources has recently been notified that we will be receiving the Virginia Lakes and Watersheds Award for the Best Maintained Publically Owned Dam for the historic Pedlar River Dam. Pedlar Dam is one of the larger concrete gravity dams in Virginia, was originally completed in 1907. The dam is 85-feet tall, 416-feet long, with a 150-foot long ogee spillway. The 138-acre reservoir, high up in the mountains of Amherst County near the Blue Ridge Parkway, and is Lynchburg's primary raw water supply.

The City has meticulously operated and maintained the dam throughout its long history. The 1907 construction included a caretaker's residence; a full-time caretaker has been employed ever since. The City has carefully preserved the dam's records including the caretakers' daily log books dating back to 1908, the 1903, 1926, and 1964 construction drawings, and many other records.

The dam was recently upgraded to comply with the 2008/2010 ammendments to the dam safety regulations at a total construction cost of $1,010,447.

THE CITY OF LYNCHBURG

WATER RESOURCES

Appendix A. Projection Letter

PJ Sun, LLC
Providing Services to the
Water Industry

January 29, 2013

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, 2018. The accompanying projections were prepared to help management evaluate the need for rate adjustments and develop strategies for funding capital improvements.

The financial projections have been prepared based on the assumptions that are described on the first page of the Water, Sewer and Stormwater projections that follow this introductory letter. An explanation of the proposed rate increases recommended to occur July 1, 2013 and a brief description of factors that will influence rate increases after FY 2014 are included below.

WATER FUND

Over the past five years water rate increases have resulted in an average bill increase in the water component of most customers' water and sewer bill of 3.5%. The increase has been the result of 4% annual increases in the water volume rate in all but one year with no increase in the account charge. Effective July 1, 2013 no increase in the volume rate is proposed but the account charge is proposed to increase by $2.00 ($.66 for water and $1.34 for sewer). This increase will be scaled-up by equivalent meter size so that the account charge for larger customers will be higher. The $2.00 increase in the account charge is estimated to generate approximately $750,000 in annual revenues, $250,000 of which will be directed to the Water Fund. This is equivalent to a 3.3% water volume rate increase and is needed to cover increases in the Water Fund budget including debt service on previously issued debt.

After 2014, $1.00 annual increases in the account charge ($.33 for water and $.67 for sewer), scaled-up by equivalent meter size, have been assumed plus a 1% increase in the water volume rate. This will generate approximately $200,000 in additional annual revenue in the Water Fund which should be sufficient to fund increasing operation and maintenance expenses, capital maintenance and new debt service for distribution improvements. However, debt coverage and unreserved cash as a percent of budget will likely be lower than they have been historically.

Over the past five years annual water capital expenditures have averaged close to $5.0 million. During this time period both water treatment plants were renewed and upgraded and several water tanks were rehabilitated. Further, the Pedlar Dam and raw water lines were evaluated and reported to be in good conditions considering their age. After FY 2014 annual capital expenditures in the Water Fund are assumed to average $2.5 million, approximately one-half of the previous five year average. Most of the water capital expenditures will be earmarked for distribution network improvements. Considering the age of the City's distribution network this level of expenditure should be considered as a minimum reinvestment in the water network.

As of the date of this letter it is unclear if Bedford County will continue to be a long term contract customer after FY 2016. Bedford County has indicated that they are considering constructing additional facilities that will allow them to transmit water to parts of the City where they currently use water purchased from Lynchburg. If Bedford County ceases to be a contract customer the Water Fund would lose approximately $1.5 million in annual revenue. This is equivalent to a 20% annual rate increase.

SEWER FUND

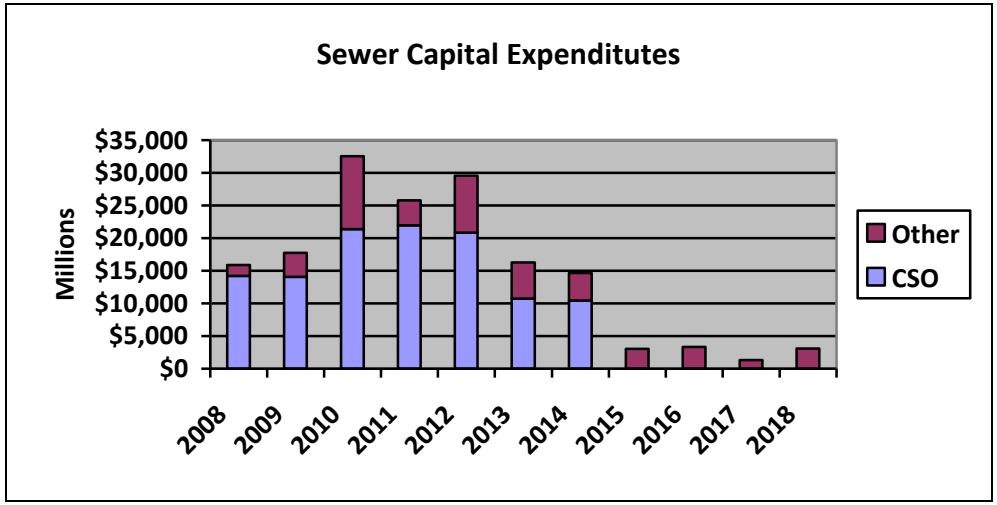
Over the past five years the average sewer bill has increased about 5%, or about 1% per year. Over this same time period the average increase in sewer bills in Virginia communities has averaged 27%, or about 5% per year. Similar to water, no increase in the sewer volume rate is proposed at this time. However, the account charge is proposed to increase by $2.00 ($.66 for water and $1.34 for sewer), scaled-up by equivalent meter size. The increase in the account charge is estimated to generate approximately $500,000 in annual revenues in the Sewer Fund. For the average customer, the sewer component of the water and sewer bill will increase by 3.3%.

The Special Order requires the City to increase its sewer rates so that the average annual sewer bill is equal to at least 1.25% of MHI (Median Household Income). As shown below the City has met this requirement in FY 2012 and is expected to meet it in FY 2013 and FY 2014 based on the increase in the account charge noted above.

	FY 2012	FY 2013	FY 2014
Annual Sewer Bill			
Sewer volume rate	$5.65	$5.65	$5.65
Avg. monthly use in HCF	x7	x7	7
Volume charge	39.55	39.55	39.55
Account charge	1.85	1.85	3.19
Total monthly sewer bill	41.40	41.40	42.74
	x12	x12	x12
Annual sewer bill	$496.80	$496.80	$512.88
Estimated MHI	$38,340	$39,107	$39,900
Annual Sewer Bill as a % of MHI	1.30%	1.27%	1.29%

The FY 2012 estimated MHI shown in the above table is based on numbers published by the U.S. Bureau of Labor and Statistics. For FY 2013 and FY 2014 we have assumed a 2% annual increase in MHI. The $2.00 increase in the account charge ($1.34 for sewer) is needed to (1) keep the annual sewer bill for an average customer over 1.25% of MHI and (2) pay for increasing operation and maintenance expenses and debt service on previously issued debt. Without the increase in the account charge the debt coverage in the Sewer Fund would fall below City Council's 1.20 debt service policy.

Similar to water, $1.00 annual increases in the account charge ($.67 for sewer) have been assumed after FY 2014. This will generate approximately $250,000 in additional revenue in the Sewer Fund which should be sufficient to fund increasing operation and maintenance expenses, basic capital maintenance and some small capital expenditures. As depicted in the graph below the total capital investment program in the Sewer Fund will be reduced substantially after FY 2014.



It is important to note that from FY 2008 to FY 2012 Federal and State grants were used to fund approximately $25.2 million of CSO capital expenditures. Virginia Clean Water Revolving Loan Funds at 0% interest rate were used to fund most of the remainder. Going forward no new borrowing for CSO is planned until such time that the debt coverage in the Sewer Fund improves. As detailed in the attached Sewer Fund financial projections the projected debt coverage is barely over City Council's 1.20 debt service policy in FY 2013 to FY 2018.

As of the date of this letter an alternative Long Term Control Plan is being developed that would significantly reduce the existing planned CSO expenditures and timeline to complete the CSO program. Further, there is a possibility the City may receive some new State grant funding for CSO improvements. However, additional regulatory requirements are also being debated that could significantly increase the need for future improvements at the wastewater treatment plant. These matters plus an unclear expenditure plan to rehabilitate the sanitary sewer system makes it difficult to estimate future trends in sewer rates and capital expenditures.

With regard to the sanitary sewer system it is important to note that the proposed sewer capital plan only provides for annual reinvestment of $500,000. Engineering evaluations of the sanitary sewer system are currently in process. Preliminary data indicates that much more reinvestment in the sanitary sewer system will be needed in the future.

STORMWATER FUND

The Stormwater Fund and fee was implemented, effective July 1, 2012, based on a study and implementation plan that was funded from the Sewer Fund. A new stormwater permit will be issued effective July 1, 2013. The new permit will provide information to allow management to more clearly understand regulatory requirements and future environmental goals. In this regard, a stormwater master plan will be commissioned in FY 2014 at an approximate cost of $1.5 million. The master plan will define capital projects needed to meet the new stormwater permit requirements. The master plan will include a condition assessment of the stormwater system and also include efforts to map the stormwater system in the GIS.

No increase in the $4.00 per month stormwater charge is proposed at July 1, 2013. Going forward it is clear that the stormwater fee will need to increase but it is not possible to predict with any certainty the rate of increase until the stormwater permit is issued and a master plan is developed.

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.

Timothy A. Mitchell

John Rosser

Appendix B. Financial Projections

WATER FUND
FINANCIAL PROJECTIONS
FY 2013 to FY 2018

WATER FUND KEY ASSUMPTIONS

1. Annual water production will average 11.0 MGD during the projection period. Over the past five years annual water production has averaged 11.0 MGD and has ranged from 10.05 MGD in FY 2012 to 11.55 MGD in FY 2008.

2. The annual volume of water billed to non-contract customers is estimated at 3.100 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 3.186 million HCF and has ranged from 3.101 million HCF in FY 2012 to 3.301 million HCF in FY 2008.

3. The annual volume of water billed to contract customers (Amherst, Bedford, Campbell, Rock Tenn and Frito-Lay) is estimated at 1.404 million HCF in FY 2013 and is assumed to increase 1% per year despite the assumed reduction in volume from Amherst due to a phased closure of a regional training academy. Over the past five years the annual volume of water sold to contract customers has averaged 1.567 million HCF and has ranged from 1.792 HCF in FY 2008 to 1.393 HCF in FY

4. No increase in the water volume rate is assumed during the projection period. However, a $2.00 fixed charge ($.66 for water and $1.34 for sewer) per equivalent 5/8" water meter is assumed effective July 1, 2013, The fixed charge is assumed to increase by $1.00 ($.33 for water and $.67 for sewer) each year thereafter.

5. Water rates applicable to county contract customers are assumed to increase 2% per year; water rates applicable to Rock Tenn and Frito-Lay are based on current contract provisions through FY 2014; thereafter contract rates are assumed to increase 3% per year.

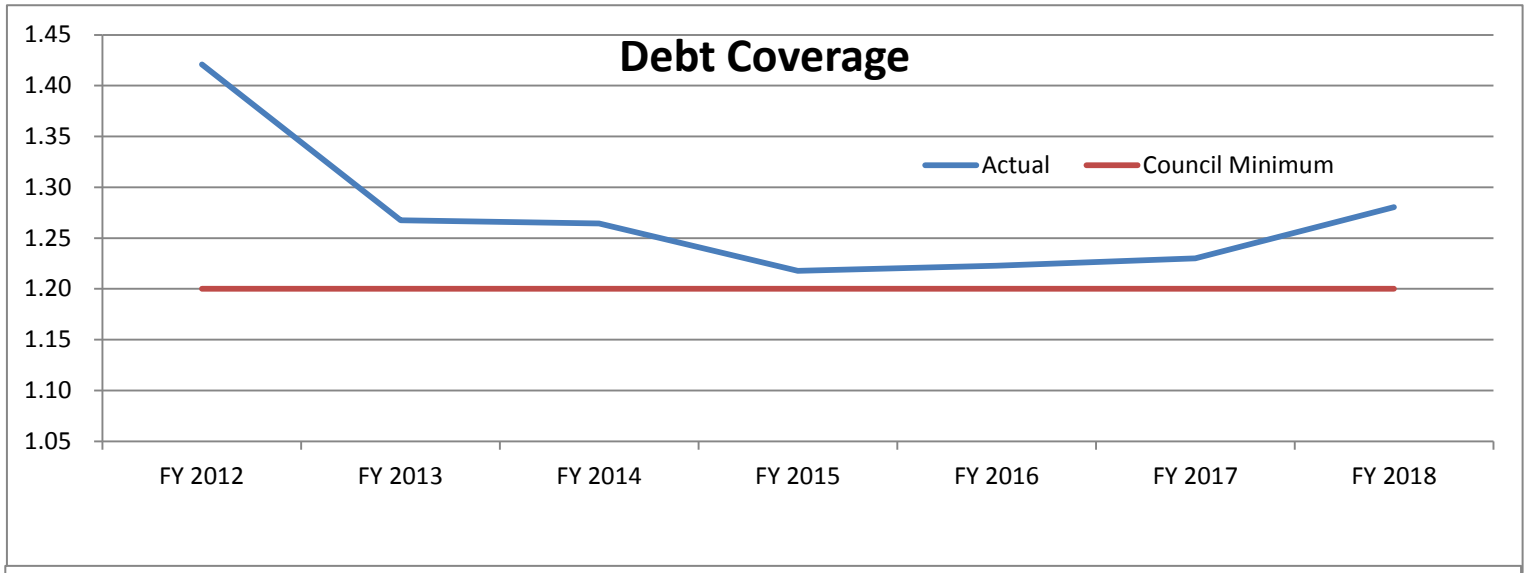
6. Operating expenses in FY 2013 and FY 2014 are based on preliminary budget submission documents ; Operating expenses after FY 2014 are assumed to increase 3% per year.

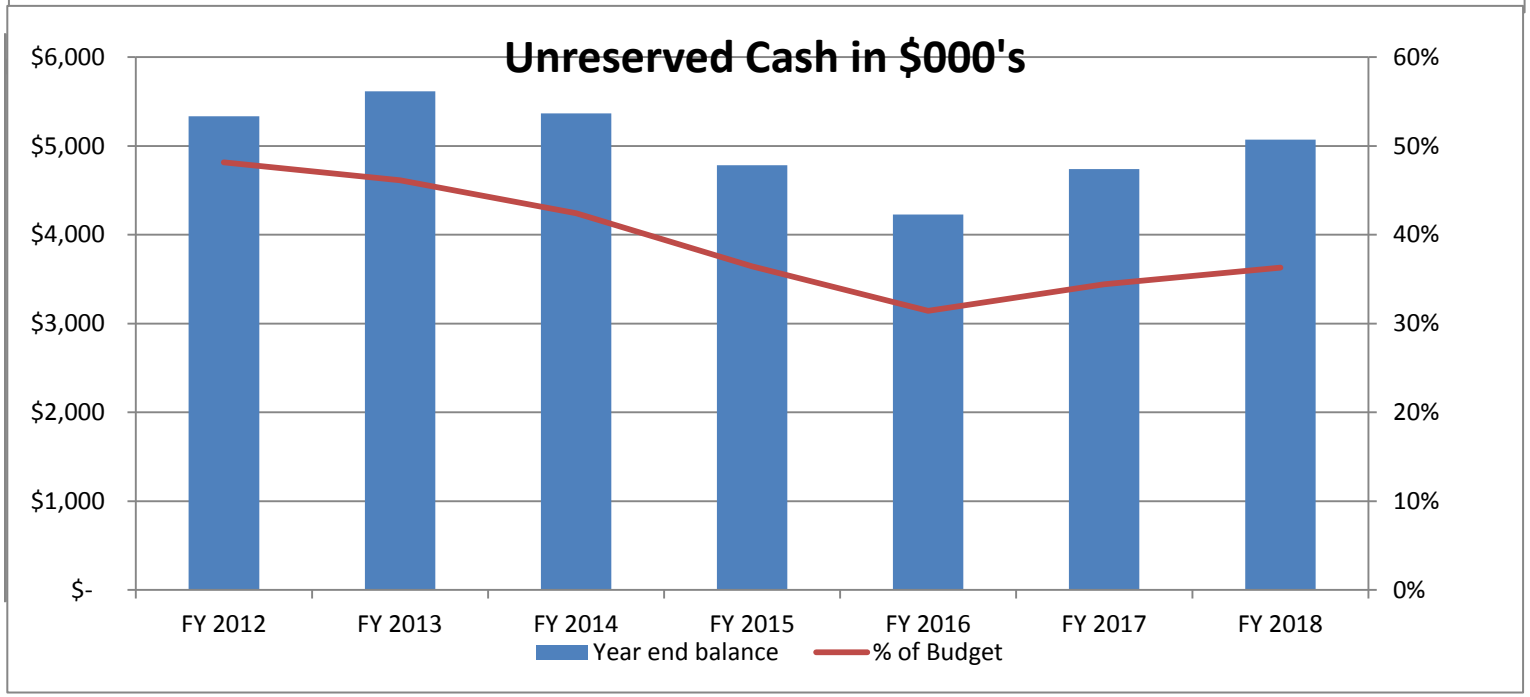
7. There are approximately 67 equivalent full time approved staff position in Water Fund departments in FY 2013. No change in the number of approved staff position is assumed during the projection period.

8. Short term line of credit financing is assumed to be available at 2%; long term debt financing is assumed to be available at 3.5%, 30 year repayment terms.

9. Additional assumption are included as part of the notes that are included on the following financial projections.

WATER FUND


Debt Coverage
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
Actual
Council Minimum
FY 2012
FY 2013
FY 2014
FY 2015
FY 2016
FY 2017
FY 2018


Unreserved Cash in $000's
$6,000
$5,000
$4,000
$3,000
$2,000
$1,000
$-
60%
50%
40%
30%
20%
10%
0%
FY 2012
FY 2013
FY 2014
FY 2015
FY 2016
FY 2017
FY 2018
Year end balance
% of Budget

CITY OF LYNCHBURG
WATER CAPITAL FINANCING PLAN

	Est.	Budget	Proj.	Proj.	Proj.	Proj.
	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
BEGINNING FUNDS	**$2,401,794**	**$240,616**	**$172,869**	**$322,869**	**$672,869**	**$1,022,869**
RECEIPTS						
Transfers	700,000	800,000	800,000	800,000	800,000	800,000
LOC borrowing	5,500,000	-	2,000,000	-	2,000,000	-
G.O. borrowings, net proceeds	-	4,200,000	-	2,000,000	-	1,000,000
total receipts	**6,200,000**	**5,000,000**	**2,800,000**	**2,800,000**	**2,800,000**	**1,800,000**
EXPENDITURES						
Unexpended appropriations @ 6/30/12	6,526,178	1,042,192	100,000	-	-	-
FY 2013 appropriation	1,835,000	1,675,555	350,000	250,000	250,000	235,750
FY 2014 to FY 2018 CIP						
Transfer project	-	-	-	-	-	-
Annual water petitions	-	-	-	-	-	50,000
Distribution system improvements	-	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000
Annual facility improvements	-	350,000	200,000	200,000	200,000	200,000
Water main replacements (CSO)	-	-	-	-	-	-
total expenditures	**8,361,178**	**5,067,747**	**2,650,000**	**2,450,000**	**2,450,000**	**2,485,750**
ENDING FUNDS	**$240,616**	**$172,869**	**$322,869**	**$672,869**	**$1,022,869**	**$337,119**

Notes:
1. Beginning funds in FY 2013 equals cash and investments in the Water Capital Fund plus SNAP investments.

PROJECTED STATEMENT OF WATER FUND DEBT COVERAGE

	Actual	Est.	Budget	Proj.	Proj.	Proj.	Proj.
	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Revenues:							
Charges for services	$9,797,132	$10,337,115	$10,597,129	$10,852,502	$11,110,218	$11,370,331	$11,632,897
Water contracts	2,517,733	2,518,864	2,744,837	2,837,986	2,934,698	3,035,113	3,139,381
Interest and other	302,720	284,211	284,211	284,211	284,211	284,211	284,211
total revenues	12,617,585	13,140,190	13,626,177	13,974,699	14,329,127	14,689,656	15,056,490
Expenses:							
Water treatment	2,391,043	2,879,632	3,243,093	3,340,386	3,440,597	3,543,815	3,650,130
Water line maintenance	1,469,277	1,552,487	1,678,816	1,729,180	1,781,056	1,834,488	1,889,522
Meter reading	885,442	864,194	893,355	920,156	947,760	976,193	1,005,479
Administration / engineering	2,648,696	2,996,051	3,078,182	3,170,527	3,265,643	3,363,613	3,464,521
Non-departmental	139,898	392,889	227,712	233,793	240,057	246,509	253,154
Capitalizable cost (1)	(102,807)	(150,000)	(154,500)	(159,135)	(163,909)	(168,826)	(173,891)
total expenses	7,431,549	8,535,253	8,966,658	9,234,908	9,511,205	9,795,791	10,088,915
Operating income	5,186,036	4,604,937	4,659,519	4,739,791	4,817,921	4,893,865	4,967,575
Debt Service	3,649,967	3,633,188	3,685,136	3,891,986	3,940,254	3,978,453	3,879,283
Net Revenue	**$1,536,069**	**$971,749**	**$974,383**	**$847,805**	**$877,667**	**$915,412**	**$1,088,292**
Debt Coverage Ratio	1.42	1.27	1.26	1.22	1.22	1.23	1.28

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

	Actual	Est.	Budget	Proj.	Proj.	Proj.	Proj.
	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Sources of Cash:							
Beginning cash balance	$10,328,127	$8,177,463	$6,027,962	$5,860,098	$5,778,767	$5,922,525	$6,099,110
Net revenue plus capitalized costs	1,433,262	821,749	819,883	688,670	713,758	746,585	914,401
LOC borrowing	79,705	5,500,000	0	2,000,000	0	2,000,000	0
Federal grant	24,000	0	0	0	0	0	0
G.O. bond proceeds (1)	0	0	9,779,705	0	4,000,000	0	3,000,000
total sources of cash	**11,865,094**	**14,499,212**	**16,627,550**	**8,548,767**	**10,492,525**	**8,669,110**	**10,013,511**
Uses of Cash:							
Capital Fund expenditures	3,559,889	8,361,178	5,067,747	2,650,000	2,450,000	2,450,000	2,485,750
Other capital expenditures	0	110,072	120,000	120,000	120,000	120,000	120,000
Repayment of LOC borrowing	0	0	5,579,705	0	2,000,000	0	2,000,000
Payments to other organizations	(13,134)	0	0	0	0	0	0
Change in working capital items	140,876	0	0	0	0	0	0
total uses of cash	**3,687,631**	**8,471,250**	**10,767,452**	**2,770,000**	**4,570,000**	**2,570,000**	**4,605,750**
Ending Cash	**$8,177,463**	**$6,027,962**	**$5,860,098**	**$5,778,767**	**$5,922,525**	**$6,099,110**	**$5,407,761**

Cash in Capital Fund	$2,401,794	$172,869	$322,869	$672,869	$1,022,869	$337,119	$0
Customer deposits	440,640	240,616	172,869	322,869	672,869	1,022,869	337,119
Unrestricted cash	5,335,029	5,614,477	5,364,360	4,783,029	4,226,787	4,739,122	5,070,642
Total cash	**$8,177,463**	**$6,027,962**	**$5,860,098**	**$5,778,767**	**$5,922,525**	**$6,099,110**	**$5,407,761**
Unrestricted cash as a % of budget	48%	46%	42%	36%	31%	34%	36%

Notes:
1. G.O. Bond proceeds include funds to repay LOC borrowing.

