

Department of Utilities FY 2012 Rate Study and Annual Report



**Council Work Session
February 22, 2011**



**Department of Utilities
FY 2012 Rate Study
and Annual Report**

Table of Contents

	Page
Section I – Executive Summary	3
Section II – Successes and Challenges	4
Section III – Rate Increases	11
Section IV - Rate Comparisons	14
Section V – FY 2012 Capital Projects	17
Section VI – Conclusion	18
Water and Sewer Fund Financial Projections	Appendix I
Department of Utilities Statistical and Financial Data	Appendix II

Mission Statement:

“Provide excellent water and wastewater services that promote the health, safety, and prosperity of the community.”

To: The Honorable Mayor and Members of the City Council
From: Timothy A. Mitchell, P.E., Director of Utilities
Re: FY 2012 Rate Study and Annual Report
Date: February 22, 2011

I. EXECUTIVE SUMMARY

The Utilities Department prepares the Rate Study and Annual Report in order to determine the adequacy of the water and sewer rates to fund the operating and capital expenses of the Water and Sewer Funds and ensure compliance with the CSO financial criteria. As always, the following are the guiding principles that are adhered to in developing the recommended rates and fees:

- Equitable sharing of water and sewer 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.

The proposed water volume rate is recommended to be increased by 3%, while the sewer volume rate is recommended to increase by 2%. The water rate increase is primarily related to the need to continue the investment in the water infrastructure at previously planned levels especially the replacement of aging water lines. As of July 1, 2010, the average annual sewer bill was calculated to be 1.25% of the median household income. This is minimum allowable by the City's CSO Consent Special Order. Based on recommendations by the City's rate consultant, PJ Sunn, we are recommending a minimal sewer rate increase of 2%, just enough to continue to maintain compliance through the upcoming projection year. This would be the first sewer rate increase in two years. One very significant fact is that for the first time in at least a decade the City of Lynchburg's combined water and sewer bill based on 5,000 gallons of consumption is less than the statewide average. This is based on the "22nd Annual Virginia Water and Wastewater Report 2010", prepared by Draper Aden Associates. Since 2004 the statewide average combined rate has increased by 43.1% while City's combined rate has only increased a total of 30.9%. A significant accomplishment given the challenges the City is facing especially with CSO.

This report describes some of the recent success and challenges of the Utilities Department, discusses the proposed rate increases, compares the City rates to statewide rates, and briefly describes the significant capital projects planned for FY 2012. The

appendices include the Water and Sewer Funds Financial Projections which are the basis for the Utility Budget and recommended rates, as well as detailed statistical analysis of all aspects of Utility operations.

II. SUCCESSES and CHALLENGES

SUCCESSES

This past year has been marked with a number of notable successes. A brief overview of some of those successes follows:

Water Treatment

The Department of Utilities received the Virginia Department of Health's Excellence in Waterworks Performance Awards for the fourth consecutive year for both the College Hill and Abert Water Filtration Plants. Past awards have also included Excellence in Waterworks Operations, a distinction that less than three percent of waterworks achieve. These awards commend waterworks that provide a quality of water that significantly exceeds the expectations of the Virginia Department of Health and United States Environmental Protection Agency (USEPA). In addition to providing outstanding drinking water, a treatment plant must represent one of the most effectively operated plants and water systems in the State to be considered for an Excellence Award. These awards are given as a result of the Virginia Optimization Program (VOP). The Virginia Department of Health began the VOP in an effort to reduce the risks to public health associated with drinking water beyond standard adherence to regulatory standards. The program sets and tracks optimization goals of which the waterworks must continuously meet in order to be eligible for the awards.

Pedlar Dam

Alterations to the Pedlar Dam that were required to comply with the Department of Conservation and Recreation's (DCR) new Dam Safety Regulations were recently completed. Originally various sources estimated that the cost to comply with these new regulations would exceed \$5 million. As a result of an innovated approach developed by the staff of the Department of Utilities, the total cost of the renovations needed for regulatory compliance was less than \$675,000. Pedlar Dam is one of the first dams in the state to be in complete compliance with the new regulations. It is designed to safely pass the full probable maximum flood without a danger of failing.