CITY OF LYNCHBURG
CHARGES FOR SERVICES

	Actual	Est.	Budget	Proj.	Proj.	Proj.	Proj.
	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Water Sales							
HCF of use	3,101,321	3,100,000	3,100,000	3,100,000	3,100,000	3,100,000	3,100,000
Actual water rate	2.29	2.38	2.38	2.40	2.43	2.45	2.48
	$7,108,141	$7,371,998	$7,378,000	$7,451,780	$7,526,298	$7,601,561	$7,677,576
% increase in revenues	0.94%	3.71%	0.08%	1.00%	1.00%	1.00%	1.00%
All Other:							
Account / Fixed charge	595,011	600,000	850,000	975,000	1,100,000	1,225,000	1,350,000
Sewer Fund charge	1,241,000	1,620,000	1,580,000	1,627,400	1,676,222	1,726,509	1,778,304
Hydrant rentals-water	9,530	3,000	3,000	3,000	3,000	3,000	3,000
Hydrant rentals-equip.	7,230	2,000	2,000	2,000	2,000	2,000	2,000
General Fund hydrants	351,900	351,900	358,938	366,117	373,439	380,908	388,526
Cut-on/off-late fees	99,576	92,000	92,000	92,000	92,000	92,000	92,000
Meter removal	7,080	7,500	7,500	7,500	7,500	7,500	7,500
Delinquent account fee	82,988	85,000	85,000	85,000	85,000	85,000	85,000
Fire protection	96,781	98,717	100,691	102,705	104,759	106,854	108,991
Connection fee	81,444	50,000	50,000	50,000	50,000	50,000	50,000
Availability fee	72,300	25,000	60,000	60,000	60,000	60,000	60,000
Water cost plus & other	44,151	30,000	30,000	30,000	30,000	30,000	30,000
	2,688,991	2,965,117	3,219,129	3,400,722	3,583,920	3,768,771	3,955,321
	$9,797,132	**$10,337,115**	**$10,597,129**	**$10,852,502**	**$11,110,218**	**$11,370,331**	**$11,632,897**

Notes:

1. Account / Fixed charge increases due to introduction of a $2.00 fixed fee by meter size equivalent effective July 1, 2013. The fixed fee is assumed to increase $1.00 per year. Approximately 33% of the fixed fee is allocated to the Water fund.
2. Fire protection fees assumed to increase 2% per year until the fees approximate cost of service levels.
3. Availability fees assumed to increase in FY 2014 due to increase in fee amounts. No major upturn in real estate development assumed.

CITY OF LYNCHBURG
WATER CONTRACTS

	Actual	Est.	Budget	Proj.	Proj.	Proj.	Proj.
	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
AMHERST							
HCF of use	43,305	40,000	35,000	30,000	25,000	20,000	15,000
Rate	2.03	2.00	2.04	2.08	2.12	2.16	2.21
Current year bills	$87,956	$80,000	$71,400	$62,424	$53,060	$43,297	$33,122
Prior year settlement	(10,969)	($8,698)	-	-	-	-	-
	$76,987	$71,302	$71,400	$62,424	$53,060	$43,297	$33,122
BEDFORD							
HCF of use	727,881	742,439	757,287	772,433	787,882	803,639	819,712
Rate	2.01	2.00	2.04	2.08	2.12	2.16	2.21
Current year bills	$1,462,079	$1,484,877	$1,544,866	$1,607,279	$1,672,213	$1,739,770	$1,810,057
Prior year settlement	(56,326)	(134,355)	-	-	-	-	-
	$1,405,753	$1,350,522	$1,544,866	$1,607,279	$1,672,213	$1,739,770	$1,810,057
CAMPBELL							
HCF of use	182,489	186,139	189,862	193,659	197,532	201,483	205,512
Rate	2.85	2.91	2.97	3.03	3.09	3.15	3.21
Current year bills	$520,190	$541,206	$563,070	$585,818	$609,485	$634,109	$659,727
Prior year settlement	23,034	3,384	-	-	-	-	-
	$543,224	$544,590	$563,070	$585,818	$609,485	$634,109	$659,727
ROCK TENN							
HCF of use	273,320	300,000	300,000	300,000	300,000	300,000	300,000
Rate	1.18	1.27	1.30	1.34	1.38	1.42	1.46
	$323,728	$381,000	$390,000	$401,700	$413,751	$426,164	$438,948
FRITO-LAY							
HCF of use	136,765	135,000	135,000	135,000	135,000	135,000	135,000
Rate	1.23	1.27	1.30	1.34	1.38	1.42	1.46
	$168,041	$171,450	$175,500	$180,765	$186,188	$191,774	$197,527
	$2,517,733	**$2,518,864**	**$2,744,837**	**$2,837,986**	**$2,934,698**	**$3,035,113**	**$3,139,381**

Notes:

1. FY 2014 to FY 2017 County rates assumed to increase 2% per year.
2. Rock Tenn and Frito-Lay rates are based on contract rates up to FY 2014 and 3% per increases thereafter.

CITY OF LYNCHBURG
INTEREST & OTHER WATER REVENUES

	Actual	Est.	Budget	Proj.	Proj.	Proj.	Proj.
	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Interest revenues	40,275	30,000	30,000	30,000	30,000	30,000	30,000
IRS interest rebate	251,598	243,211	243,211	243,211	243,211	243,211	243,211
All other	10,847	11,000	11,000	11,000	11,000	11,000	11,000
	$302,720	**$284,211**	**$284,211**	**$284,211**	**$284,211**	**$284,211**	**$284,211**

Note:
1. Interest revenues based on estimated average cash balance at .05% interest earnings rate.

CITY OF LYNCHBURG
ADMIN. / ENGINEERING

	Actual	Est.	Budget	Proj.	Proj.	Proj.	Proj.
	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Personal services	$1,075,159	$1,266,590	$1,218,209	$1,254,755	$1,292,398	$1,331,170	$1,371,105
Fringe benefits	365,914	501,371	452,720	466,302	480,291	494,699	509,540
Supplies & materials	43,119	38,133	42,540	43,816	45,131	46,485	47,879
Gasoline / fuel	7,601	10,000	8,253	8,501	8,756	9,018	9,289
Internal service charges	17,803	20,935	17,318	17,838	18,373	18,924	19,492
Rentals & leases	3,740	4,000	4,000	4,120	4,244	4,371	4,502
Communication charges	11,332	11,500	11,500	11,845	12,200	12,566	12,943
Contractual services	94,913	108,200	211,783	218,136	224,681	231,421	238,364
Training & travel	12,814	17,200	16,700	17,201	17,717	18,249	18,796
Indirect costs	807,321	807,321	852,890	878,477	904,831	931,976	959,935
City engineering charges	49,079	50,000	50,000	51,500	53,045	54,636	56,275
Self - insurance	146,529	146,529	146,529	150,925	155,453	160,116	164,920
Miscellaneous	13,372	14,272	15,500	15,965	16,444	16,937	17,445
Sub-total	**2,648,696**	**2,996,051**	**3,047,942**	**3,139,380**	**3,233,562**	**3,330,569**	**3,430,486**
Compensation adjustments	-	-	30,240	31,147	32,082	33,044	34,035
Total	**$2,648,696**	**$2,996,051**	**$3,078,182**	**$3,170,527**	**$3,265,643**	**$3,363,613**	**$3,464,521**

Notes:

1. FY 2013 and FY 2014 amounts are based on budget worksheets submitted as part of the FY 2014 budget process.
2. Personal services in FY 2014 assumes 20.6 staff positions will be filled throughout the year.
3. Indirect costs in FY 2013 is based on the approved FY 2013 budget. FY 2014 amount is based on the FY 2011 Maximus Report.
4. City engineering charges represent a best estimate of the labor, fringe benefits and direct overhead cost of staff time in the PW Engineering Dept. that work on water projects.
5. After FY 2014 all costs assumed to increase 3% per year unless noted otherwise.

CITY OF LYNCHBURG
WATER TREATMENT

	Actual	Est.	Budget	Proj.	Proj.	Proj.	Proj.
	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Personal services	$874,903	$985,528	$1,005,928	$1,036,106	$1,067,189	$1,099,205	$1,132,181
Fringe benefits	322,121	395,320	411,743	424,095	436,818	449,923	463,420
Supplies & materials	111,930	127,700	128,200	132,046	136,007	140,088	144,290
Chemicals	241,818	370,500	526,400	542,192	558,458	575,211	592,468
Gasoline / fuel	10,799	13,000	11,745	12,097	12,460	12,834	13,219
Internal service charges	21,923	34,580	32,015	32,975	33,965	34,984	36,033
Rentals & leases	2,935	4,000	4,000	4,120	4,244	4,371	4,502
Communication charges	10,942	11,000	11,000	11,330	11,670	12,020	12,381
Utilities	515,865	608,741	746,832	769,237	792,314	816,083	840,566
Contractual services	222,418	239,326	248,446	255,899	263,576	271,484	279,628
Training & travel	3,579	10,000	10,000	10,300	10,609	10,927	11,255
Misc., incl. operations fee	51,810	79,937	82,500	84,975	87,524	90,150	92,854
Sub-total	**2,391,043**	**2,879,632**	**3,218,809**	**3,315,373**	**3,414,834**	**3,517,280**	**3,622,798**
Compensation adjustment	-	-	24,284	25,013	25,763	26,536	27,332
Total	**$2,391,043**	**$2,879,632**	**$3,243,093**	**$3,340,386**	**$3,440,597**	**$3,543,815**	**$3,650,130**

Notes:
1. FY 2013 and FY 2014 amounts are based on budget worksheets submitted as part of the FY 2014 budget process.
2. Personal services in FY 2014 assumes 24 staff positions will be filled throughout the year.
3. After FY 2014 all costs assumed to increase 3% per year.

CITY OF LYNCHBURG
WATER LINE MAINTENANCE

	Actual	Est.	Budget	Proj.	Proj.	Proj.	Proj.
	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Personal services	$577,879	$584,806	$587,830	$605,465	$623,629	$642,338	$661,608
Fringe benefits	199,954	223,057	229,142	236,016	243,097	250,390	257,901
Supplies & materials	429,811	468,000	488,600	503,258	518,356	533,906	549,924
Gasoline / fuel	36,892	38,000	38,091	39,234	40,411	41,623	42,872
Internal service charges	88,828	88,912	138,083	142,225	146,492	150,887	155,414
Rentals & leases	4,696	4,500	3,500	3,605	3,713	3,825	3,939
Communication charges	2,926	3,100	3,400	3,502	3,607	3,715	3,827
Contractual services	123,983	138,292	173,063	178,255	183,603	189,111	194,784
Training & travel	3,739	3,750	3,750	3,863	3,978	4,098	4,221
Miscellaneous	569	70	570	587	605	623	642
Sub-total	**1,469,277**	**1,552,487**	**1,666,029**	**1,716,010**	**1,767,490**	**1,820,515**	**1,875,130**
Compensation adjustment	-	-	12,787	13,171	13,566	13,973	14,392
Total	**$1,469,277**	**$1,552,487**	**$1,678,816**	**$1,729,180**	**$1,781,056**	**$1,834,488**	**$1,889,522**

Notes:

1. FY 2013 and FY 2014 amounts are based on budget worksheets submitted as part of the FY 2014 budget process.
2. Personal services in FY 2013 assumes 14.75 staff positions will be filled throughout the year.
3. After FY 2014 all costs assumed to increase 3% per year.

CITY OF LYNCHBURG
METER READING

	Actual	Est.	Budget	Proj.	Proj.	Proj.	Proj.
	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Personal services	$242,312	$251,784	$259,010	$266,780	$274,784	$283,027	$291,518
Fringe benefits	90,960	101,904	104,311	107,440	110,664	113,983	117,403
Supplies & materials	466,588	417,050	419,000	431,570	444,517	457,853	471,588
Gasoline / fuel	19,714	20,000	21,268	21,906	22,563	23,240	23,937
Internal service charges	31,832	34,240	35,973	37,052	38,164	39,309	40,488
Rentals & leases	78	100	100	103	106	109	113
Communication charges	2,696	3,050	3,500	3,605	3,713	3,825	3,939
Contractual services	30,783	32,366	42,466	43,740	45,052	46,404	47,796
Training & travel	479	2,000	2,000	2,060	2,122	2,185	2,251
Miscellaneous	-	1,700	-	-	-	-	-
Sub-total	**885,442**	**864,194**	**887,628**	**914,257**	**941,685**	**969,935**	**999,033**
Compensation adjustments	-	-	5,727	5,899	6,076	6,258	6,446
Total	**$885,442**	**$864,194**	**$893,355**	**$920,156**	**$947,760**	**$976,193**	**$1,005,479**

Notes:

1. FY 2013 and FY 2014 amounts are based on budget worksheets submitted as part of the FY 2014 budget process.
2. Personal services in FY 2014 assumes 7.8 staff positions will be filled throughout the year.
3. After FY 2014 all costs assumed to increase 3% per year.

CITY OF LYNCHBURG
WATER NON-DEPARTMENTAL

	Actual	Est.	Budget	Proj.	Proj.	Proj.	Proj.
	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Financial audit	$20,656	$21,276	$21,914	$22,571	$23,249	$23,946	$24,664
Interest on customer deposits	3,212	3,308	3,408	3,510	3,615	3,724	3,835
OPEB/Retirees health/WC insurance	86,615	86,615	170,500	175,615	180,883	186,310	191,899
Utility billing upgrades & other	2,420	0	0	0	0	0	0
Allowance for doubtful accounts	6,495	6,690	6,891	7,097	7,310	7,529	7,755
Project costs charged to operations	20,500	275,000	25,000	25,000	25,000	25,000	25,000
	$139,898	**$392,889**	**$227,712**	**$233,793**	**$240,057**	**$246,509**	**$253,154**

Notes:

1. FY 2013 and FY 2014 amounts are based on budget worksheets submitted as part of the FY 2014 budget process.
2. OPEB related cost based on best available information.
3. Project cost charged to operations in FY 2013 includes $250,000 related to Pedlar Raw Water Main Assessment Project.
4. After FY 2014 all costs assumed to increase 3% per year.

CITY OF LYNCHBURG
WATER FUND BONDS PAYABLE AND DEBT SERVICE

	Est.	Budget	Proj.	Proj.	Proj.	Proj.
	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
P&I on borrowings o/s @ 6/30/12 (1)	$3,578,188	$3,458,991	$3,329,747	$3,308,015	$3,194,432	$3,042,762
Interest on LOC borrowing	55,000	55,000	20,000	20,000	20,000	20,000
Interest only payments on G.O. Bonds						
$9.8 million issued in FY 2014	-	171,145	-	-	-	-
$4.0 million issued in FY 2016				70,000	-	-
$3.0 million issue in FY 2018						52,500
Level debt service payments on G.O. Bonds						
Level P&I on $9.8 million			542,239	542,239	542,239	542,239
Level P&I on $5.5 million					221,782	221,782
	$3,633,188	**$3,685,136**	**$3,891,986**	**$3,940,254**	**$3,978,453**	**$3,879,283**

Notes:
1. Based on Debt Book as of June 30, 2012.
2. Interest on LOC based on a 2.0% annual rate.
3. New debt issues assumed to occur in the first quarter of years shown; interest assumed at 3.5%.
4. Level debt service assumed on all new G.O issues starting one year after year of issue.

SEWER FUND
FINANCIAL PROJECTIONS
FY 2013 to FY 2018

SEWER FUND KEY ASSUMPTIONS

1. Annual sewer flow at the wastewater treatment plant (WWTP) will average 11.0 MGD during the projection period. Over the past five years WWTP flow has averaged 11.1 MGD and has ranged from 10.54 MGD in FY 2012 to 13.0 MGD in FY 2010.

2. The annual volume of wastewater billed to non-contract customers is estimated at 2.550 million HCF for each year during the projection period. Over the past five years the annual wastewater billed to non-contract customers has averaged 2.571 million HCF and has ranged from 2.536 million HCF in FY 2011 to 2.626 million HCF in FY 2008.

3. The annual wastewater flow applicable to Bedford and Campbell Counties is assumed to increase slightly each year; the flow applicable to Amherst is assumed to decrease by about 35% over the next five years due to a phased closure of a regional training academy located in Amherst County.

4. No increase in the wastewater volume rate is assumed during the projection period. However, a $2.00 fixed charge ($.66 for water and $1.34 for sewer) per equivalent 5/8" meter is assumed effective July 1, 2013. The fixed charge is assumed to increase $1.00 ($.33 for water and $.67 for sewer) each year thereafter.

5. Sewer rates applicable to Rock Tenn and Frito-Lay are assumed to increase 3% and 5% respectively each year. Septic hauler charges and industrial sur-charges are also assumed to increase effective July 1, 2013 by 5% per year for two years and then 3% per year thereafter.

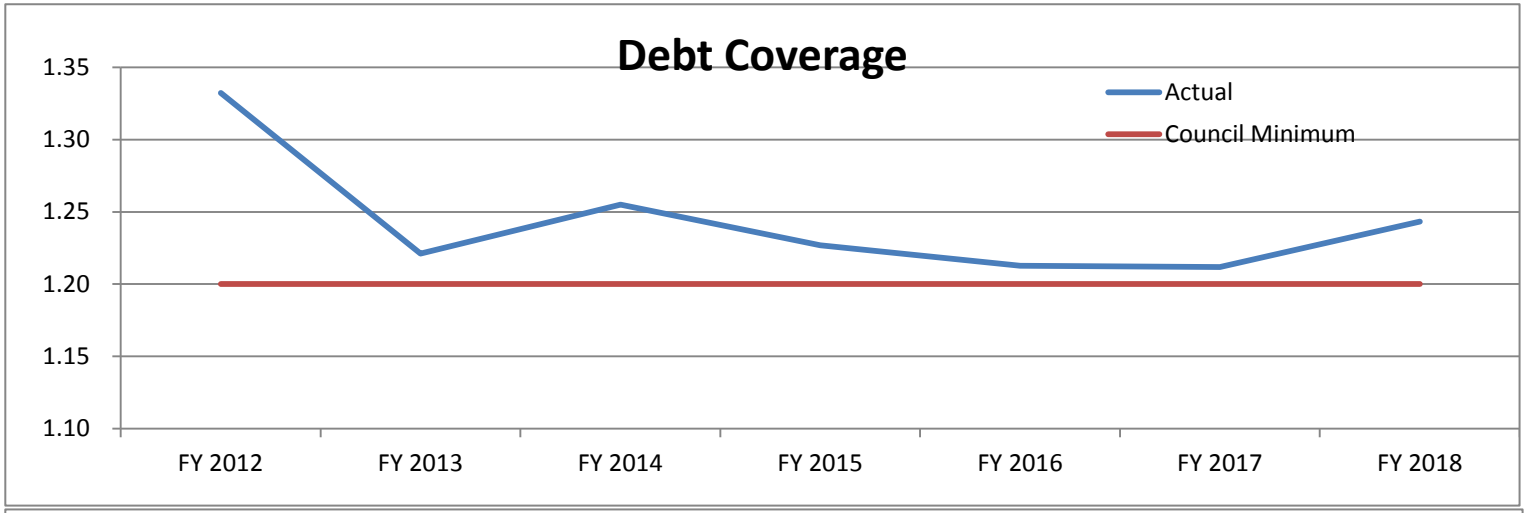
6. Operating expenses in FY 2013 and FY 2014 are based on preliminary budget submission documents; Operating expenses after FY 2014 are assumed to increase 3% per year.

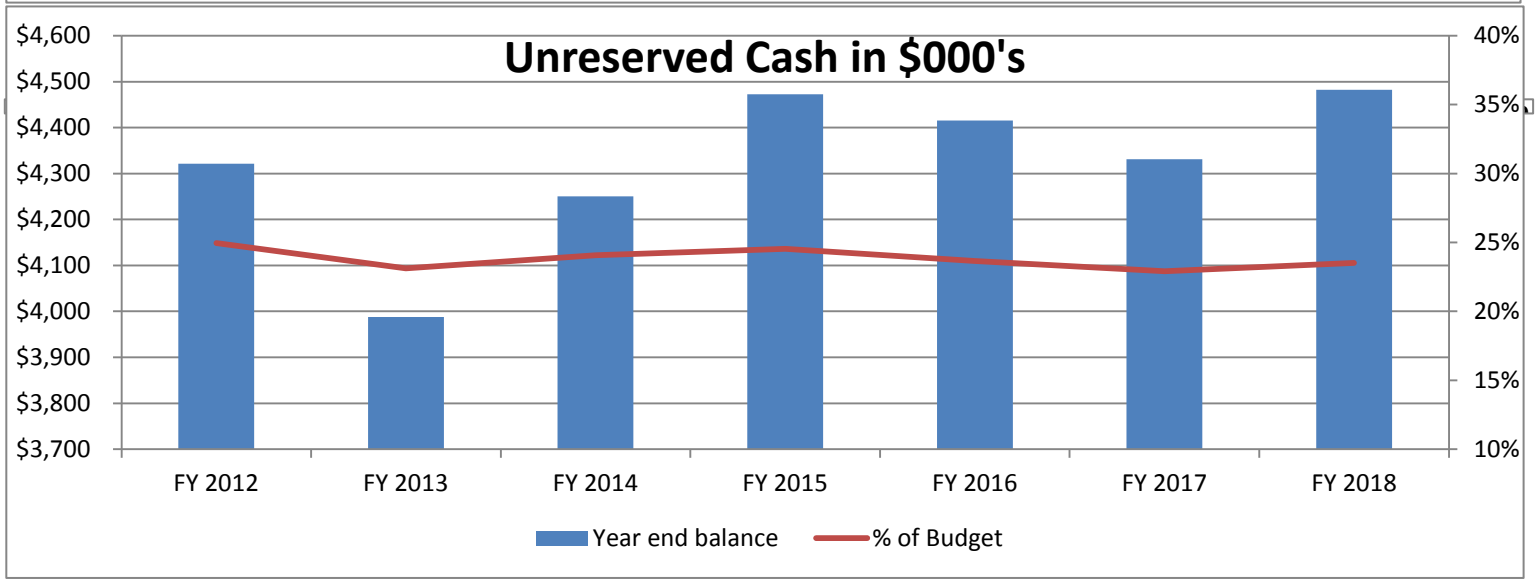
7. There are approximately 51 equivalent full time approved staff positions in the Sewer Fund departments. No change in the number of approved staff positions is assumed during the projection period.

8. Short term line of credit financing is assumed to be available at 2%; long term financing is assumed to be available at 3.5%, 30 year repayment terms. No new borrowing is assumed to occur with the VCWRLF during the projection period.

9. Additional assumptions are included as part of the notes that are included on the following financial projections.

SEWER FUND


Debt Coverage
1.35
1.30
1.25
1.20
1.15
1.10
Actual
Council Minimum
FY 2012
FY 2013
FY 2014
FY 2015
FY 2016
FY 2017
FY 2018


Unreserved Cash in $000's
$4,600
$4,500
$4,400
$4,300
$4,200
$4,100
$4,000
$3,900
$3,800
$3,700
40%
35%
30%
25%
20%
15%
10%
FY 2012
FY 2013
FY 2014
FY 2015
FY 2016
FY 2017
FY 2018
Year end balance
% of Budget

CITY OF LYNCHBURG
SEWER LOCAL CAPITAL FINANCING PLAN

	Est.	Budget	Proj.	Proj.	Proj.	Proj.
	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
BEGINNING FUNDS (1)	**$5,259,536**	**$2,318,418**	**$958,912**	**$21,281**	**$171,281**	**$361,281**
RECEIPTS						
Transfers	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
LOC borrowing	-	-	600,000	-	-	-
G.O. borrowing	-	-	-	2,000,000	-	1,500,000
Total Receipts	**1,500,000**	**1,500,000**	**2,100,000**	**3,500,000**	**1,500,000**	**3,000,000**
EXPENDITURES						
Unexpended Appropriations (2)	3,041,118	959,506	137,631	-	-	-
FY 2013 Appropriation	400,000	250,000	-	-		
FY 2014 to FY 2018 CIP:						
Burton Creek	-	500,000	2,000,000	2,000,000	-	-
Sewer extensions	-	100,000	100,000	100,000	100,000	100,000
CSO local	-	-	-	-	-	-
WWTP improvements	500,000	250,000	250,000	250,000	350,000	350,000
PLC Replacement	500,000	-	-	-	-	-
SSES	-	500,000	500,000	500,000	500,000	500,000
WWTP Control Building	-	-	-	-	250,000	1,500,000
RDP	-	-	-	-	50,000	50,000
Blue Ridge Farms	-	300,000	50,000	500,000	60,000	600,000
Total Expenditures	**4,441,118**	**2,859,506**	**3,037,631**	**3,350,000**	**1,310,000**	**3,100,000**
ENDING FUNDS	**$2,318,418**	**$958,912**	**$21,281**	**$171,281**	**$361,281**	**$261,281**

Notes:
1. Beginning funds in FY 2013 equals cash and investment accounts in the Sewer Capital Fund.
2. Unexpended appropriations represents unspent funds applicable to FY 2012 and prior year appropriations.

CITY OF LYNCHBURG
SEWER VCWRLF & GRANT FINANCING PLAN

	Est.	Budget	Proj.	Proj.	Proj.	Proj.
	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
BEGINNING FUNDS	**$23,621,773**	**$11,810,887**	**$0**	**$0**	**$0**	**$0**
Receipts						
VCWRLF loan approvals - 0%	-	-	-	-	-	-
Total Receipts	0	0	0	0	0	0
EXPENDITURES						
Unexpended appropriations	11,810,886	11,810,887	-	-	-	-
FY 2012 appropriations:	-	-	-	-	-	-
FY 2013 appropriations:	-	-	-	-	-	-
Total Expenditures	11,810,886	11,810,887	0	0	0	0
ENDING FUNDS	**$11,810,887**	**$0**	**$0**	**$0**	**$0**	**$0**

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.

CITY OF LYNCHBURG
PROJECTED STATEMENT OF SEWER FUND DEBT COVERAGE

	Actual	Est.	Budget	Proj.	Proj.	Proj.	Proj.
	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Revenues:							
Charges for services	$16,954,824	$16,182,187	$16,731,214	$17,032,529	$17,320,570	$17,609,752	$17,900,109
Sewer contracts	2,797,948	2,831,248	2,916,305	3,011,698	3,064,937	3,127,739	3,227,693
Interest and other	242,304	91,953	206,953	196,953	202,156	71,953	71,953
Total Revenues	19,995,076	19,105,388	19,854,472	20,241,179	20,587,662	20,809,444	21,199,755
Expenses:							
WWTP	6,103,570	6,755,227	6,951,014	7,172,844	7,391,030	7,615,761	7,847,233
Sewer line maintenance	2,039,460	2,104,088	2,124,359	2,188,090	2,253,732	2,321,344	2,390,985
Stormwater (1)	558,312	-	-	-	-	-	-
Non-departmental	843,720	224,149	230,123	286,277	292,615	299,144	305,868
Capitalizable cost (2)	(298,186)	(250,000)	(257,500)	(265,225)	(273,182)	(281,377)	(289,819)
Total Expenses	9,246,876	8,833,464	9,047,996	9,381,986	9,664,196	9,954,872	10,254,268
Operating Income	10,748,200	10,271,924	10,806,476	10,859,193	10,923,467	10,854,572	10,945,487
Debt service	8,067,483	8,411,416	8,611,155	8,851,703	9,007,595	8,957,399	8,804,525
Net Revenue	$2,680,717	$1,860,508	$2,195,321	$2,007,490	$1,915,872	$1,897,173	$2,140,961
Debt Coverage	1.33	1.22	1.25	1.23	1.21	1.21	1.24

Notes:
1. Stormwater accounted for as a separate fund stating in FY 2013.
2. 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

	Actual	Est.	Budget	Proj.	Proj.	Proj.	Proj.
	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Sources of Cash:							
Beginning cash balance	$11,942,470	$9,236,906	$6,306,296	$5,209,402	$4,494,036	$4,586,726	$4,692,522
Net revenue plus capitalized costs	2,382,531	1,610,508	1,937,821	1,742,265	1,642,690	1,615,796	1,851,143
LOC borrowing	-	-	-	600,000	-	-	-
G.O. bond proceeds, net	-	-	-	-	2,600,000	-	1,500,000
VCWRLF loan draw downs	26,368,702	11,810,886	11,810,887	-	-	-	-
Proceeds from other organizations	34,341	-	-	-	-	-	0
Total Sources of Cash	**40,728,044**	**22,658,300**	**20,055,004**	**7,551,667**	**8,736,726**	**6,202,522**	**8,043,665**
Uses of Cash:							
Capital & VCWRLF expenditures	30,495,802	16,252,004	14,670,393	3,037,631	3,350,000	1,310,000	3,100,000
Other capital expenditures	-	100,000	175,209	20,000	200,000	200,000	200,000
LOC repayment	-	-	-	-	600,000	-	-
Change in working capital items	651,403	-	-	-	-	-	-
Total Uses of Cash	**31,147,205**	**16,352,004**	**14,845,602**	**3,057,631**	**4,150,000**	**1,510,000**	**3,300,000**
Ending Cash	**$9,580,839**	**$6,306,296**	**$5,209,402**	**$4,494,036**	**$4,586,726**	**$4,692,522**	**$4,743,665**

Cash in capital fund	$5,259,536	$2,318,418	$958,912	$21,281	$171,281	$361,281	$261,281
Unrestricted cash	4,321,303	3,987,878	4,250,490	4,472,755	4,415,445	4,331,241	4,482,384
Total cash	**$9,580,839**	**$6,306,296**	**$5,209,402**	**$4,494,036**	**$4,586,726**	**$4,692,522**	**$4,743,665**
Unrestricted cash as a % of budget	25%	23%	24%	25%	24%	23%	24%

CITY OF LYNCHBURG
CHARGES FOR SERVICES

	Actual	Est.	Budget	Proj.	Proj.	Proj.	Proj.
	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
CITY CUSTOMERS							
HCF of use	2,490,918	2,550,000	2,550,000	2,550,000	2,550,000	2,550,000	2,550,000
Rate	5.65	5.65	5.65	5.65	5.65	5.65	5.65
	$14,538,826	$14,407,500	$14,407,500	$14,407,500	$14,407,500	$14,407,500	$14,407,500
% increase in revenues	3.5%	-0.9%	0.0%	0.0%	0.0%	0.0%	0.0%
ALL OTHER:							
Account charge	420,505	420,000	920,000	1,170,000	1,420,000	1,670,000	1,920,000
VDOT reimbursement	688,036	0	0	0	0	0	0
College Hill backwash	119,457	123,041	126,732	130,534	134,450	138,484	142,638
Leachate treatment	64,154	66,078	68,061	70,102	72,206	74,372	76,603
Septic hauler charges	391,361	410,929	431,476	453,049	466,641	480,640	495,059
Industrial pre-treatment	6,160	4,500	4,500	4,500	4,635	4,774	4,917
Industrial surcharges	415,370	436,139	457,945	480,843	495,268	510,126	525,430
Industrial monitoring	33,188	35,000	35,000	35,000	36,050	37,132	38,245
Cut-on penalties	90,189	82,000	83,000	84,000	86,520	89,116	91,789
Connection charges	105,903	75,000	75,000	75,000	75,000	75,000	75,000
Availability charges	80,410	100,000	100,000	100,000	100,000	100,000	100,000
Sewer cost plus	1,265	12,000	12,000	12,000	12,000	12,000	12,000
Collection & Tax Lien Fees	-	10,000	10,000	10,000	10,300	10,609	10,927
All other	-	-	-	-	-	-	-
	2,415,998	1,774,687	2,323,714	2,625,029	2,913,070	3,202,252	3,492,609
	$16,954,824	**$16,182,187**	**$16,731,214**	**$17,032,529**	**$17,320,570**	**$17,609,752**	**$17,900,109**

Notes:

1. Account / Fixed charge increases due to introduction of a $2.00 fixed fee by meter size equivalent effective July 1, 2013. The fixed fee assumed to increase $1.00 per year. Approximately 67% of the fixed fee is allocated to the Sewer Fund.
3. VDOT reimbursement considered as part of Stormwater Fund transfer from General Fund after FY 2012
4. Septic hauler and industrial sur-charges assumed to increase 5% per year to FY 2015; thereafter 3% per year.
5. Connection fees are less than historical average due to slow down in real estate development.
6. Availability fees assumed to increase in FY 2014 due to an increase in the amount of the fees.

CITY OF LYNCHBURG
SEWER CONTRACTS

	Actual	Est.	Budget	Proj.	Proj.	Proj.	Proj.
	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
AMHERST							
Operating	$169,200	$180,000	$145,243	$135,605	$125,022	$98,512	$101,506
Existing capital amort.	220,614	217,203	213,791	210,380	197,118	196,524	196,524
Prior Year settlement	8,917	1,002	-	-	-	-	-
Future capital. - WWTP	-	16,797	63,973	68,152	72,331	76,510	80,689
Future capital -Interceptor	-	-	-	-	-	-	-
	398,731	415,002	423,007	414,137	394,471	371,546	378,719
BEDFORD							
Operating	206,400	218,000	207,490	214,113	220,627	227,336	234,246
Existing capital amort.	221,116	218,598	196,700	194,183	186,362	184,019	184,019
Prior Year settlement	12,981	(11,299)	-	-	-	-	-
Future capital. - WWTP	-	7,270	25,623	27,297	28,971	30,645	32,319
Future capital -Interceptor	-	-	-	17,267	17,267	17,267	17,267
	440,497	432,569	429,813	452,860	453,227	459,267	467,851
CAMPBELL							
Operating	180,000	190,000	193,657	199,839	205,918	212,180	218,629
Existing capital amort.	109,235	107,769	106,303	104,837	99,484	98,194	98,194
Prior Year settlement	58,411	5,740	-	-	-	-	-
Future capital. - WWTP	-	6,957	25,623	27,297	28,971	30,645	32,319
Future capital -Interceptor	-	-	-	7,467	7,467	7,467	7,467
	347,646	310,466	325,583	339,440	341,840	348,486	356,609
INDUSTRIAL							
Rock Tenn	920,823	948,448	976,901	1,006,208	1,036,394	1,067,486	1,099,511
Frito-Lay	690,251	724,764	761,002	799,052	839,004	880,955	925,002
	1,611,074	1,673,211	1,737,903	1,805,260	1,875,399	1,948,441	2,024,513
	$2,797,948	**$2,831,248**	**$2,916,305**	**$3,011,698**	**$3,064,937**	**$3,127,739**	**$3,227,693**

Notes:

1. County operating revenues based on % of WWTP expenses (Amherst-2.3%, Bedford-3.0%, Campbell-2.8%).
2. Amherst operating revenues decrease due to planned closure of Training Academy.
3. Rock Tenn revenues are assumed to increase 3% per year.
4. Frito-Lay revenues are assumed to increase 5% per year.

CITY OF LYNCHBURG
OTHER SEWER REVENUES

	Actual	Est.	Budget	Proj.	Proj.	Proj.	Proj.
Other Revenues	**FY 2012**	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**
Interest Revenue	64,362	40,000	30,000	20,000	20,000	20,000	20,000
State highway maintenance	-	-	-	-	-	-	-
Miscellaneous Revenue	131,989	6,000	6,000	6,000	6,000	6,000	6,000
SW Fund start-up repayment	-	-	125,000	125,000	130,203	-	-
IRS interest rebate	45,953	45,953	45,953	45,953	45,953	45,953	45,953
	$242,304	**$91,953**	**$206,953**	**$196,953**	**$202,156**	**$71,953**	**$71,953**

Notes:

1. SW Fund start-up repayment is a transfer from the SW Fund to recover the cost incurred by the Sewer Fund to study, organize and implement the SW fund and fee.

CITY OF LYNCHBURG
WASTEWATER TREATMENT

	Actual	Est.	Budget	Proj.	Proj.	Proj.	Proj.
	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Personal services	$1,369,888	$1,465,477	$1,527,467	$1,573,291	$1,620,490	$1,669,104	$1,719,178
Fringe benefits	471,574	560,701	589,744	607,436	625,659	644,429	663,762
Supplies & materials	342,959	391,986	402,500	414,575	427,012	439,823	453,017
Sludge disposal - landfill	545,237	500,000	575,000	592,250	610,018	628,318	647,168
Chemicals	555,245	654,000	644,000	663,320	683,220	703,716	724,828
Gasoline / fuel	28,997	40,000	64,120	66,044	68,025	70,066	72,168
Internal service charges	172,380	224,835	272,558	280,735	289,157	297,831	306,766
Rentals & leases	5,020	7,000	8,500	8,755	9,018	9,288	9,567
Communication charges	7,439	8,700	9,300	9,579	9,866	10,162	10,467
Electricity	597,446	700,000	675,000	695,250	716,108	737,591	759,718
Other utilities	51,001	117,300	140,300	144,509	148,844	153,310	157,909
Contractual services	772,734	908,493	745,843	768,218	791,265	815,003	839,453
Training & meetings	15,615	15,905	16,600	17,098	17,611	18,139	18,683
Indirect costs	352,560	352,560	488,021	502,662	517,741	533,274	549,272
Self-insurance	48,470	48,470	48,470	49,924	51,422	52,964	54,553
Admin/OH Pmts to Water Fund	782,000	875,000	791,000	814,730	839,172	864,347	890,277
Nutrient payments	-	-	-	-	-	-	-
Nutrient sales	(14,995)	(140,000)	(110,000)	(100,000)	(100,000)	(100,000)	(100,000)
Misc.	0	24,800	27,900	28,737	29,599	30,487	31,402
Sub-total	**6,103,570**	**6,755,227**	**6,916,323**	**7,137,113**	**7,354,226**	**7,577,853**	**7,808,188**
Compensation adjustment	-	-	34,691	35,732	36,804	37,908	39,045
Total	**$6,103,570**	**$6,755,227**	**$6,951,014**	**$7,172,844**	**$7,391,030**	**$7,615,761**	**$7,847,233**

Notes:

1. FY 2013 and FY 2014 amounts are based on budget worksheets submitted as part of the FY 2014 budget process.
2. Personal services in FY 2014 assumes 37 staff positions will be filled throughout the year.
3. Gasoline / fuel increases due to closing of landfill and need to haul to Campbell County landfill or Maplewood.
4. Other utilities increase in FY 2013 due to increase in natural gas needs.
5. Indirect costs in FY 2012 to FY 2014 based on agreed upon amounts between Finance and Utilities.
6. Nutrient payments and credits based on best available information as of date of projections.
7. Unless noted otherwise, all expenses after FY 2014 are assumed to increase 3% per year.

CITY OF LYNCHBURG
SEWER LINE MAINTENANCE

	Actual	Est.	Budget	Proj.	Proj.	Proj.	Proj.
	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Personal services	$503,356	$473,934	$483,567	$498,074	$513,016	$528,407	$544,259
Fringe benefits	186,736	200,588	201,445	207,488	213,713	220,124	226,728
Supplies & materials	135,253	150,100	153,000	157,590	162,318	167,187	172,203
Gasoline / fuel	59,018	65,000	60,311	62,120	63,984	65,903	67,881
Internal service charges	169,127	198,582	216,126	222,610	229,288	236,167	243,252
Rentals & leases	2,947	2,500	3,000	3,090	3,183	3,278	3,377
Communication charges	3,729	4,800	5,000	5,150	5,305	5,464	5,628
Contractual services	97,151	120,661	178,092	183,435	188,938	194,606	200,444
Training & meetings	4,414	4,000	3,750	3,863	3,978	4,098	4,221
Indirect costs	231,216	231,216	203,812	209,926	216,224	222,711	229,392
Self-insurance	152,257	152,257	152,257	156,825	161,529	166,375	171,367
City engineering charges	110,256	125,000	113,300	116,699	120,200	123,806	127,520
Admin/OH Pmts to Water Fund	384,000	375,000	339,000	349,170	359,645	370,434	381,547
Miscellaneous Expenses	0	450	450	464	477	492	506
Sub-total	**2,039,460**	**2,104,088**	**2,113,110**	**2,176,503**	**2,241,798**	**2,309,052**	**2,378,324**
Compensation adjustment	-	-	11,249	11,586	11,934	12,292	12,661
Total	**$2,039,460**	**$ 2,104,088**	**$2,124,359**	**$2,188,090**	**$2,253,732**	**$2,321,344**	**$2,390,985**

Notes:

1. FY 2013 and FY 2014 amounts are based on budget worksheets submitted as part of the FY 2014 budget process.
2. Personal services in FY 2014 assumes 13.45 staff positions will be filled throughout the year.
3. Indirect costs in FY 2012 to FY 2014 based on agreed upon amounts between Finance and Utilities.
4. City engineering charges represent a best estimate of labor, overhead and direct overhead cost of staff time in the PW Engineering Dept. that work on sewer projects.
5. Unless noted otherwise, all expenses after FY 2014 are assumed to increase 3% per year.

CITY OF LYNCHBURG
STORMWATER

	Actual	Est.	Budget	Proj.	Proj.	Proj.	Proj.
	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Personal services	$213,503	-	-	-	-	-	-
Fringe benefits	78,499	-	-	-	-	-	-
Supplies & materials	38,447	-	-	-	-	-	-
Gasoline / fuel	12,747	-	-	-	-	-	-
Internal service charges	40,236	-	-	-	-	-	-
Rentals & leases	103	-	-	-	-	-	-
Communication charges	1,488	-	-	-	-	-	-
Contractual services	94,204	-	-	-	-	-	-
Training & meetings	1,046	-	-	-	-	-	-
Start-up project	-	-	-	-	-	-	-
Indirect costs	-	-	-	-	-	-	-
Self-insurance	-	-	-	-	-	-	-
City engineering charges	-	-	-	-	-	-	-
Adm./OH Pmts to Water Fund	75,000	-	-	-	-	-	-
Miscellaneous Expenses	3,039	-	-	-	-	-	-
	$558,312	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**

Notes:
1. Stormwater is accounted for in a separate fund in FY 2013.

CITY OF LYNCHBURG
NON-DEPARTMENTAL-SEWER

	Actual	Est.	Budget	Proj.	Proj.	Proj.	Proj.
	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Financial audit	$15,796	$16,270	$16,758	$17,261	$17,779	$18,312	$18,861
Allowance for doubtful accounts	13,766	14,179	14,604	15,042	15,494	15,959	16,437
OPEB/Retirees health/WC insurance	119,618	168,700	173,761	178,974	184,343	189,873	195,570
Legal & professional (CSO)	-	-	-	-	-	-	-
Major sewer line cleaning	236,432	-	-	50,000	50,000	50,000	50,000
Fire damage	76,656	-	-	-	-	-	-
Minor capital purchases	1,249	-	-	-	-	-	-
Project costs charged to operations	380,203	25,000	25,000	25,000	25,000	25,000	25,000
	$843,720	**$224,149**	**$230,123**	**$286,277**	**$292,615**	**$299,144**	**$305,868**

Notes:

1. FY 2013 and FY 2014 amounts are based on budget worksheets submitted as part of the FY 2014 budget process.
2. OPEB related cost based on best available information.
3. Project cost charged to operations in FY 2012 includes amounts related to study and implementation of the Stormwater Fund.
4. After FY 2014 all costs assumed to increase 3% per year.