Additionally, the staff of Utilities elected to develop the very complex Emergency Action Plan in house saving approximately \$300,000. Table top exercises have been conducted that included emergency personnel from Amherst County, the City of Lynchburg, the Virginia Department of Emergency Management, and the DCR. This was another required component of the new regulations.



Raw Water Line

Early one Sunday morning in October, operators at the Abert Water Filtration Plant noticed a slight drop in flow from the Pedlar Reservoir, a couple of hours later there was suddenly a combined loss of flow rate from the Pedlar Reservoir as well as the sedimentation basins at Abert of nearly 20 million gallons per day. This indicated a massive break somewhere in the raw water line. Through the quick action of the operators at the Abert Filtration Plant immediate steps were taken to shut down the water line and avoid any drinking water quality violations. It ultimately took several days of engineering analysis and field investigation to determine that the break on the 22 mile long pipeline was under the James River. It was determined that the most cost effective, quickest, and least disruptive approach to making this repair was with the use of divers working off barges in the river. Despite the challenges of working underwater in frigid weather conditions, the pipeline is now back in service. Efforts are also underway to determine the best approach to maximize the life of this critical 75 year old pipeline. While the break itself can not be classified as a success, the response to isolate the break and continuously meeting drinking water standards is certainly illustrative of a success.



Safety

The Department of Utilities operates 3 industrial facilities, (2 water treatment plants and 1 waste water treatment plant), 24 hours a day, 365 days a year as well as maintain nearly 1,000 miles of water and sewer lines. Every day Utility employees are doing jobs that are considered some of the most hazardous tasks our industry faces including: confined space entries, excavation work, working with chemicals and the process systems that handle them, high pressure water lines, traffic control, and then anything else necessary to maintain the water and sewer systems.

Even considering all this, through the Department's commitment to safety, we currently have reached over two years and 400,000 man-hours without a Lost Time Injury.



Wastewater Water Treatment Plant (WWTP)

A long term Solids Management and Capital Improvements Plan was completed. This gives us a pathway forward for managing future operational and capital projects required at the WWTP to compensate for the upcoming closure of the regional landfill. The plan determined that in the short and intermediate term, solids would still be land-filled at the Regional Landfill located in Campbell County landfill with the City modifying its transportation fleet by purchasing more efficient trucks and phasing out the existing trailers. In the long term, the City will move toward construction of anaerobic digesters in approximately ten years, with the goal to create Class A biosolids that can be land applied. Additionally, the long term plan calls for either the selling of the methane gas produced by the digesters or use it to fuel electric generators that could actually power a significant portion of the plant.

Staff also successfully negotiated with the DEQ Construction Assistance Program staff a 20 year, 0% interest loan through the Virginia Clean Water Revolving Loan Fund for the upcoming \$7 to \$9 million capital project to refurbish the secondary clarifiers and improve the performance of the headworks. Normally with interest rates of approximately 3% for WWTP projects this ends up saving about \$3 million over the life of the loan.

Regional Industrial Pretreatment Memorandum of Understanding

The City of Lynchburg and the water and wastewater authorities for Amherst, Bedford, and Campbell Counties entered into a Memorandum of Understanding that will ensure compliance with both State and Federal regulations related to industrial pretreatment. This will also ensure that industries in the counties will have the same level of accountability for their wastewater discharges as those in the City. Further, it will also ensure that industries in the counties are billed for surcharges for high strength waste at the same rate as those industries in the City. This was the culmination of over a year of work and negotiations between the Utilities Department and the counties. Additionally, a regional Fats, Oil, and Grease Program was developed to help prevent the discharge of these products into the sanitary sewer system. Fats, oil, and grease are responsible for a significant amount of sewer blockages which result in sanitary sewer overflows. Again, this will provide consistency across the region. This program will begin to be implemented over the next year.

Distribution System Improvements

Towards the goal of renewing the water system infrastructure, the Utilities Department completed several water line replacement projects over the past year, replacing 18,000 feet of water line at a cost of nearly \$2.5 million. Primarily these projects were either in conjunction with CSO projects or small-diameter water main replacement projects. A summary of some of the projects follow:



- Patrick/York Street Small Mains (08016-W) replaced 5,200 lf of small diameter water lines on Patrick, York, Smyth, 1st, and Lovell Streets including one block of aging 8" diameter pipe. This project had been at the top of the small mains replacement program list. Approximately 55 customers were given new water services and tied into the new water mains. The total cost was \$477,000.
- Knight Street Small Mains (09036-W) replaced 4,900 lf of small diameter water lines on Knight, 17th, 18th, 19th, Taylor, Monroe, and Spencer Streets including one block of aging 8" diameter pipe. Previous dead end water lines on 19th and Knight Streets were tied to an existing 20" main to provide a fully looped water system. This project

had been second on the small mains replacement program list. Approximately 80 customers were given new water services and tied into the new water mains. The total cost of the project was \$553,000.