CITY OF LYNCHBURG
SEWER FUND BONDS PAYABLE

	Est.	Budget	Proj.	Proj.	Proj.	Proj.
	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
P&I on debt o/s @ 6/30/12 (1)	8,411,416	8,611,155	8,845,703	8,962,095	8,816,034	8,636,910
Interest on LOC borrowing	-	-	6,000	-	-	-
Interest only payments on G.O. Bonds						
$2.6 million bond issue in FY 2016	-	-	-	45,500	-	-
$1.5 million bond issue in FY 2018						26,250
Level debt service payments on G.O. Bonds						
$2.6 million bond issue in FY 2016					141,365	141,365
	$8,411,416	**$8,611,155**	**$8,851,703**	**$9,007,595**	**$8,957,399**	**$8,804,525**

NOTES:
1. Based on Debt book as of June 30, 2012.
2. Level debt service on G.O issues starting one year after issue date at 3.5%; 30 year repayment terms.

STORMWATER FUND
FINANCIAL PROJECTIONS
FY 2013 to FY 2018

CITY OF LYNCHBURG
STORMWATER OPERATING FUND

	Actual	Est.	Budget	Proj.	Proj.	Proj.	Proj.
	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Beginning Funds	-	$0	$954,520	$783,733	$493,584	793,657	799,865
Revenues:							
Stormwater fees, net	-	3,120,000	3,120,000	3,315,000	3,380,000	3,445,000	3,510,000
General Fund transfer (VDOT)	-	650,000	650,000	650,000	650,000	650,000	650,000
Other	-	12,000	12,000	12,000	12,000	12,000	12,000
total revenues	-	3,782,000	3,782,000	3,977,000	4,042,000	4,107,000	4,172,000
Expenses & Transfers:							
Departmental expenses	-	$927,480	$1,312,059	$1,423,449	$1,535,463	$1,580,799	1,628,223
G.F. charges - PW & CD	-	1,600,000	1,683,921	1,834,439	1,989,472	2,149,156	2,313,631
Indirect cost	-	-	81,807	84,261	86,789	89,393	92,074
Transfer to Sewer Fund	-	-	125,000	125,000	130,203	-	-
Transfers to Capital Fund	-	300,000	750,000	800,000	-	-	-
Debt service	-	-	-	-	-	281,444	281,444
total expenses & transfers	-	2,827,480	3,952,787	4,267,149	3,741,927	4,100,792	4,223,816
Ending Funds	-	$954,520	$783,733	$493,584	$793,657	$799,865	$748,049
Ending funds as % of revenues	-	25.2%	20.7%	12.4%	19.6%	19.5%	17.9%

Notes:
1. Stormwater was accounted for as part of Sewer Fund in FY 2012.
2. G.F. charges include salary and overhead for approximately 2 FTEs in Community Development plus work performed by PW related to maintenance, street sweeping and 50% of leaf collection cost.
3. G.F. charges are assumed to increase $100,000 over and above annual inflation after FY 2014 as more BMPs are developed.
4. Transfer to Sewer Fund is for reimbursement of start-up cost for the Stormwater Utility Fund.

CITY OF LYNCHBURG
STORMWATER CAPITAL FUND

	Actual	Est.	Proj.	Proj.	Proj.	Proj.	Proj.
	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Beginning Funds	-	$0	$150,000	$350,000	$100,000	$2,800,000	$500,000
Receipts:							
Transfer from Operations	-	300,000	750,000	800,000	-	-	-
Bond proceeds	-	-	-	-	4,000,000	-	6,000,000
total receipts	-	300,000	750,000	800,000	4,000,000	-	6,000,000
Expenditures:							
Master planning & design	-	0	250,000	750,000	500,000	-	-
Infrastructure renewal	-	150,000	300,000	300,000	300,000	300,000	300,000
Water quality related projects	-	0	0	0	500,000	2,000,000	3,000,000
total expenditures	-	150,000	550,000	1,050,000	1,300,000	2,300,000	3,300,000
Ending Funds	-	$150,000	$350,000	$100,000	$2,800,000	$500,000	$3,200,000

Notes:
1. Watershed implementation plan calls for $110 to $120 million to be spent on water quality by 2025
2. First permit cycle is likely to call for a 5% reduction to water quality goals by 2018 (≈$1.0 million CAPEX / year).
3. Second permit cycle is likely to call for a 35% reduction to water quality goals by 2023 (≈$7.0 million CAPEX / year).
4. Third permit cycle is likely to call for a 60 % reduction to water quality goals by 2028 (≈$12.0 million CAPEX / year)
5. Trading and credits for existing BMPs are assumed to reduce CAPEX in first permit cycle.

CITY OF LYNCHBURG
STORMWATER OPERATING REVENUES Departmental Expenses & Debt Service

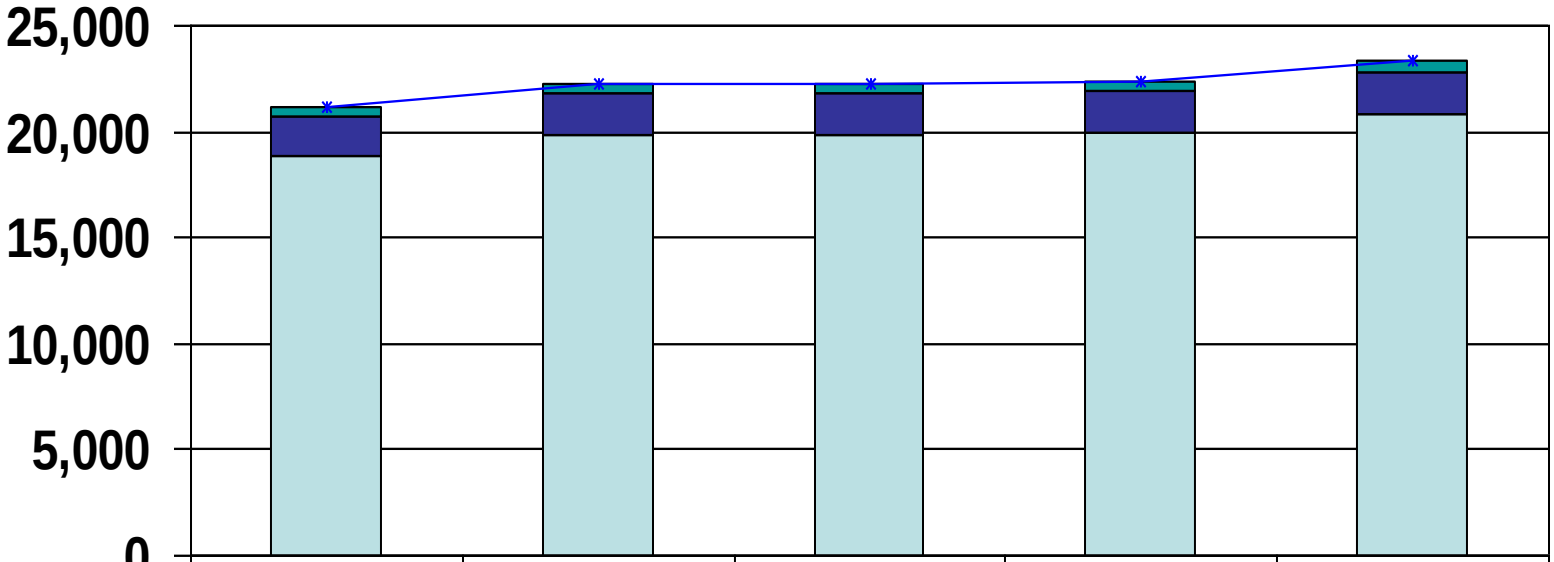
	Actual	Est.	Budget	Proj.	Proj.	Proj.	Proj.
	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Stormwater Fees:							
SFU's	-	65,000	65,000	65,000	65,000	65,000	65,000
Annual bill	-	$48.00	$48.00	$51.00	$52.00	$53.00	$54.00
Annual billed revenue	-	**3,120,000**	**3,120,000**	**3,315,000**	**3,380,000**	**3,445,000**	**3,510,000**
Departmental Expenses:							
Personal services	-	182,206	313,519	372,925	434,112	447,136	460,550
Fringe benefits	-	82,076	130,850	154,776	179,419	184,801	190,345
M&R supplies & materials	-	60,005	75,150	77,405	79,727	82,118	84,582
Contractual charges	-	57,429	183,300	188,799	194,463	200,297	206,306
Internal service charged	-	103,364	80,340	82,750	85,233	87,790	90,423
Admin/OH payments	-	370,000	450,000	463,500	477,405	491,727	506,479
Travel & training	-	1,000	5,000	5,150	5,305	5,464	5,628
Communications	-	1,000	2,000	2,060	2,122	2,185	2,251
Credits & uncollectible	-	62,400	62,400	66,300	67,600	68,900	70,200
Miscellaneous	-	8,000	9,500	9,785	10,079	10,381	10,692
	-	**927,480**	**1,312,059**	**1,423,449**	**1,535,463**	**1,580,799**	**1,627,456**
Debt Service:	-						
FY 2016 borrowing	-	-	-	-	-	281,444	281,444
	-	**-**	**-**	**-**	**-**	**281,444**	**281,444**

Notes:
1. FY 2013 and FY 2014 department expenses based on preliminary budget request.
2. Personal services in FY 2014 assumes 7.8 FTE staff. One additional staff assumed to be added in FY 2015 and one other in FY 2016
3. Internal service charges based on fuel, maintenance and depreciation for a Vactor, dump truck, utility truck.
4. Adm. / OH payments based on Water Fund Engineering / Adm cost allocations.
5. Credits & uncollectibles are equal to 2% of annual billed revenue.
6. All debt service (see capital fund) assumes level debt service at 3.5%, 20 year repayment terms.
7. Unless noted otherwise all cost after FY 2014 assumed to increase 3% per year.

Appendix C. Statistical Data

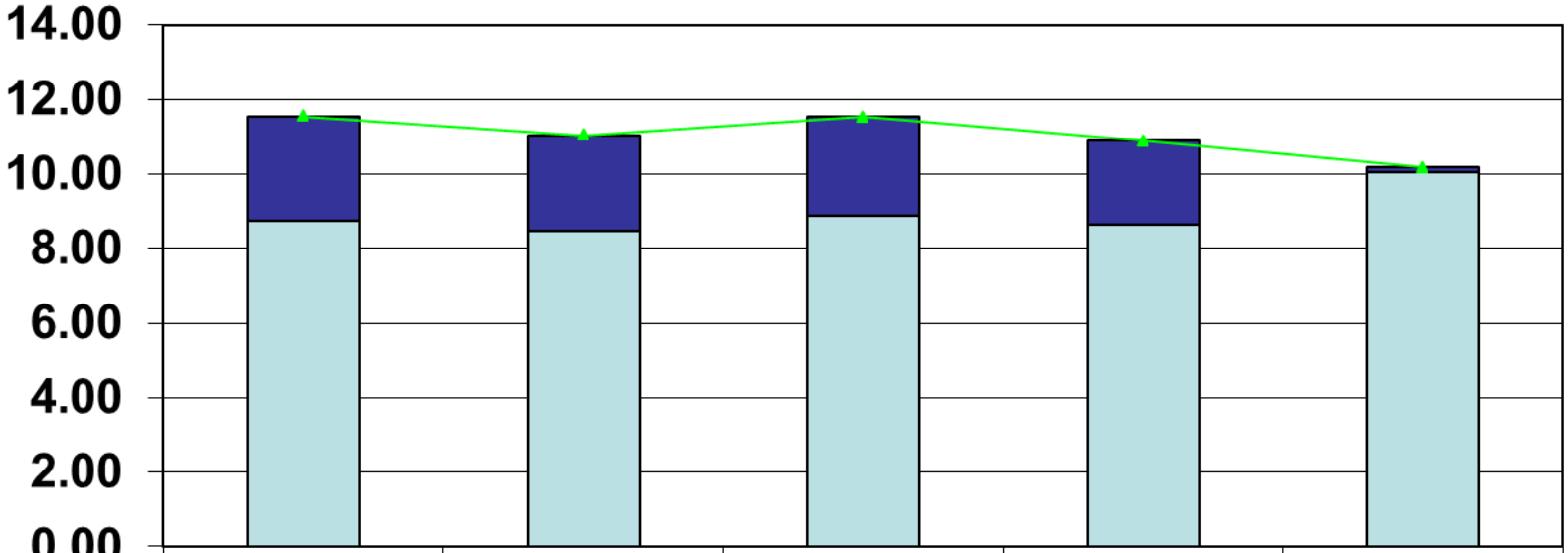
Water Fund Statistics

Number of Water Customers



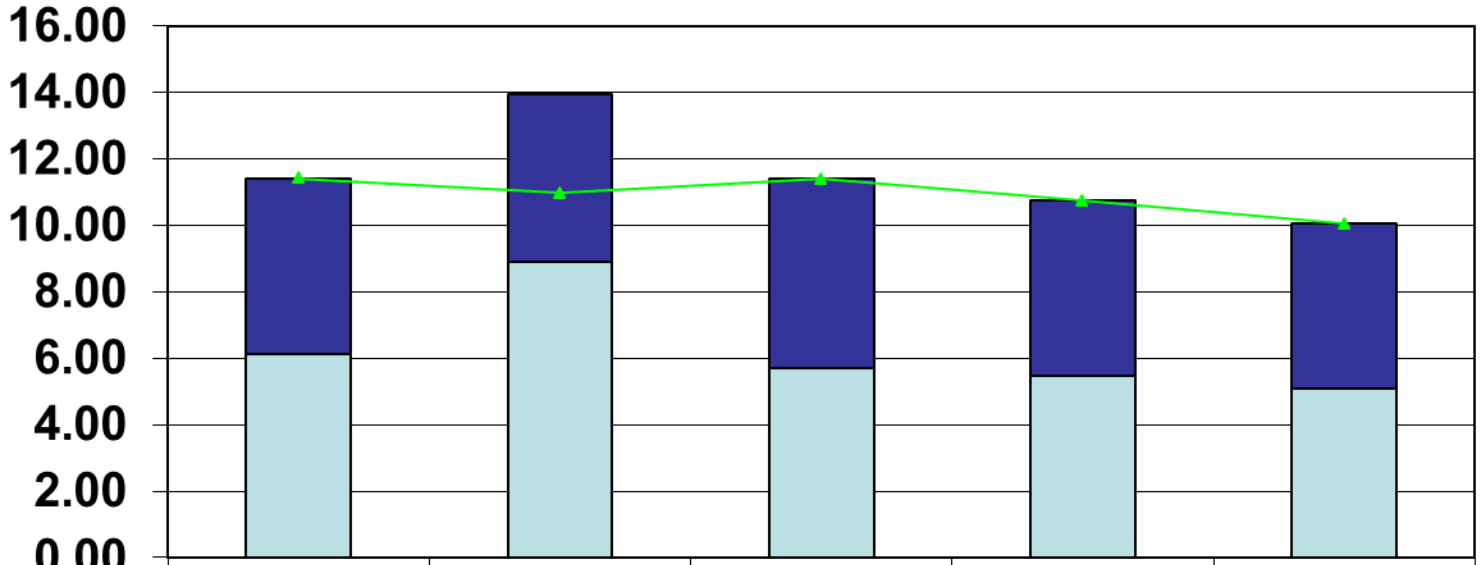
	2008	2009	2010	2011	2012
Other	401	430	431	436	462
Business	1,950	1,950	1,951	1,945	2,044
Domestic	18,807	19,830	19,883	19,993	20,802
Total	21,158	22,240	22,265	22,374	23,308

Water Withdrawals in MGD



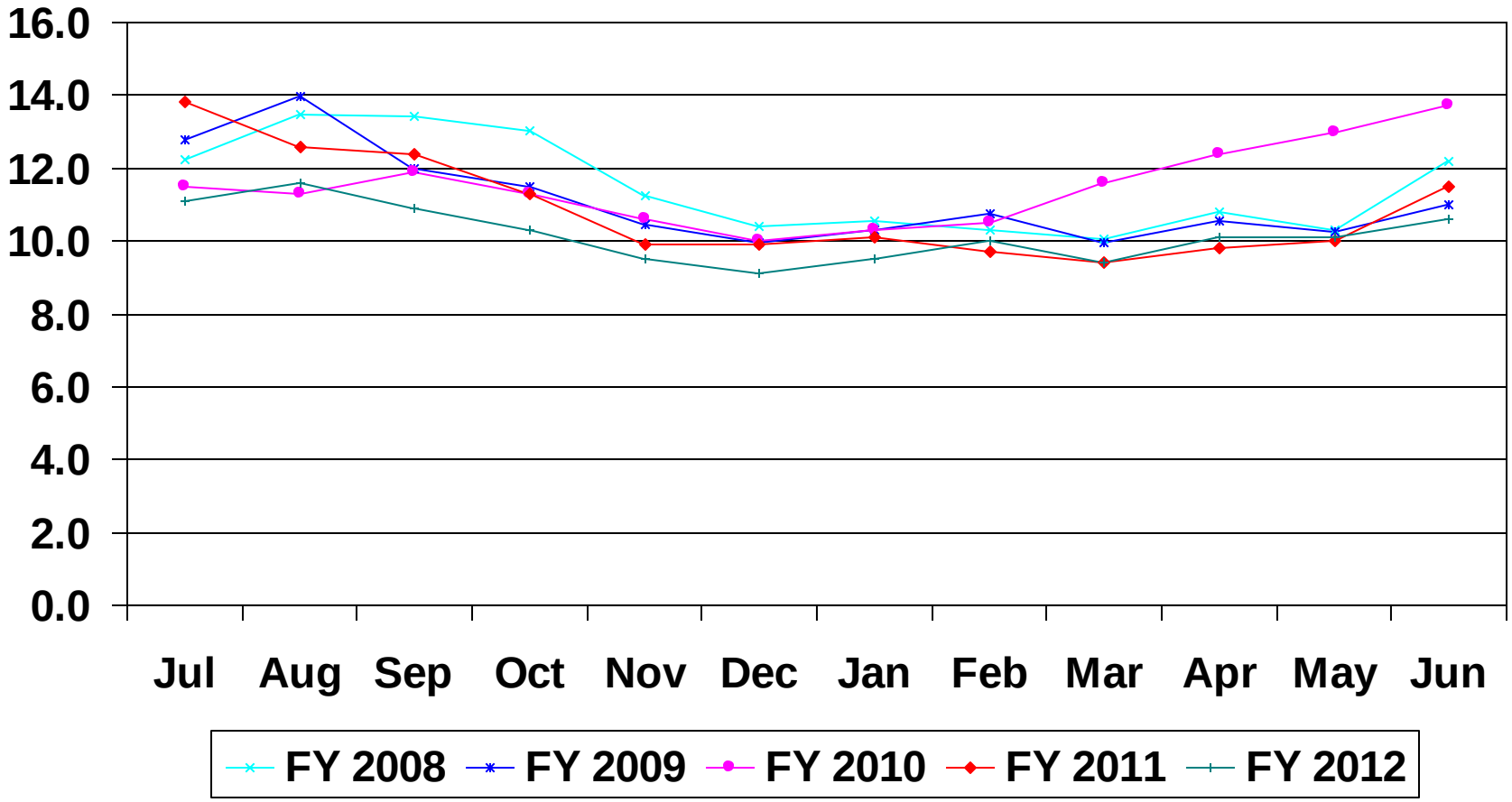
	2008	2009	2010	2011	2012
James	2.83	2.58	2.64	2.24	0.12
Pedlar	8.72	8.45	8.88	8.65	10.05
Total	11.55	11.03	11.52	10.89	10.17

Water Production in MGD

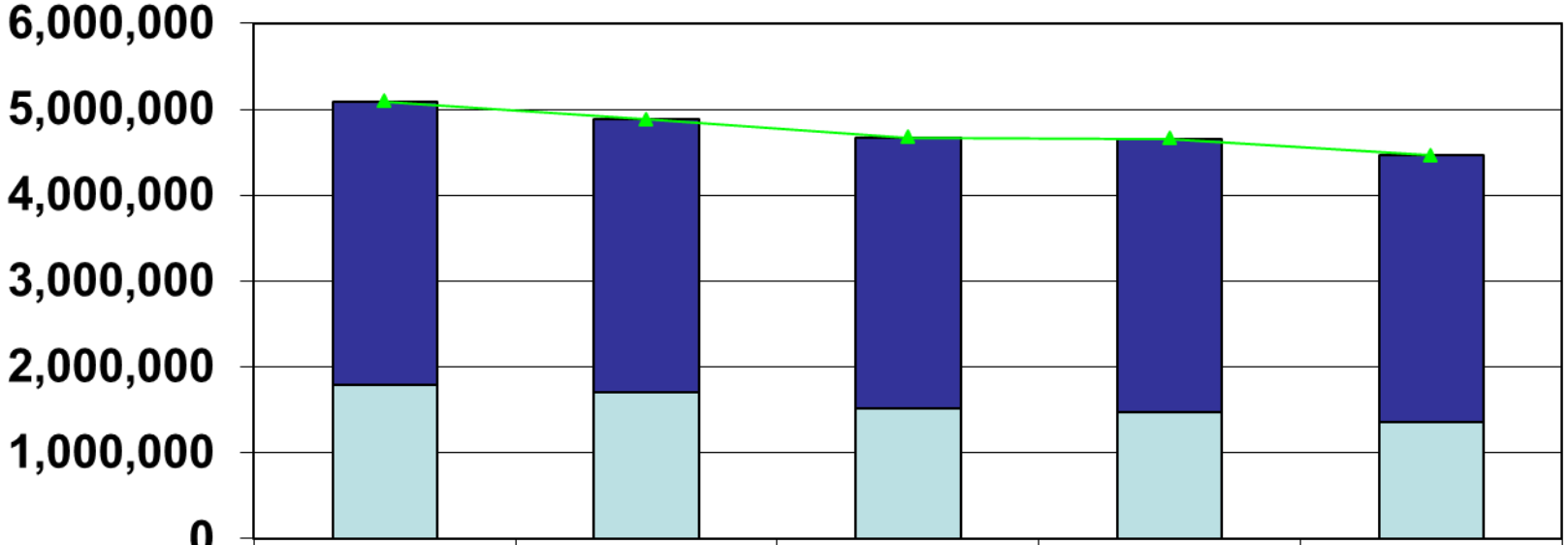


	2008	2009	2010	2011	2012
College Hill	5.29	5.08	5.71	5.26	4.96
Abert	6.13	8.89	5.69	5.48	5.09
Total	11.42	10.97	11.40	10.74	10.05