- 2nd, Page, Munford Street Small Mains (09026-W) replaced 1,800 lf of small diameter water line on 2nd, Page, and Munford Streets. This project was on the small mains replacement program list, but was moved to the top in response to customer issues with water pressure at the end of Munford Street. Approximately 40 customers were given new water services and tied into the new water mains. The total cost was \$225,000.
- CSO 8.1.C was completed in April of 2010 though most of the work was completed in 2009. This project included 2,400 lf of water line replacements and 43 services at a cost of \$300,000.
- CSO 2.2 (08022-S) replaced 2,100 lf of small and aging water lines on Cedar, Norfolk Memphis, and Rivermont in conjunction with the sanitary sewer and stormwater CSO project. Approximately 20 customers were given new water services and tied to the new water mains. The cost of the water line work on the project was approximately \$400,000. The water line work is complete with this project though the CSO part is still ongoing.
- CSO 1D3.1A (05033-S) replaced 1,300 lf of small and aging water lines on Hollins Mill and Rivermont in conjunction with the sanitary sewer and stormwater CSO project. Five customers were given new water services and tied to the new water mains. The cost of the water line work on the project was approximately \$250,000.
- Villas Way – Westburg Connection (09060-W) installed 250 lf of 8” water line between Villas Way Drive and Westburg Drive through an existing easement. Cost was \$50,000 utilizing the City’s annual contractor. The water line will be active following a second water main project on Gaddy Road which will allow the City to move about half of the Maple Hills subdivision to the City of Lynchburg meter reading rather than from Bedford County PSA.

Central Business District Water Line Replacement Program

Planning for the Central Business District Water Main Replacement is underway. The age of the water distribution infrastructure in the Central Business District is resulting in an increasing number of water main breaks which have caused significant damage to both public and private property. The nature of the highly urbanized area makes simple water line replacement impossible. A phased replacement plan will be developed to mitigate disruption to downtown traffic, business, parking, and other concerns. Other improvements that can be completed in association with the water line replacements will be considered and incorporated where possible and practical. The Department of Utilities and other stakeholders have begun meeting with property and business owners to discuss the water system needs and to gather feedback on what can be done to help minimize inconveniences. A plan should be completed by June 2011 with design work starting shortly thereafter.

CSO

Highlights of the CSO Program this past year included investing \$23,000,000 on 18 different CSO projects, four of which were stimulus projects, and the establishment of three public-private partnerships for stormwater management. On the James River Interceptor alone, over 13,000 linear feet of 24 to 72 inch sewer was installed in 2010. One of our stimulus projects was a public-private partnership with Randolph College that disconnected campus rooftops and routed this stormwater runoff into rain barrels and rain gardens instead of into the combined sewer system. This innovative project will allow the closure of one of the 30 remaining CSO points in the City and will be presented at national and state conferences in 2011.



CHALLENGES

The primary challenges facing the Department include the following: (1) continued implementation of the CSO program; (2) sanitary sewer overflows (SSO) and collection system maintenance; (3) the impact of the Chesapeake Bay water quality goals on the CSO Program, WWTP and urban stormwater; (4) sludge disposal; (5) nutrient trading; (6) and an aging water system.

CSO

2010 also presented us with some challenges. Extreme weather conditions (record snowfall followed by record rainfall) in early 2010 led to the failure of nearly a mile of the river bank along Division 6 of the JRI, jeopardizing the integrity of the interceptor and the progress of the project. A quick design, coupled with great coordination between the City, Contractor, CSXT and the permitting agencies, allowed this delay to be minimized and kept the project on schedule. Division 4, which is installing the new JRI under seven sets of railroad tracks, encountered poor soils that threatened the integrity of the tracks. It took 8 months of significant redesign and negotiation with CSXT and Norfolk Southern to reach a solution so this project can be completed.