Monthly Production in MGD



Water Sold in HCF

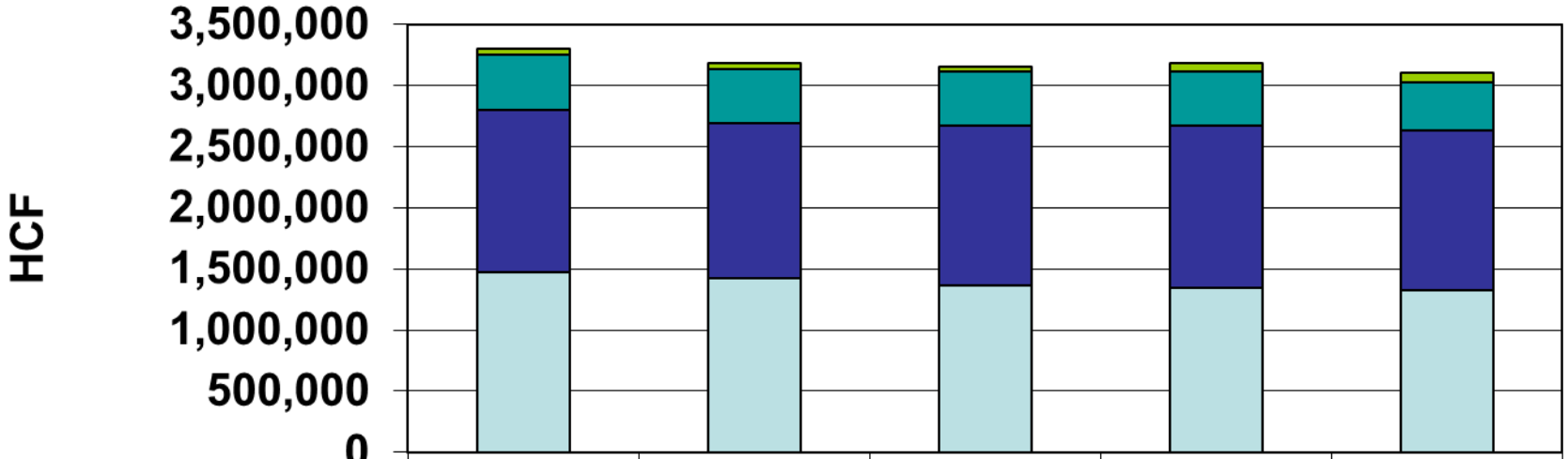


	2008	2009	2010	2011	2012
All other	3,301,619	3,184,500	3,155,289	3,187,335	3,101,321
Contracts	1,792,474	1,699,776	1,514,452	1,470,833	1,363,760
Total	5,094,093	4,884,276	4,669,741	4,658,168	4,465,081

Contract Water Use in HCF

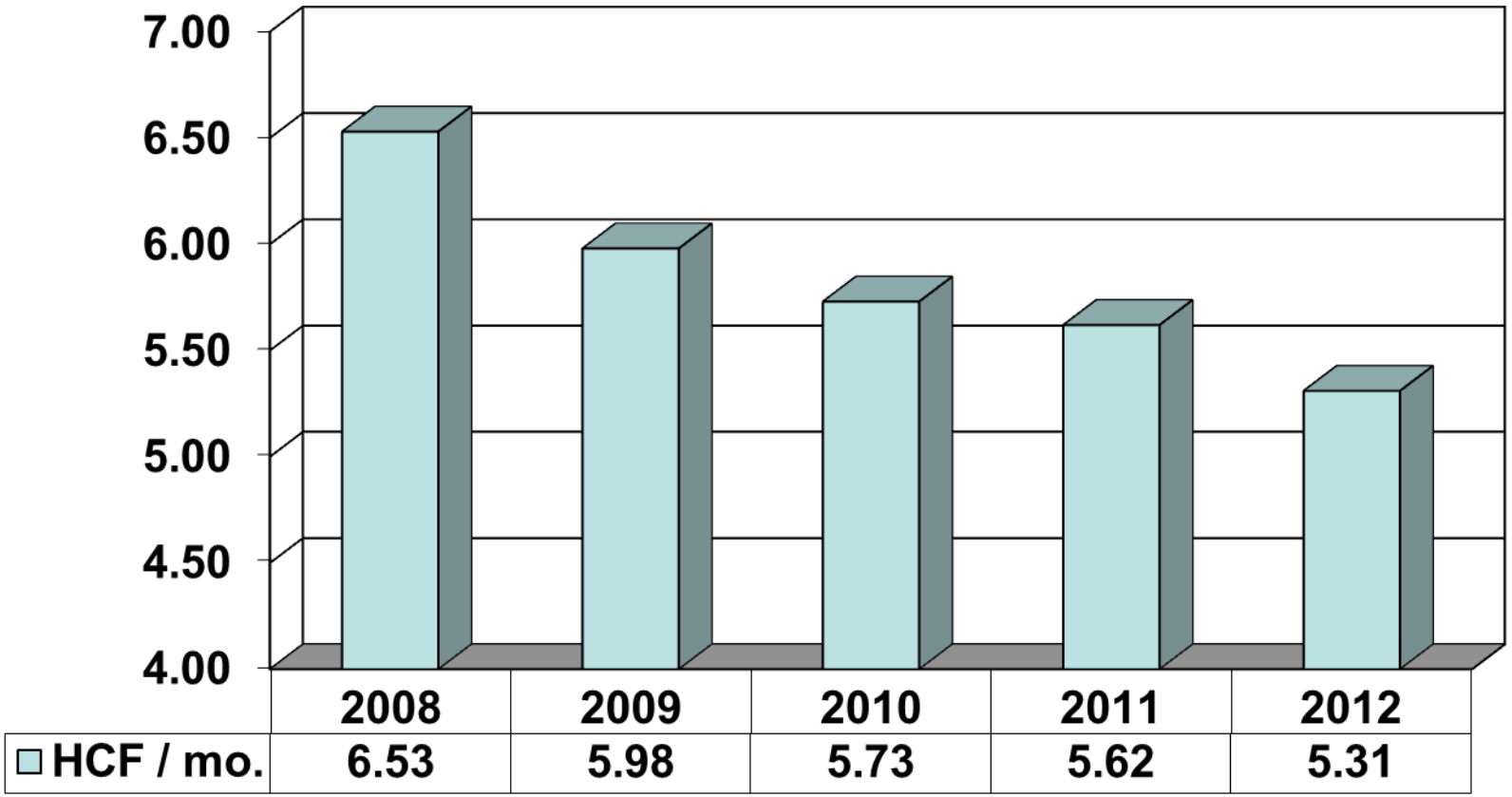
Water Customers	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Amherst	54,410	55,355	49,805	54,080	43,305
Bedford	806,541	798,263	725,571	748,310	727,881
CCUSA	268,788	250,826	215,854	196,767	182,489
Frito-Lay	181,668	155,245	125,509	139,112	136,765
Rock Tenn	481,067	440,087	397,713	332,564	273,320
Total contract use	1,792,474	1,699,776	1,514,452	1,470,833	1,363,760
Non-contract use	3,301,619	3,184,500	3,155,289	3,187,335	3,101,321
Total use	5,094,093	4,884,276	4,669,741	4,658,168	4,465,081
Contract % of use	35%	35%	32%	32%	31%

Non-Contract Water Sales in HCF

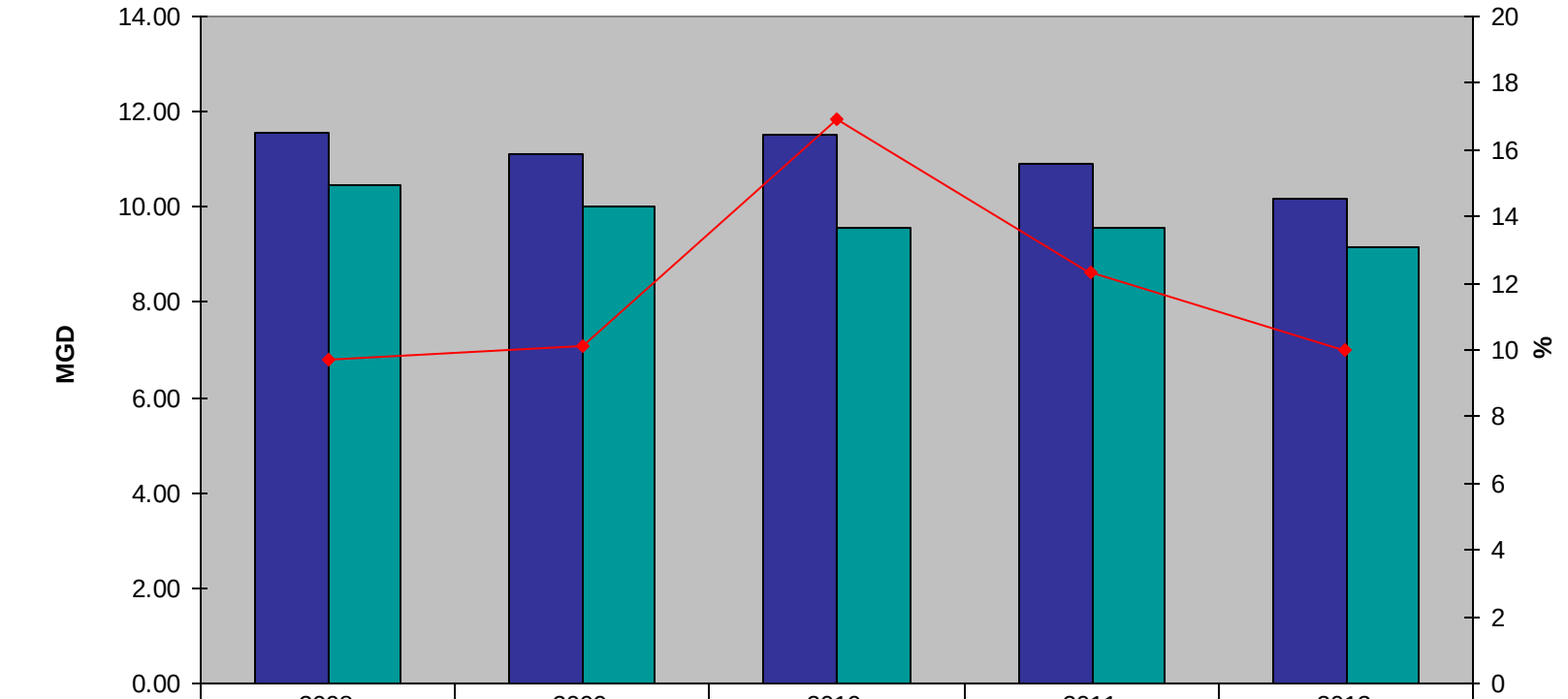


	2008	2009	2010	2011	2012
All other	44,969	49,185	41,346	72,543	71,086
Institutional	457,306	441,538	440,810	440,575	399,277
Business	1,325,161	1,267,266	1,305,771	1,326,344	1,305,666
Domestic	1,474,183	1,426,511	1,367,362	1,347,873	1,325,292

Avg. Monthly Water Sold Domestic Customers



Non Revenue Water



	2008	2009	2010	2011	2012
Production	11.56	11.13	11.52	10.89	10.17
Sales	10.44	10.01	9.57	9.55	9.15
NRW %	9.7	10.1	16.9	12.3	10.00

Water Complaints

Type of Complaint	FY 2008	FY2009	FY 2010	FY 2011	FY 2012
1. Discolored water	171	131	140	123	53
2. Odor / taste	4	8	2	11	6
3. No water	-	28	40	15	13
4. High / low pressure	141	94	86	95	67
5. Service line leaks	135	211	133	98	85
6. Main breaks	-	39	46	30	39
7. Meter related	81	134	75	75	71
8. Unclassified	-	-	-	255	232
Total complaints	532	645	522	702	566
Number of water customers	21,158	22,240	22,265	22,374	23,308
Complaints / 1,000 customers	25	29	23	31	24

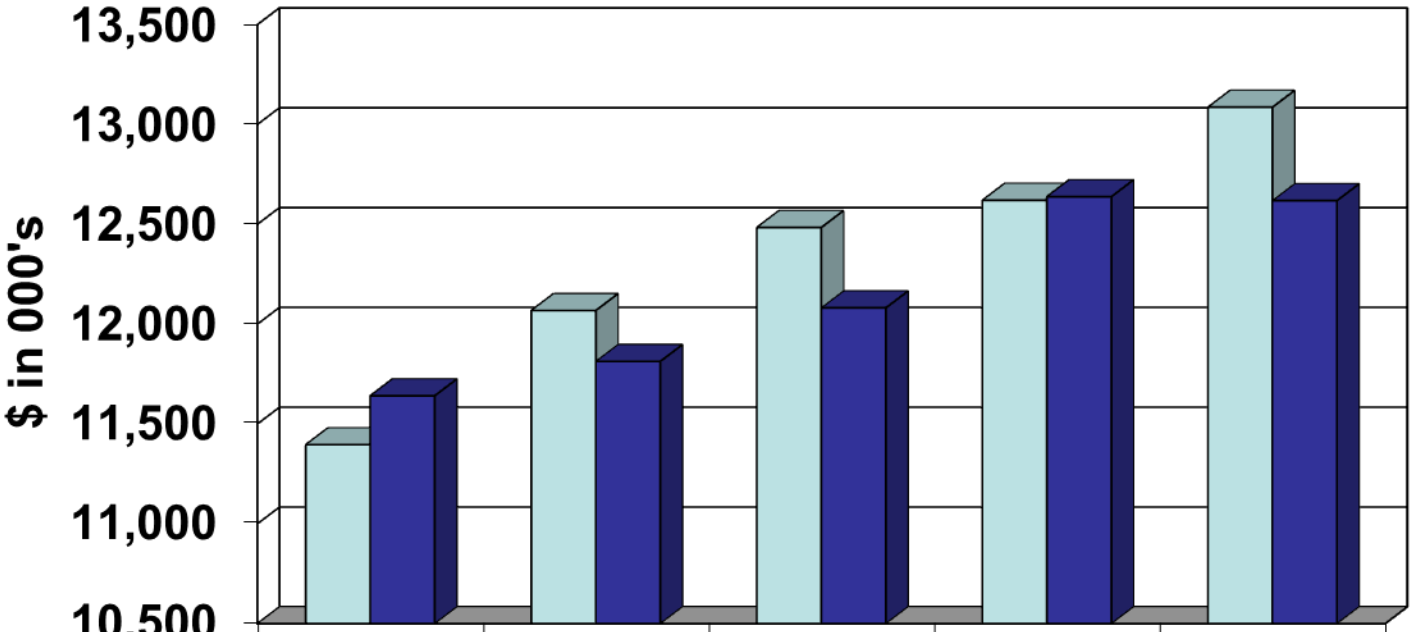
Water Fund Financial Data

Water Fund Debt Coverage

($ in 000's)

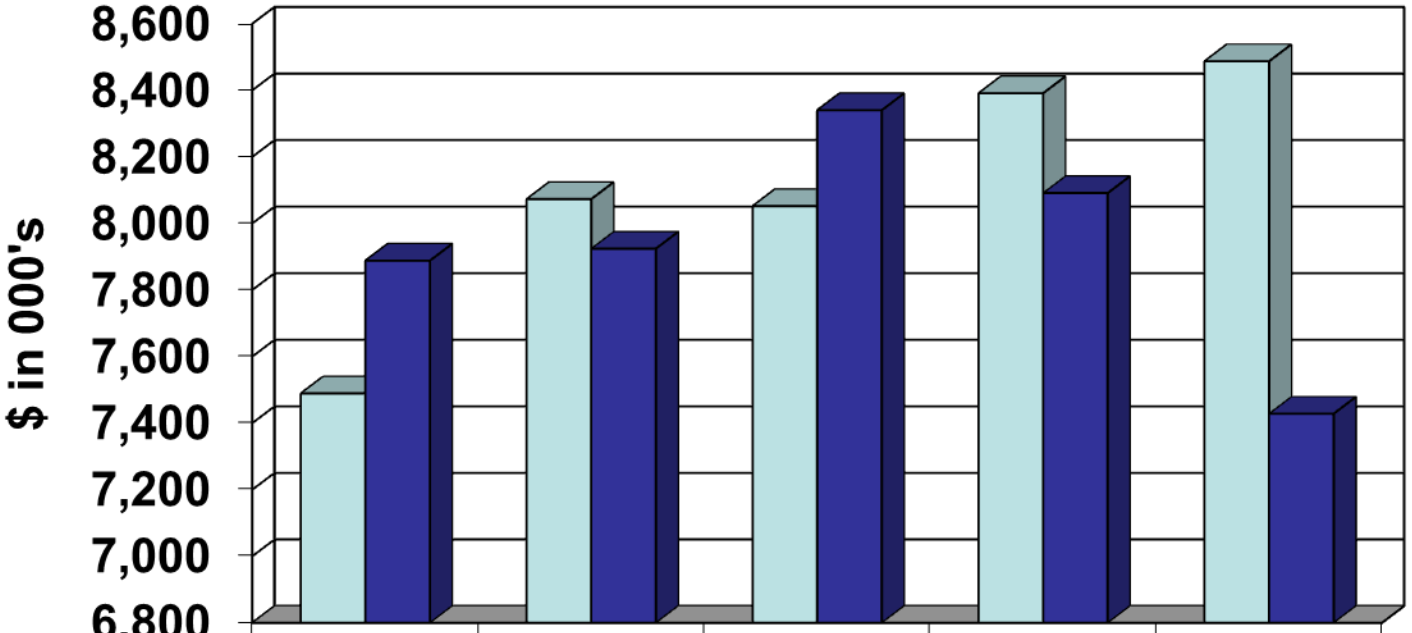
	FY 2008	FY2009	FY 2010	FY 2011	FY 2012
Revenues:					
Charges for services	$8,763	$9,034	$9,309	9,792	9,791
Water contracts	2,502	2,690	2,720	2,670	2,518
Interest & other	376	89	52	176	309
	11,641	11,813	12,081	12,638	12,618
Expenses:					
Water treatment	2,683	2,954	2,863	2,767	2,390
Water line maintenance	1,400	1,548	1,603	1,627	1,469
Meter reading	879	821	861	836	885
Administration	2,478	2,440	2,448	2,793	2,647
Non-departmental	133	128	168	164	119
Project expenses	315	33	397	14	21
Capitalized expenses	0	0	0	-110	-103
	7,888	7,924	8,340	8,091	7,428
Operating income	3,753	3,889	3,741	4,547	5,190
Debt service	2,877	2,703	2,999	3,677	3,650
Debt coverage	1.30	1.44	1.25	1.24	1.42

Water Revenues
Adopted Budget vs. Actual



	2008	2009	2010	2011	2012
Budget	11,396	12,068	12,484	12,620	13,086
Actual	11,641	11,813	12,081	12,638	12,618

Water Operating Expenses Adopted Budget vs. Actual



	2008	2009	2010	2011	2012
Budget	7,489	8,073	8,052	8,391	8,487
Actual	7,888	7,924	8,340	8,091	7,428

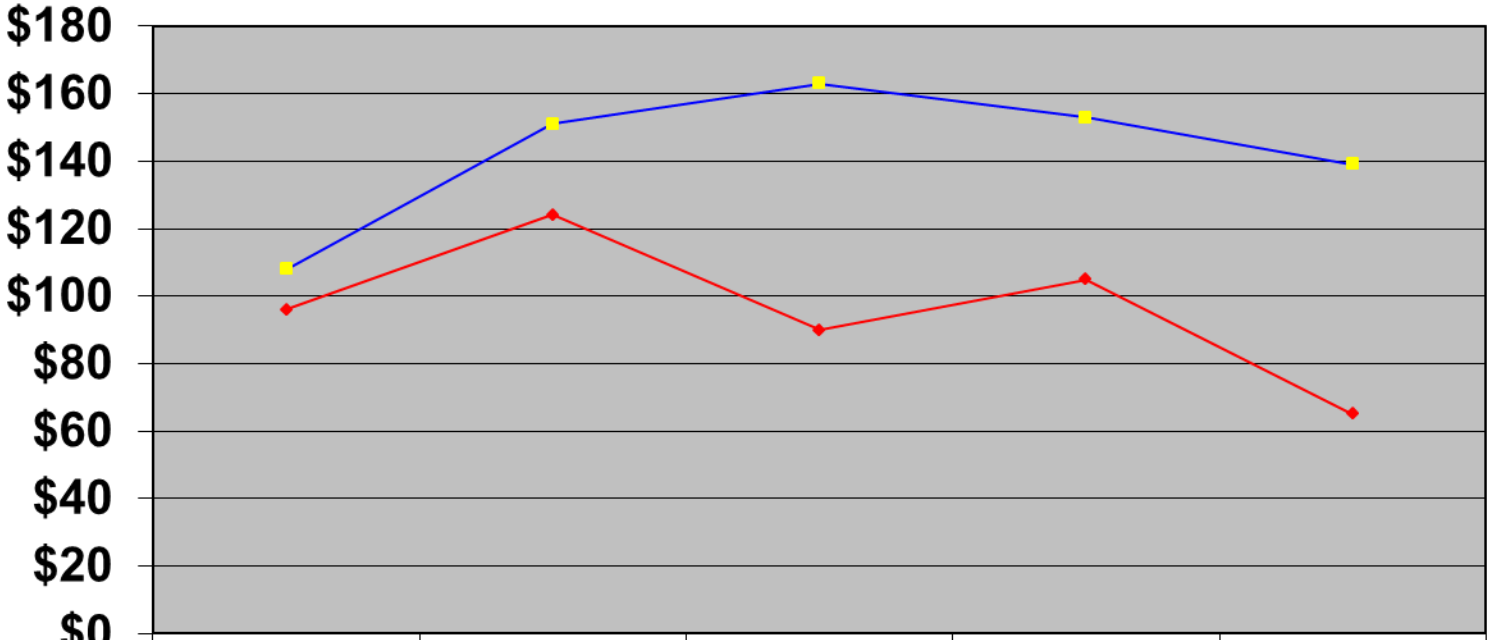
Largest Water Customers
($ in 000's)

Customer	FY 2008	FY2009	FY 2010	FY 2011	FY 2012
1. Bedford County	$1,326	$1,501	$1,537	$1,487	$1,406
2. CCUSA	432	473	465	509	543
3. Rock Tenn	472	436	460	396	324
4. Liberty University	217	215	233	269	303
5. Frito-Lay	179	169	149	170	168
6. Azdel	91	56	143	150	126
7. Centra Health	213	173	124	137	262
8. Griffin Pipe	106	120	115	135	148
9. Amherst County	93	97	110	107	77
10. Kroger / Westover	122	105	108	105	107
11. Tri-Tech	64	67	106	133	154
12. RR Donnelley	111	115	102	135	112
Total top 12	3,426	3,527	3,652	3,733	3,730
Total water revenues	11,641	11,813	12,081	12,638	12,618
Top 12 % of total	29%	30%	30%	30%	30%
Customers with total billings in excess of $100,000 / year.					

Water Expenses by Object
($ in 000's)

Expenses by object	FY 2008	FY2009	FY 2010	FY 2011	FY 2012
Personal services	$2,636	$2,764	$2,828	2,976	2,770
Fringe benefits	969	1,023	1,052	1,151	979
Supplies & materials	994	959	974	1,052	1,051
Contractual services	603	479	582	419	472
Utilities, including natural gas	455	614	687	609	516
Chemicals	404	504	378	419	242
General Fund allocations	1,105	1,026	905	1,004	1,003
All other, including project expenses	722	540	879	571	358
Total excluding capitalized expenses	$7,888	$7,909	$8,285	$8,201	$7,391
% increase	20.2%	0.3%	4.8%	-1.0%	-9.9%

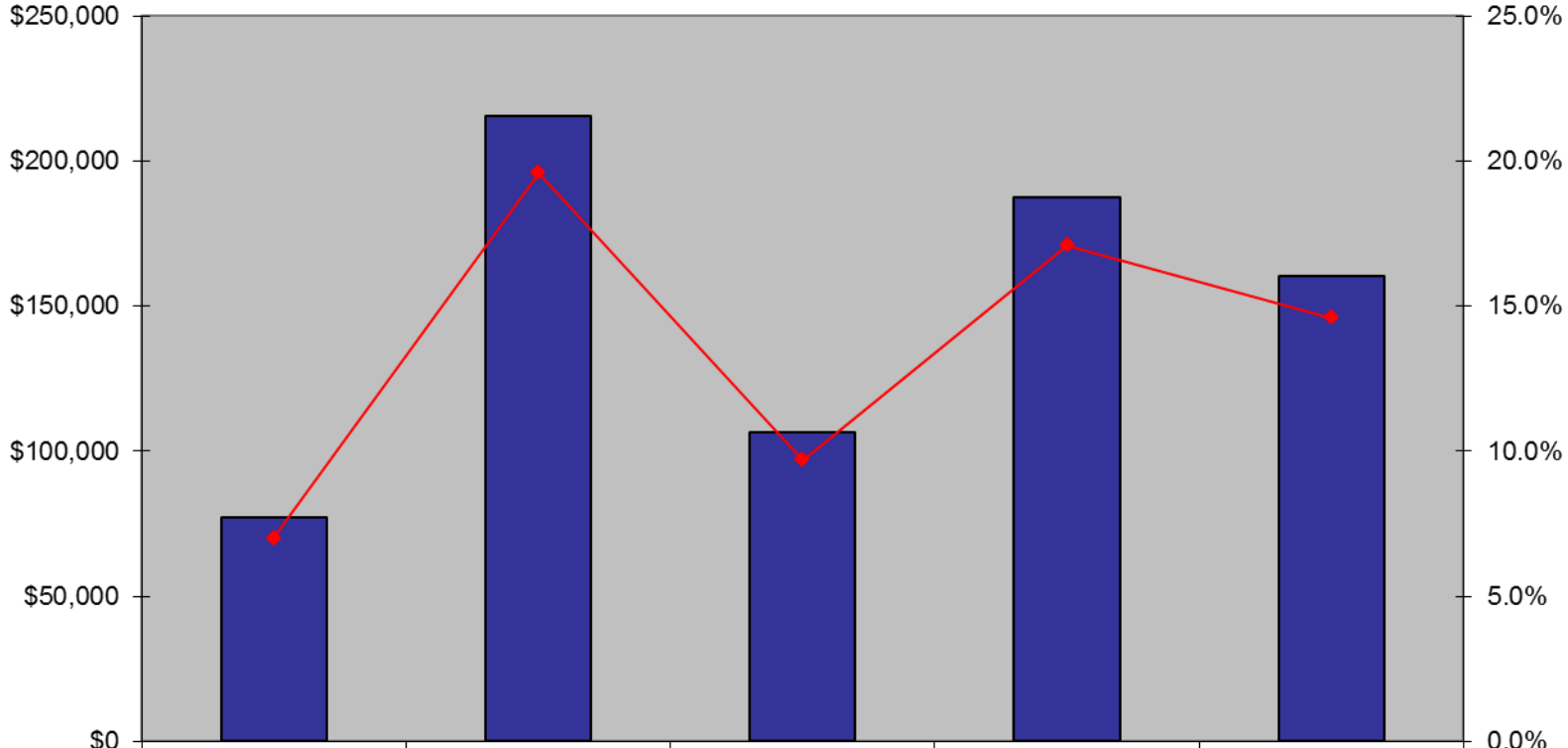
Water Variable Expenses / MG



	2008	2009	2010	2011	2012
Chemicals	$96	$124	$90	$105	$65
Utilities	$108	$151	$163	$153	$139

Water Vehicle Costs

Total cost of all vehicles ($1.1 million)

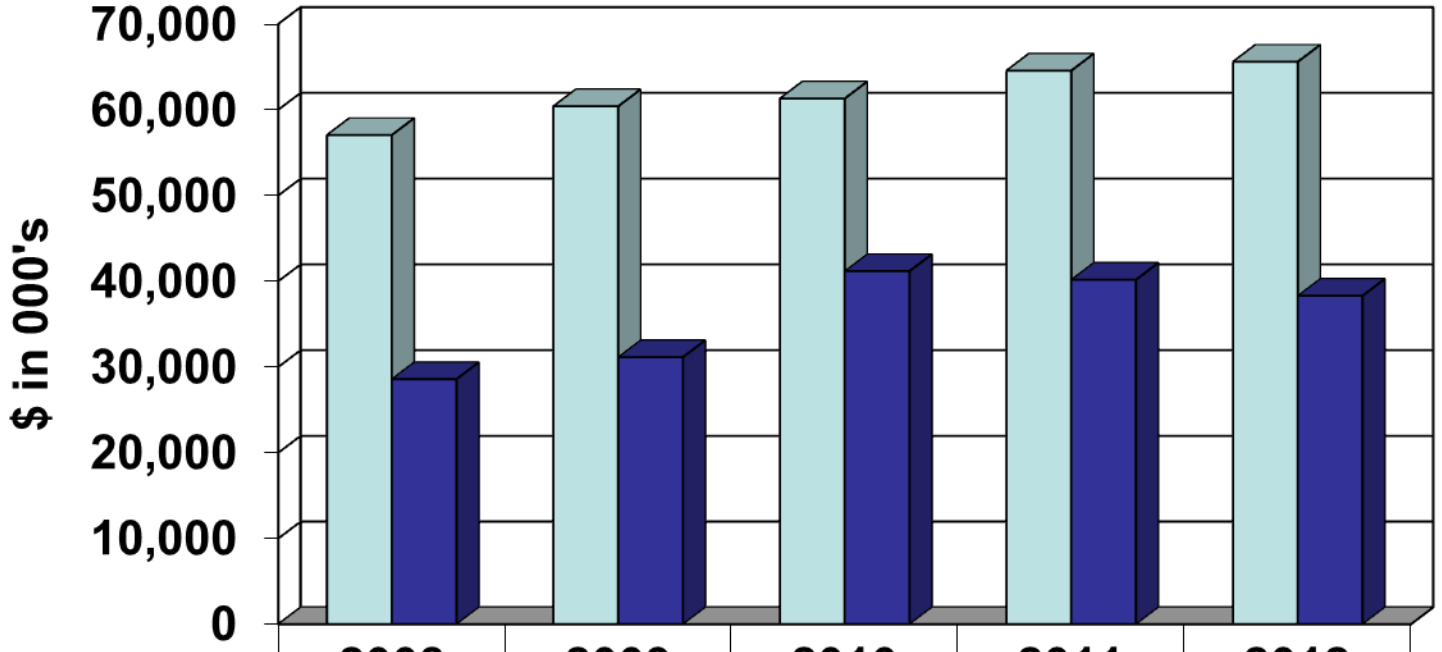


	2008	2009	2010	2011	2012
Payments	$77,000	$215,500	$106,658	$187,737	$160,386
Replcment %	7.0%	19.6%	9.7%	17.1%	14.6%

Water Capital Expenditures
$ in 000's

Capital Expenditures	FY 2008	FY2009	FY 2010	FY 2011	FY 2012
Source of supply	45	220	463	1,202	103
Treatment plants	4,347	2,349	83	494	298
Storage tanks	683	733	98	603	22
Petitions & extensions	840	211	239	304	111
Distribution & CSO improvements	804	1,765	1,795	2,435	2,920
Other	0	182	778	364	0
Total	6,719	5,460	3,456	5,402	3,454

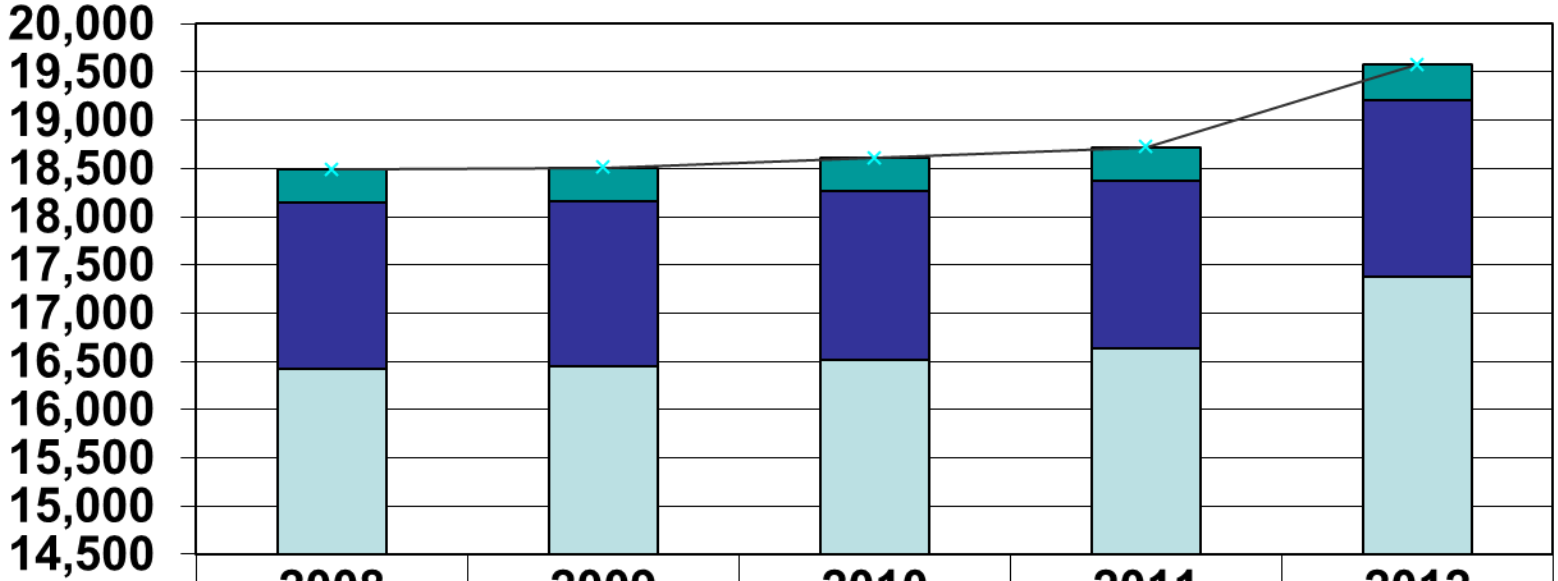
Net Water Capital Assets



	2008	2009	2010	2011	2012
Net fixed assets	57,028	60,391	61,294	64,545	65,579
Bonds & notes	28,572	31,138	41,164	40,166	38,293

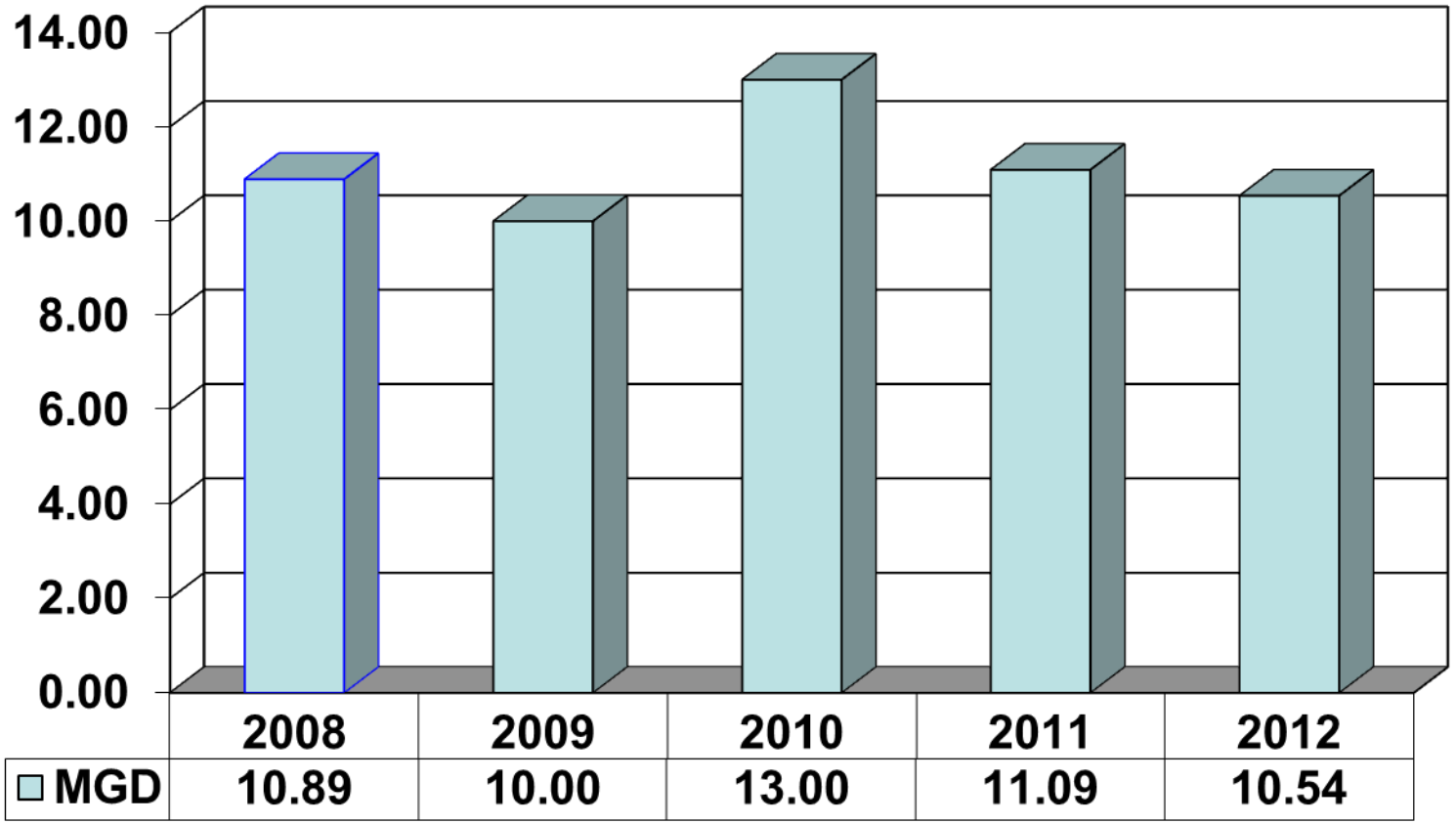
Wastewater Statistics

Number of Sewer Customers

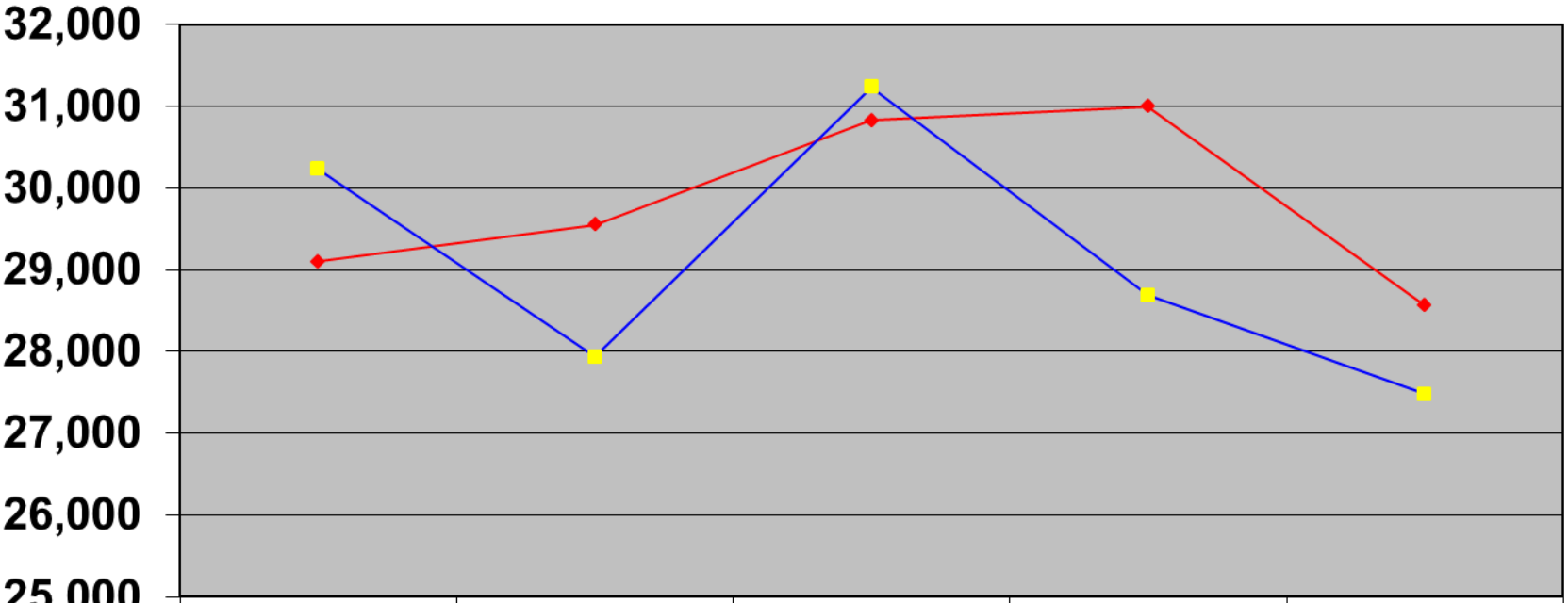


	2008	2009	2010	2011	2012
Other	336	340	345	350	359
Business	1,734	1,715	1,743	1,736	1,842
Domestic	16,416	16,450	16,518	16,632	17,371
Total	18,486	18,505	18,606	18,718	19,572