TMDL

Another significant challenge facing the CSO Program is the developing Chesapeake Bay TMDL, which threatens to undermine the City's Consent Order for CSO. The City has been tracking this regulation and negotiating with local and federal regulatory agencies for over two years and it appears that the City's unique Order is protected in the current version of the regulation. Staff will continue to monitor and react to the regulations as they are finalized in 2011.

The Chesapeake Bay TMDL also has the potential to significantly impact the WWTP. Ultimately more stringent nutrient limits may force the upgrade of the WWTP at a cost of approximately \$70 million. All the major WWTP's in the James River Basin have been working closely with DEQ and EPA on the development of the Chesapeake Bay TMDL. An area of significant concern is related to chlorophyll-a in the James River which can have the effect of driving nutrient loads even lower. The State and EPA have agreed to study this issue over the next several years and it is one in which we will need to stay closely involved.

SSO

More than half (approximately 250 miles) of the City's sanitary sewer system lies outside of the remaining combined sewer areas and is in need of enhanced maintenance to help reduce and prevent the number of sanitary sewer overflows. In order to address these needs, a Sewer System Evaluation and Study (SSES) Program is being developed to inspect and prioritize these lines for repair, replacement or rehabilitation utilizing internal television inspection; smoke testing and comprehensive flow monitoring. Operational issues and standard operating procedures will also be reviewed and improved as necessary. The Program's primary goal is to eliminate unpermitted overflows of the sanitary system.

Sludge Disposal

Sludge disposal will become an issue for the WWTP in FY 2012. As a result of the regional landfill closing and moving to Campbell County, additional drivers, trucks, and trailers will

be needed to cover the longer travel times. In FY 2012 two new positions driver/operator positions will be needed.

Nutrient Trading

Nutrient trading also begins for WWTPs in the Chesapeake Bay watershed in FY 2012. In the first year of the program, which is administered by the Virginia Nutrient Credit Exchange, we will be required to purchase phosphorous credits because the WWTP was projected to discharge more phosphorous than allowed by permit, the total cost of which is \$175,000. In FY 2012 we will also have nitrogen credits to sell, however, we will not receive the associated revenues until FY 2013. Revenues and expenses should closely balance out with revenues potentially exceeding expenses in subsequent years. This should be the case until such time as a new permit dictates lower limits or system growth increases substantially.

Aging Water System

The issues of the aging water system have been well documented. Significant investment needs to continue to head off unbearable needs in the near future.

III. RATE INCREASES

The rate adjustments proposed in this report will result in a typical composite monthly water and sewer bill increase of approximately 2.2%. “Table III-1 Monthly Bill Impact” provides a comparison of typical monthly water and sewer bills for a cross section of the customer base. It should be noted that over 50% of the residential customers use less than 7 hcf per month and there are approximately 850 customers that use over 30 hcf per month.

Table III-1 Monthly Bill Impact

Customer Type	Monthly Volume	Current Bill	Proposed Bill	% Increase
Residential	7 hcf	\$58.02	\$59.28	2.2%
Commercial	30 hcf	\$236.50	\$241.90	2.3%
Industrial	1000 hcf	\$7,763.70	\$7,943.70	2.3%

A. Water Volume Rate

The water volume rate is recommended to increase by 3%. This rate is primarily driven by the planned investment of \$3.5 million annually in the distribution system. Over the next few years this distribution system money will be spent replacing the water lines in 5th Street, distribution system work associated with the Mid-Town Connector project, design associated with the Central Business District water main replacement program, and various small water main replacement projects. There is over \$15 million in immediate needs in the water system just associated with old and inadequately sized small distribution lines. In order to sustain just \$3.5 million per year in distribution

system improvements an annual rate increase of 4% was originally assumed through the projection period. However, being sensitive to the current economic conditions, a 3% increase is proposed for FY 2012. If we maintain the \$3.5 million capital program for distribution improvements, our compliance with Council's financial targets in the future years is marginal at best. As a result of this increase, a typical water bill will increase by \$0.49 per month.