Wastewater Effluent in MGD

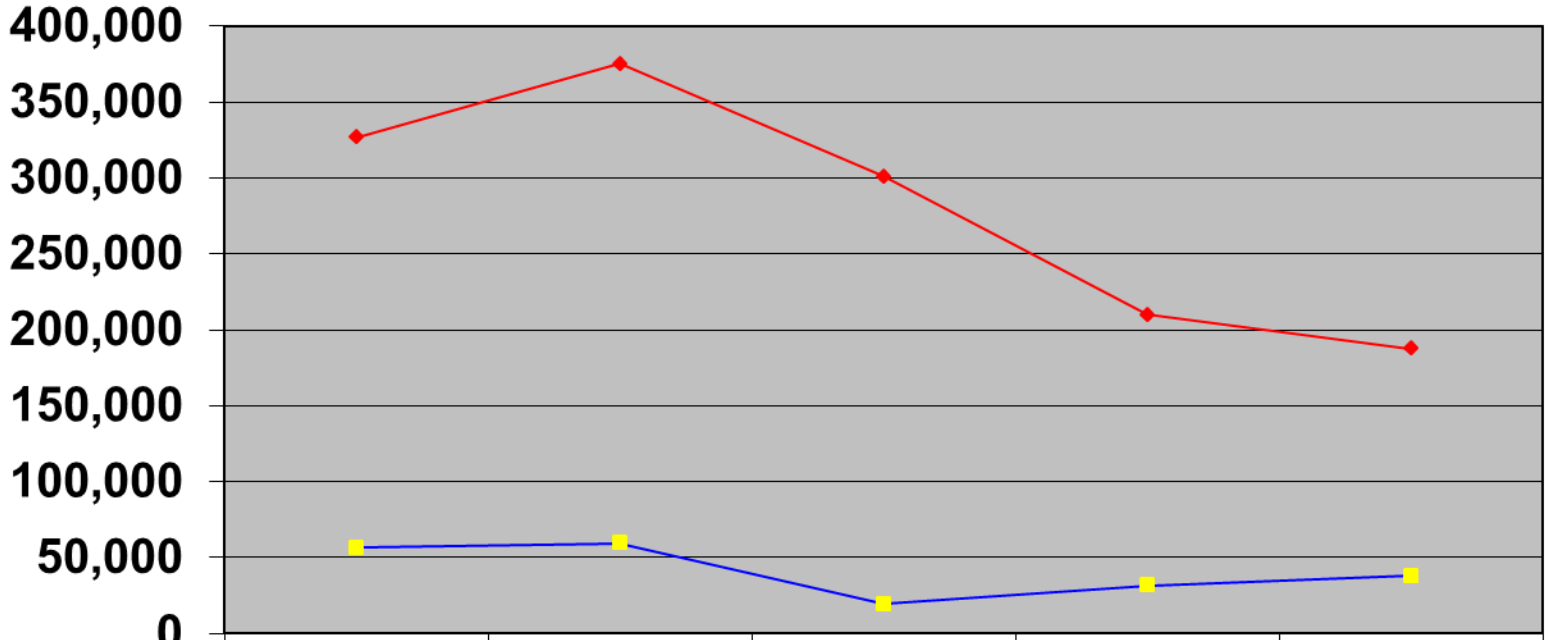


BOD / TSS Loadings in lbs. / Day



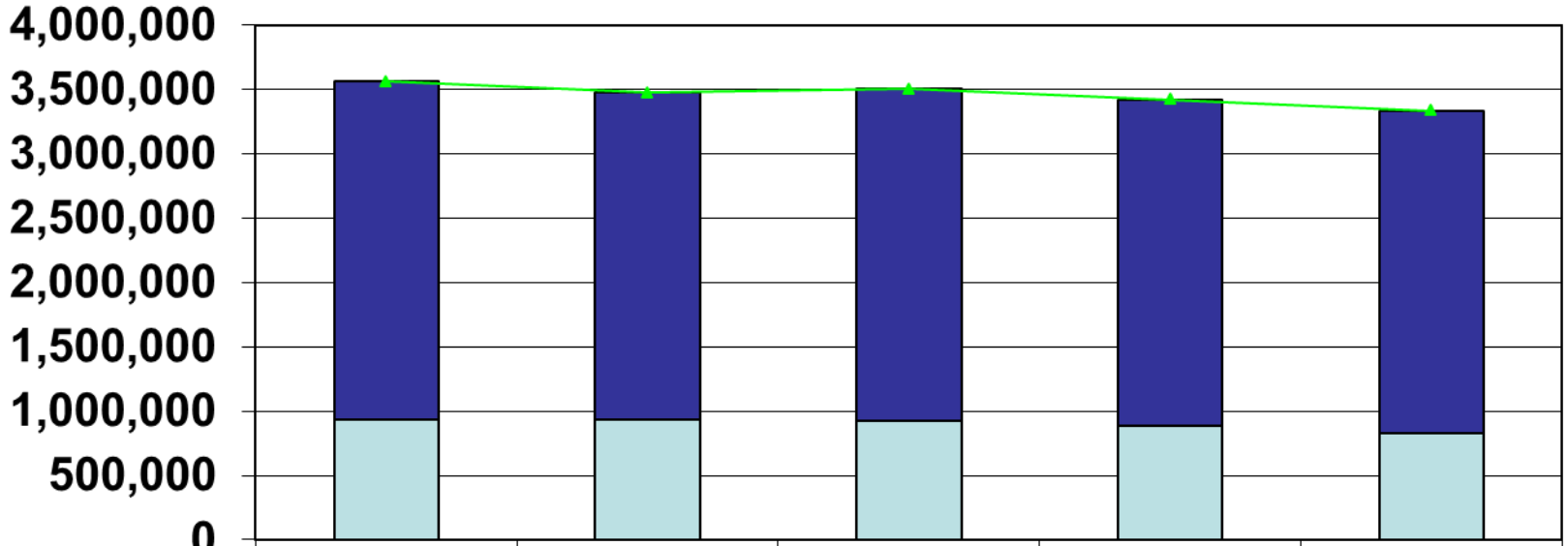
	2008	2009	2010	2011	2012
BOD	29,099	29,554	30,832	30,998	28,567
TSS	30,235	27,936	31,232	28,689	27,477

Nitrogen / Phosphorus Annual Discharge in lbs



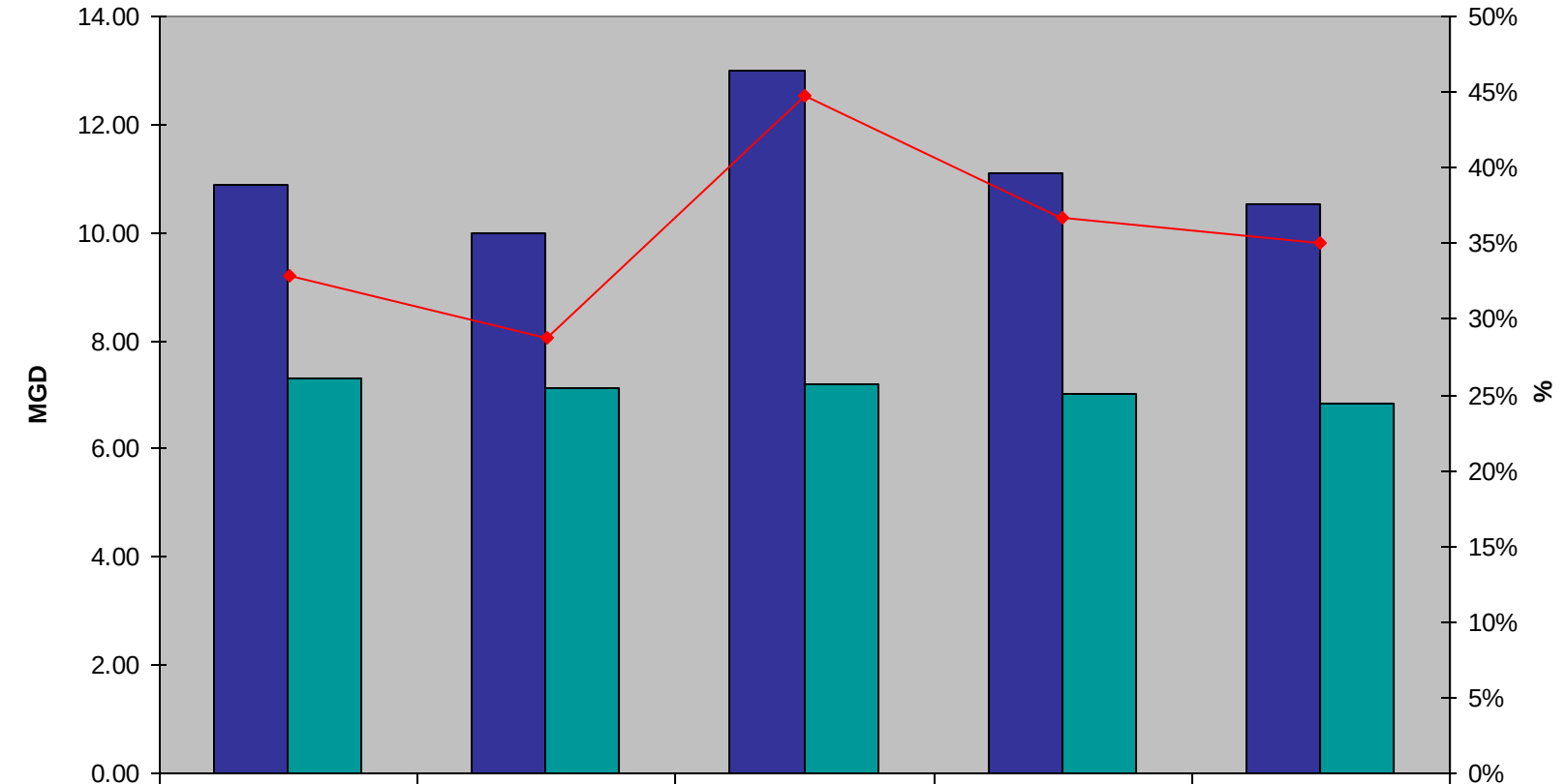
	2008	2009	2010	2011	2012
Nitrogen	326,623	375,106	301,208	210,024	187,603
Phosphorus	56,539	59,343	19,597	31,706	37,905

Sewer Sold in HCF



	2008	2009	2010	2011	2012
All other	2,625,812	2,546,506	2,582,089	2,536,205	2,513,335
Contracts	939,269	929,980	923,196	888,742	825,100
Total	3,565,081	3,476,486	3,505,285	3,424,947	3,338,435

Sewer Sales to Influent



	2008	2009	2010	2011	2012
Influent	10.89	10.00	13.00	11.09	10.54
Sales	7.31	7.12	7.18	7.02	6.84
%	32.90%	28.80%	44.70%	36.70%	35.10%

Sewer Complaints

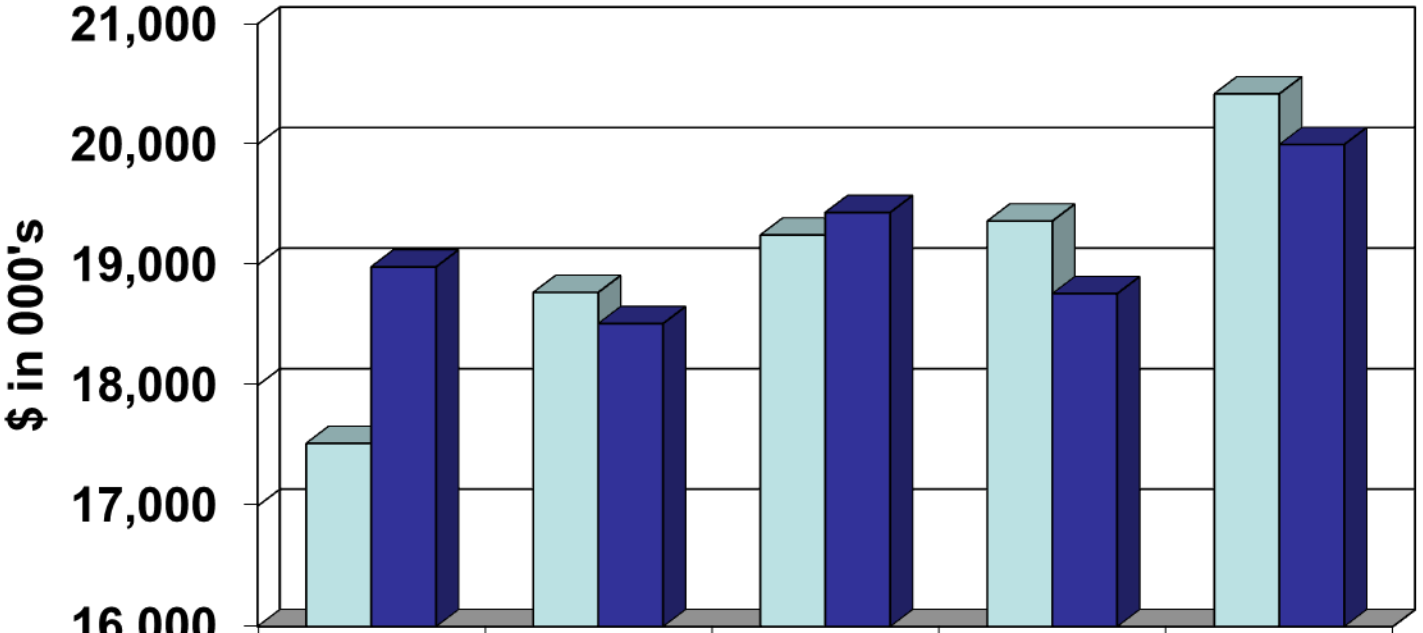
Type of Complaint	FY 2008	FY2009	FY 2010	FY 2011	FY 2012
1. Cave-in / broken sewer line	21	29	25	-	-
2. Sewer odor	45	76	45	72	30
3. Sewer overflow / backups	27	58	183	138	10
4. Stormwater related	167	228	203	219	154
5. All other	64	66	78	122	217
Total complaints	324	457	534	551	411
Number of sewer customers	18,486	18,505	18,606	18,718	19,572
Complaints / 1,000 customers	18	25	29	29	21

Sewer Fund Financial Data

Sewer Fund Debt Coverage

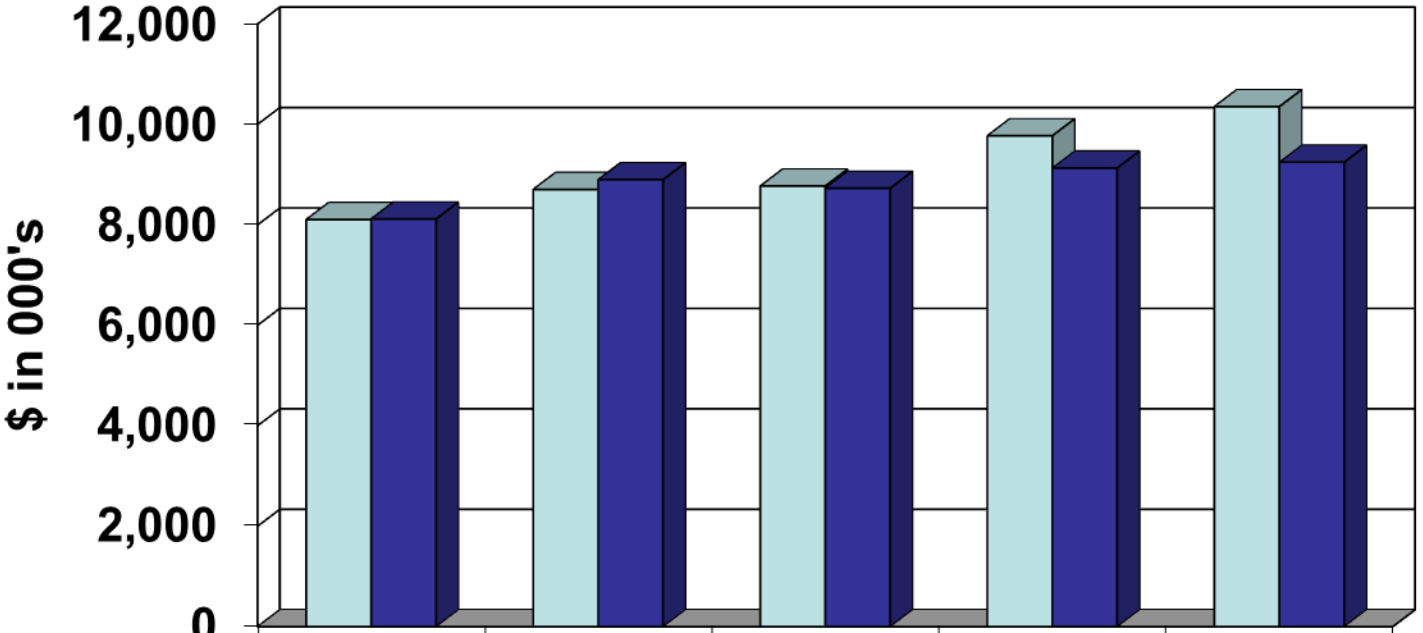
	FY 2008	FY2009	FY 2010	FY 2011	FY 2012
Revenues:					
Charges for services	15,525	15,542	16,085	15,757	16,267
Water contracts	2,836	2,562	2,991	2,806	2,802
Interest & other	623	410	359	199	930
	18,984	18,514	19,435	18,762	19,999
Expenses:					
WWTP	4,721	5,052	6,007	6,310	6,104
Sewer line maintenance + sw	1,687	1,921	2,305	2,665	2,598
Non-departmental	1,283	1,278	250	250	462
Project expenses	425	647	166	135	380
Capitalized expenses	0	0	0	-230	-298
	8,116	8,898	8,728	9,130	9,246
Operating income	10,868	9,616	10,707	9,632	10,753
Debt service, net of IRS rebate	6,959	6,569	7,107	7,573	8,067
Debt coverage	1.56	1.46	1.51	1.27	1.33

Sewer Revenues
Adopted Budget vs. Actual



	2008	2009	2010	2011	2012
Budget	17,520	18,772	19,248	19,364	20,420
Actual	18,984	18,514	19,435	18,762	19,999

Sewer Operating Expenses Adopted Budget vs. Actual



	2008	2009	2010	2011	2012
Budget	8,104	8,704	8,772	9,772	10,353
Actual	8,116	8,898	8,728	9,130	9,246

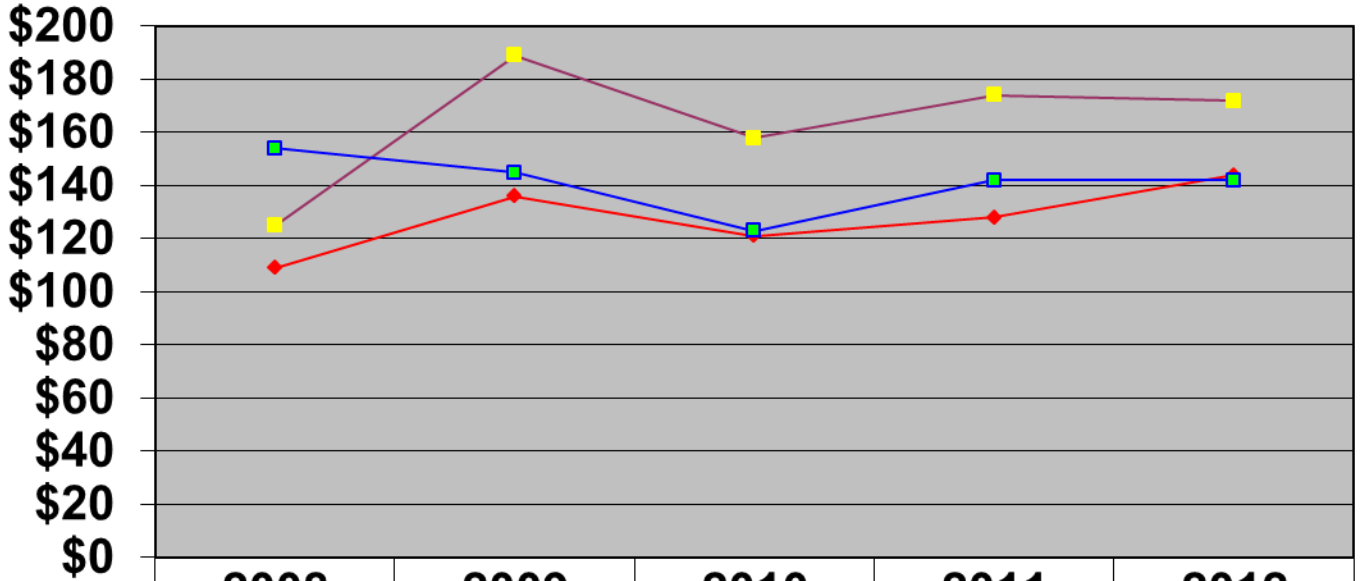
Ten Largest Sewer Customers
($ in 000)

Customers	FY 2008	FY2009	FY 2010	FY 2011	FY 2012
1. Rock Tenn	$1,431	$1,139	$1,154	$1,019	$921
2. Frito-Lay	578	613	692	778	696
3. Centra Health	278	382	450	537	516
4. Liberty University	262	469	476	518	614
5. Azdel	312	175	519	417	368
6. Bedford County	320	365	484	388	441
7. Amherst County	303	337	396	365	400
8. Griffin Pipe	298	295	280	316	283
9. Kroger / Westover Dairy	443	276	203	308	290
10. CCUSA	205	246	264	262	350
Total top 10	4,430	4,297	4,918	4,908	4,879
Total sewer revenues	18,984	18,514	19,435	18,762	19,999
Top ten % of total	23%	23%	25%	26%	24%

Sewer Expenses by Object
$ in 000's

Expenses by object	FY 2008	FY2009	FY 2010	FY 2011	FY 2012
Personal services	1,660	1,761	1,844	1,886	2,087
Fringe benefits	630	674	699	729	737
Supplies & materials	464	493	544	624	517
Contractual expenses	826	807	888	1,059	964
Sludge disposal	614	531	582	575	545
Utilities	498	690	751	703	661
Chemicals	434	496	575	518	555
General & Water Fund Allocations	1,815	2,112	1,979	2,360	2,136
All other	1,175	1,304	866	906	499
Total excluding capitalized expense	$8,116	$8,868	$8,728	$9,360	$8,701
% Increase - total	22.8%	9.3%	-1.6%	7.2%	-7.0%

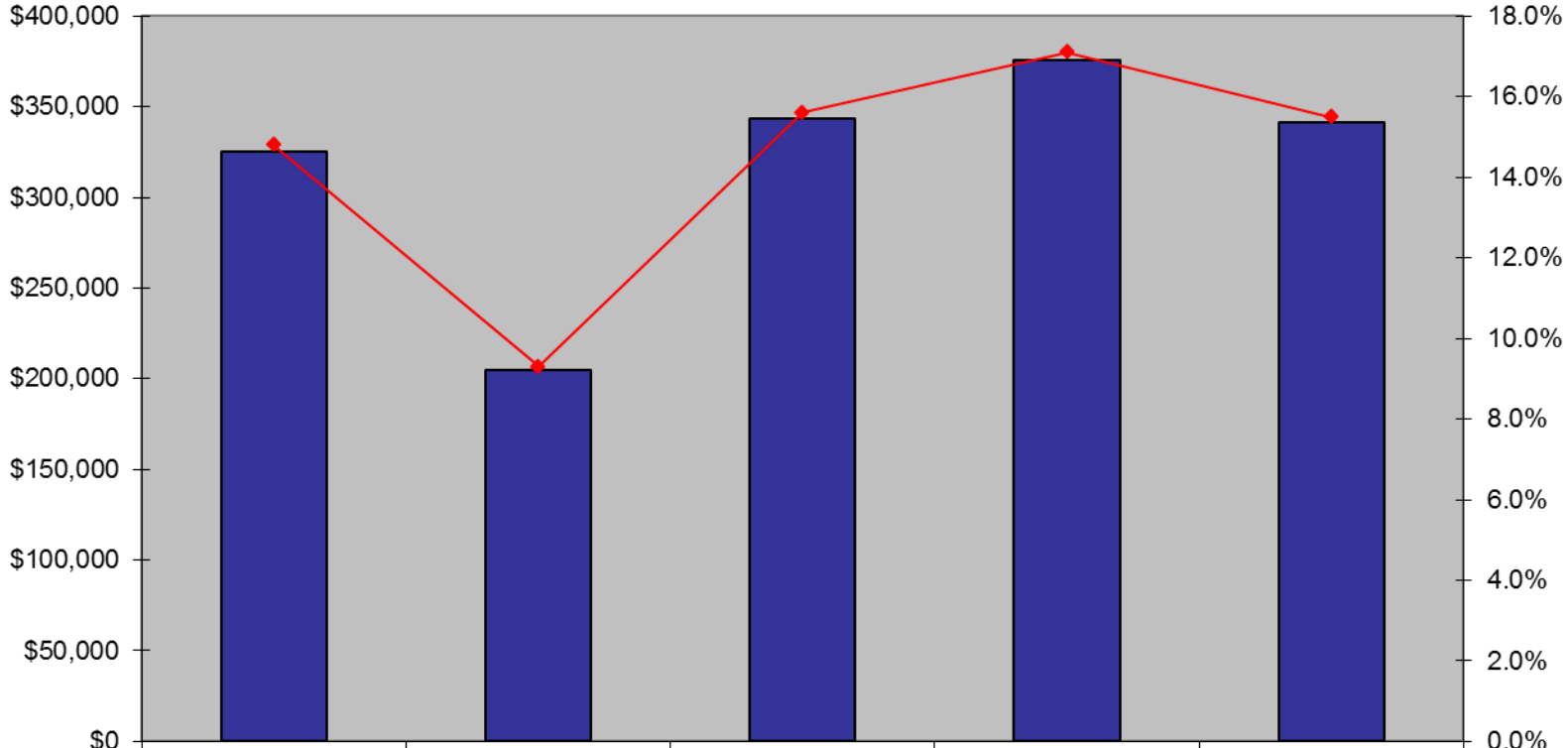
Sewer Variable Expenses / MG



	2008	2009	2010	2011	2012
Chemicals	$109	$136	$121	$128	$144
Utilities	$125	$189	$158	$174	$172
Sludge disposal	$154	$145	$123	$142	$142

Sewer Vehicle Costs

Total cost of all vehicles ($2.2 million)

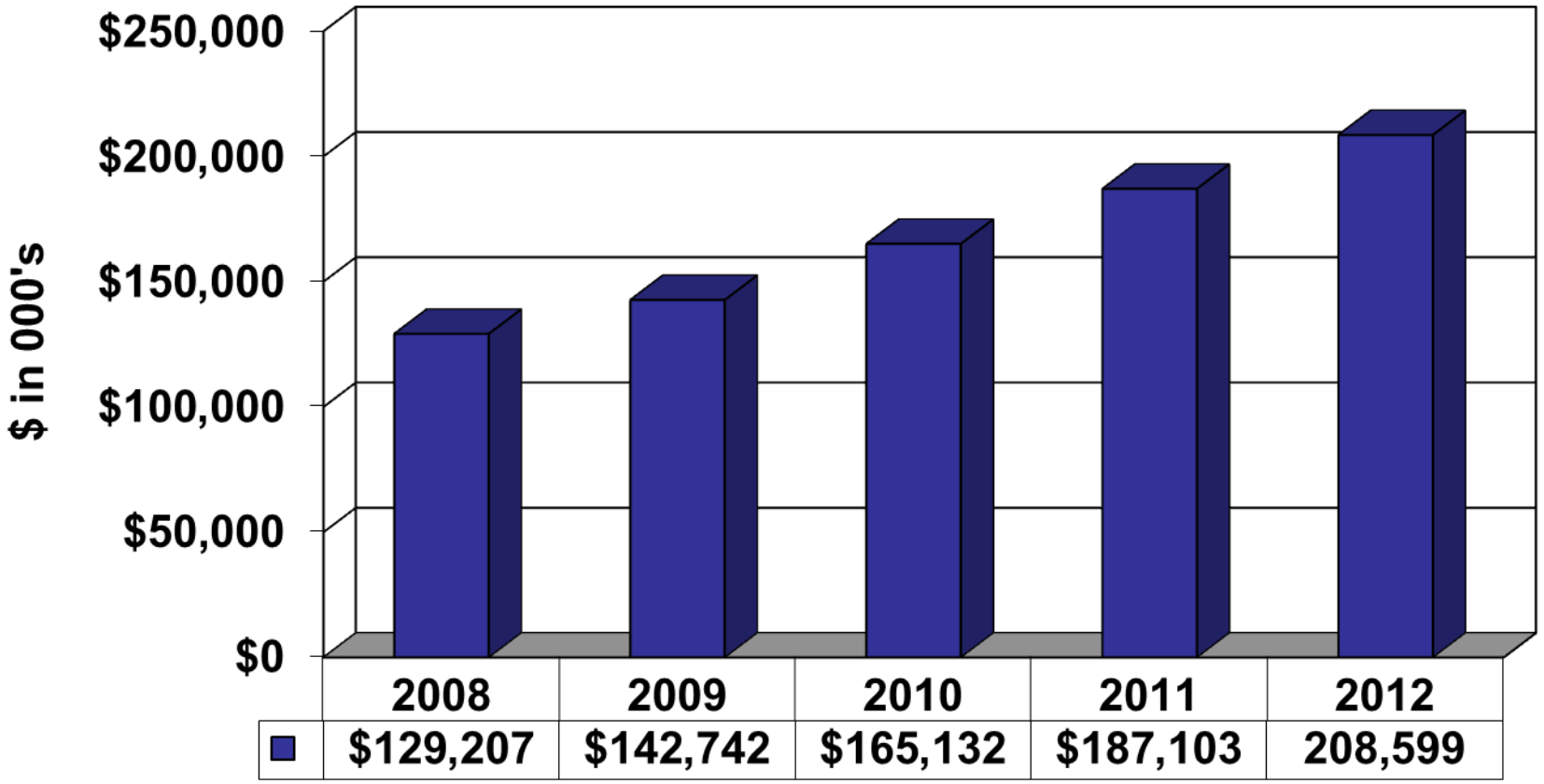


	2008	2009	2010	2011	2012
Payments	$325,000	$204,453	$343,537	$375,700	$341,507
Replcment %	14.8%	9.3%	15.6%	17.1%	15.5%

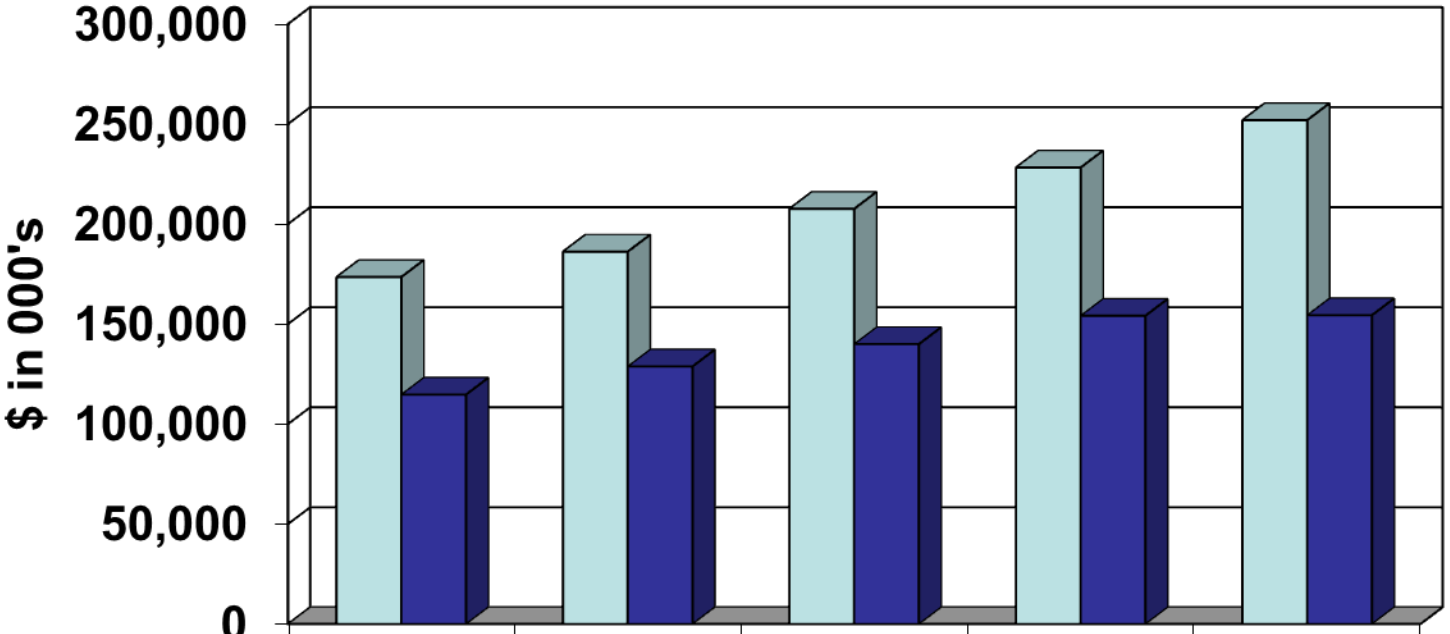
Sewer Capital Expenditures
$ in 000's

Capital Expenditures	FY 2008	FY2009	FY 2010	FY 2011	FY 2012
Sewer extensions	829	572	596	193	258
Treatment plant	630	2,564	1,612	1,164	5,572
Collection system repairs	103	309	464	997	1,667
CSO - separation & RDP	7,703	8,007	7,387	9,423	5,194
Interceptors	6,530	6,060	14,003	12,549	15,639
Stormwater	0	0	0	284	92
Other	102	218	1,092	1,177	1,132
Total	15,897	17,730	25,154	25,787	29,554

Cumulative CSO Expenditures



Net Sewer Capital Assets



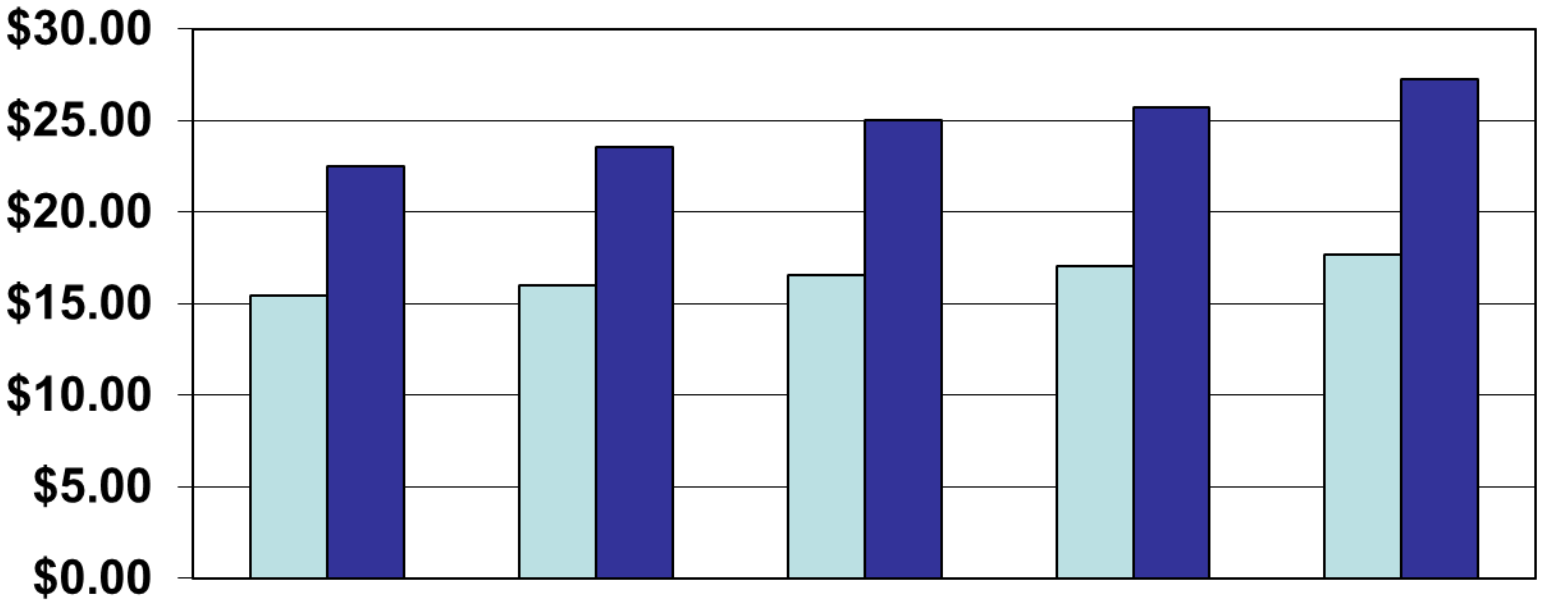
	2008	2009	2010	2011	2012
Net fixed assets	173,491	186,190	207,611	$228,252	$251,930
Bonds & notes	114,694	128,757	139,951	$154,132	$154,374

Rate & Bill Data

Water, Sewer & Stormwater Rates

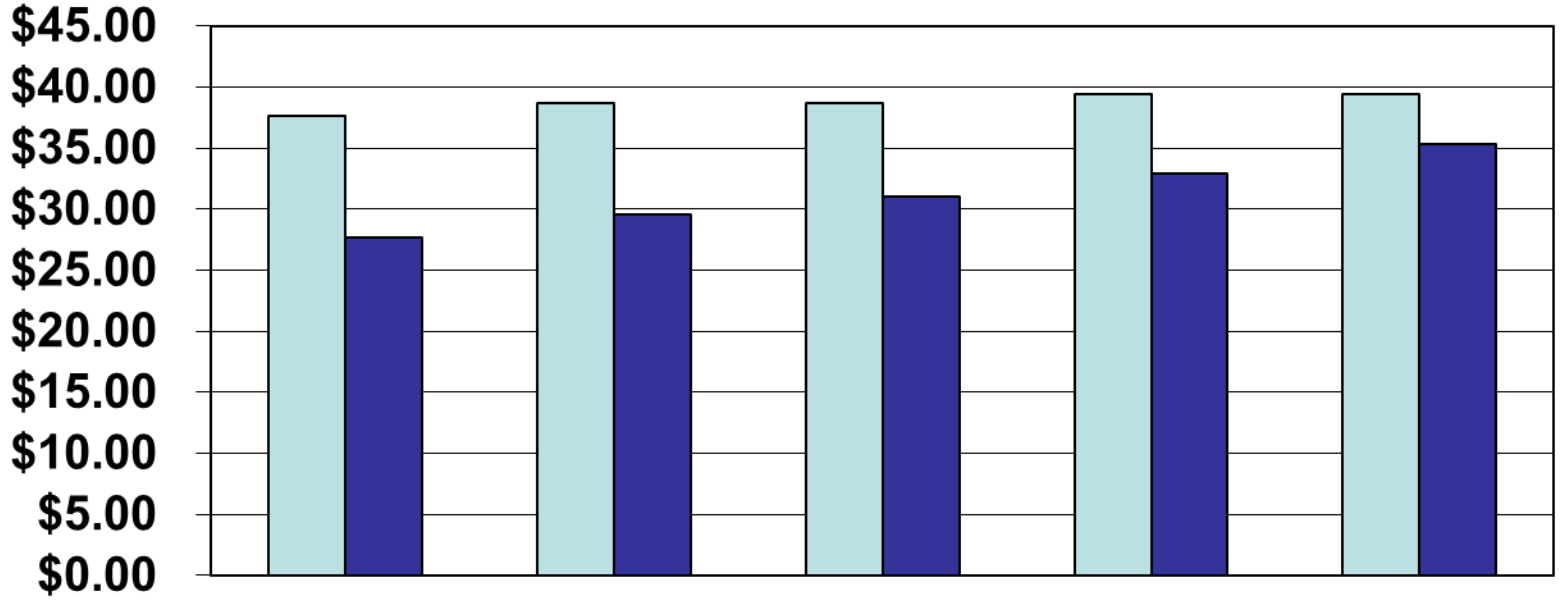
	7/1/2008	7/1/2009	7/1/2010	7/1/2011	7/1/2012
Water volume charge / hcf	$2.05	$2.13	$2.22	$2.29	$2.38
Sewer					
Volume charge / hcf	5.38	5.54	5.54	5.65	5.65
BOD / 100 lbs	18.46	18.46	20.31	20.31	21.33
TSS / 100 lbs.	20.88	20.88	22.97	22.97	24.12
Septic hauler charge	177.00	177.00	185.50	185.50	195.14
Avg. industrial pre-treatment / permit fee	1,460	1,460	1,606	1,606	1,606
Sewer only	41.35	42.47	42.27	43.24	43.24
Account charge	3.69	3.69	3.69	3.69	3.69
Stormwater					
Rate per sfu per month	0.00	0.00	0.00	0.00	4.00
Water Connection fees					
3/4" & 5/8" meters	950	950	950	950	950
1" service - 5/8" meter	1,000	1,000	1,000	1,000	1,000
1" service - 1" meter	1,150	1,150	1,150	1,150	1,150
Greater than 1" minimum	1,150	1,150	1,150	1,150	1,150
Sewer Connection Fees					
4" line	1,100	1,100	1,100	1,100	1,100
Greater than 4" - minimum	1,200	1,200	1,200	1,200	1,200
Availability fee					
Water	1,220	1,220	1,220	1,220	1,220
Sewer	1,950	1,950	1,950	1,950	1,950
Fire protection fees					
Hydrants & 8" fire lines	17.99	17.99	19.79	19.79	19.79
10" fire line	32.30	32.30	35.53	35.53	35.53
12" fire line	51.25	51.25	56.38	56.38	56.38
Cut-on charge	15	15	15	15	15
Cut-off charge	30	30	30	30	30

Water Bill Comparison @ 5,000 gallons / month



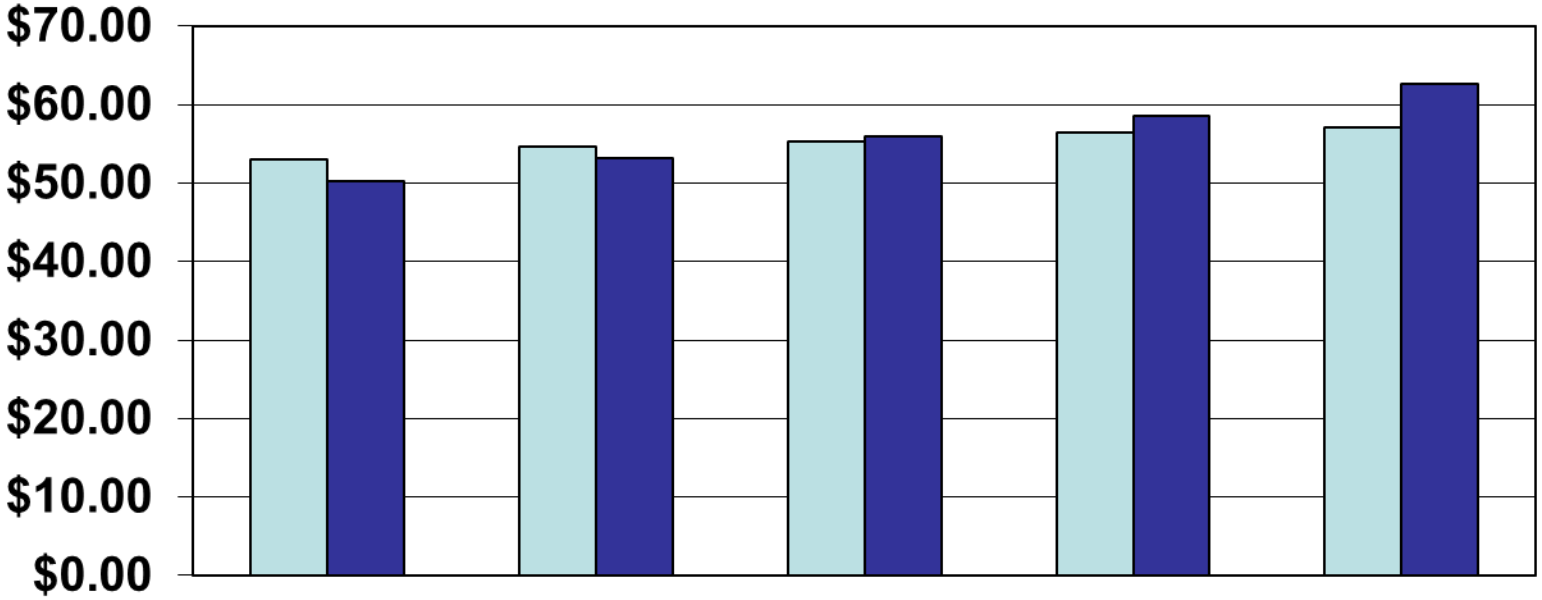
	7/1/2008	7/1/2009	7/1/2010	7/1/2011	7/1/2012
Lynchburg	$15.47	$16.00	$16.60	$17.07	$17.67
State avg.	$22.50	$23.58	$25.00	$25.70	$27.25

Sewer Bill Comparison @ 5,000 gallons / month



	7/1/2008	7/1/2009	7/1/2010	7/1/2011	7/1/2012
Lynchburg	$37.63	$38.69	$38.69	$39.42	$39.42
State avg.	$27.74	$29.56	$31.03	$32.88	$35.34

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



	7/1/2008	7/1/2009	7/1/2010	7/1/2011	7/1/2012
Lynchburg	$53.10	$54.70	$55.29	$56.49	$57.09
State avg.	$50.24	$53.14	$56.03	$58.52	$62.59

Contract Rates

	FY 2008	FY2009	FY2010	FY2011	FY2012
Water Contract rates / HCF					
Amherst	1.94	1.89	1.99	1.89	1.84
Bedford	1.90	1.93	2.00	1.90	1.84
CCUSA	1.79	1.80	1.98	1.89	1.82
Frito-Lay	0.97	1.086	1.18	1.22	1.24
Rock Tenn	0.97	1.086	1.18	1.21	1.24
Sewer Contract rates / 1,000 gallons					
Amherst (1)	1.27	1.47	1.27	1.61	1.60
Bedford (1)	1.27	1.47	1.27	1.61	1.60
CCUSA (1)	1.27	1.47	1.27	1.61	1.60
Frito-Lay	1.57	1.73	2.51	2.65	2.82
Rock Tenn	1.56	1.73	1.84	1.89	2.02
1. Volume rate only.					

Annual Sewer Bill as a % of MHI

Annual Sewer Bill

1993	$199.08	$25,437	0.78%
1994	$255.00	$25,539	1.00%
1995	$282.96	$25,523	1.11%
1996	$321.36	$25,527	1.26%
1997	$342.96	$25,370	1.35%
1998	$374.28	$27,370	1.37%
1999	$388.32	$28,168	1.38%
2000	$406.68	$28,965	1.40%
2001	$421.80	$29,762	1.42%
2002	$461.76	$34,716	1.33%
2003	$499.56	$34,756	1.44%
2004	$408.33	$35,340	1.16%
2005	$423.72	$35,934	1.18%
2006	$439.68	$36,537	1.20%
2007	$456.48	$37,151	1.23%
2008	$473.92	$37,775	1.25%
2009	$487.56	$37,710	1.29%
2010	$487.56	$38,983	1.25%
2011	$496.80	$38,353	1.30%
2012	$496.80	$38,126	1.30%
Note - MHI based on 9 hcf of monthly use up to 2003; 7 hcf thereafter.