B. Sewer Volume Rate

The sewer volume rate is recommended to increase by 2%. The City's CSO Special Order dictates that we maintain the average annual sewer bill at 1.25% of the Median Household Income (MHI). Last year the City was able to avoid a sewer rate increase because it was estimated that we could remain in compliance with the MHI requirement. There are several methodologies that can be used to determine the MHI. The City currently uses the methodology that results in the lowest MHI that is allowed by DEQ in order to keep the city sewer rates as low as possible. As of July 1, 2010, the calculated average annual sewer bill was 1.25% of the MHI, the absolute minimum required by the Special Order. Based on the assumptions provided by our rate consultant, it is assumed that household income will rise only minimally. Consequently, it is recommended that a 2% rate increase be implemented to keep sewer rates as low as possible but still remain compliant with the Special Order. As a result of a 2% rate increase combined with the additional expenses associated with the Wastewater Treatment Plant, the annual investment in the CSO Program will be reduced from \$10 million to approximately \$7 million annually. As you may recall, the program was also scaled back from \$14 million to \$10 million annually last year. As a result of this increase, a typical sewer bill will increase by \$0.77 per month.

C. Sewer Only Rates

The sewer only rates will need to be increased in conjunction with the sewer rate increase. There is no way to meter the sewer flow if a customer has no water service, therefore the sewer only rate is calculated based on an average use of 7 hcf plus the 3.69 account charge. This results in a 1.8% increase in sewer only rates from \$42.47 per month to \$43.24 per month. This impacts less than 20 customers citywide.

"Table III-7 Water and Sewer Rates – FY 2008 to FY 2012", provides a comparison of the current water and sewer rates and the rates proposed for City Council approval, effective July 1, 2011. A summary of all water and sewer rates in effect over the past four years is also included in this table.

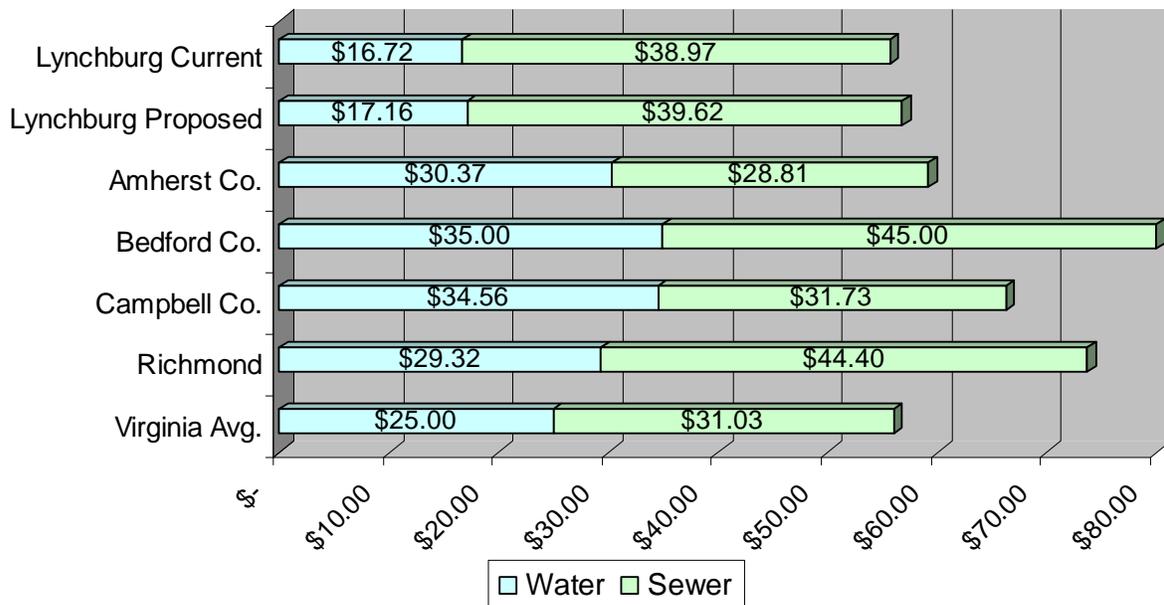
Table III-7 Water and Sewer Rates – FY 2008 to FY 2012

	FY 2008	FY 2009	FY 2010	FY 2011	Proposed FY 2012	% Increase
Water						
Volume charge / hcf	\$1.97	\$2.05	\$2.13	\$2.22	\$2.29	3%
Sewer						
Volume charge / hcf	5.17	5.38	5.54	5.54	5.65	2%
BOD charge / 100 lbs	18.46	18.46	18.46	20.31	20.31	0%
TSS charge / 100 lbs.	20.88	20.88	20.88	22.97	22.97	0%
Septic hauler charge	177.00	177.00	177.00	185.85	185.85	0%
Industrial permit fee	200.00	200.00	200.00	varies	varies	0%
Sewer only	39.88	41.35	42.47	42.47	43.24	1.8%
Fire Protection						
Hydrants & 8" or smaller fire lines	17.99	17.99	17.99	19.79	19.79	0%
10" fire lines	32.30	32.30	32.30	35.53	35.53	0%
12" fire lines	51.25	51.25	51.25	56.38	56.38	0%
Availability Fees						
Water	1,220.00	1,220.00	1,220.00	1220.00	1220.00	0%
Sewer	1,950.00	1,950.00	1,950.00	1950.00	1950.00	0%
Water Connection Fees						
¾" & 5/8" meters	850.00	950.00	950.00	950.00	950.00	0%
1" service – 5/8" meter	870.00	1,000.00	1,000.00	1000.00	1000.00	0%
1" service – 1" meter	1,030.00	1,150.00	1,150.00	1150.00	1150.00	0%
Greater than 1"- minimum	1,030.00	1,150.00	1,150.00	1150.00	1150.00	0%
Sewer Connection Fees						
4" sewer line	965.00	1,100.00	1,100.00	1100.00	1100.00	0%
Greater than 4"- minimum	1045.00	1,200.00	1,200.00	1200.00	1200.00	0%
Other Charges						
Account charge	3.69	3.69	3.69	3.69	3.69	0%
Cut-on charge	15.00	15.00	15.00	15.00	15.00	0%
Cut-off charge	25.00	25.00	25.00	25.00	25.00	0%
Delinquent account fee	5%	5%	5%	5%	5%	0%

IV. RATE COMPARISONS

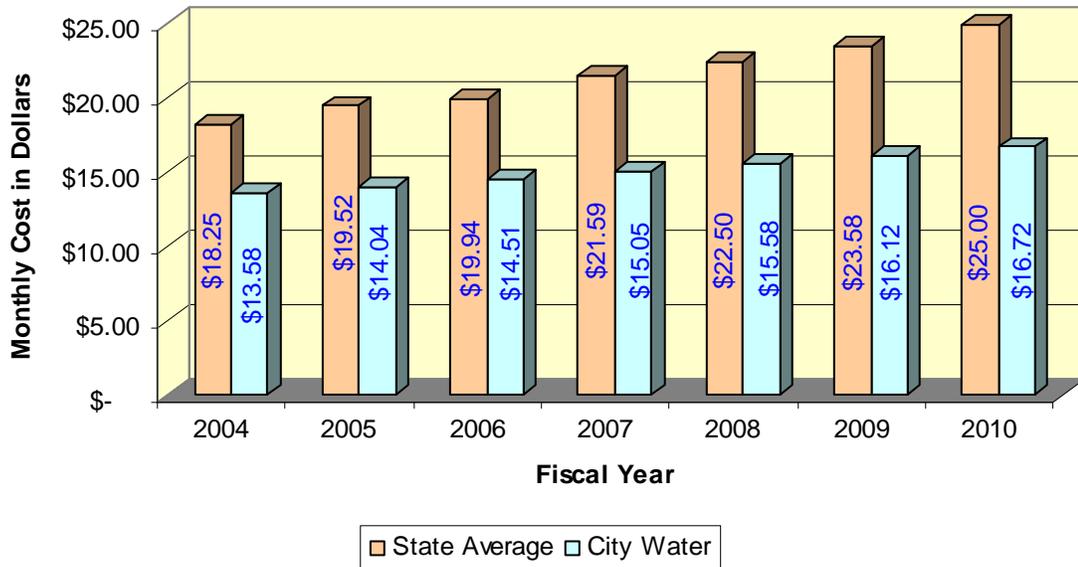
A comparison of the City's water and sewer bills for a customer using 5,000 gallons (6.68 hcf) of water per month to other communities is shown in "Figure IV-1 Bill Comparisons". (Information from other localities and the statewide average is based upon the "22nd Annual Virginia Water and Wastewater Report 2010", prepared by Draper Aden Associates.)

**Figure IV-1 Bill Comparisons
(5000 Gallons per Month)**



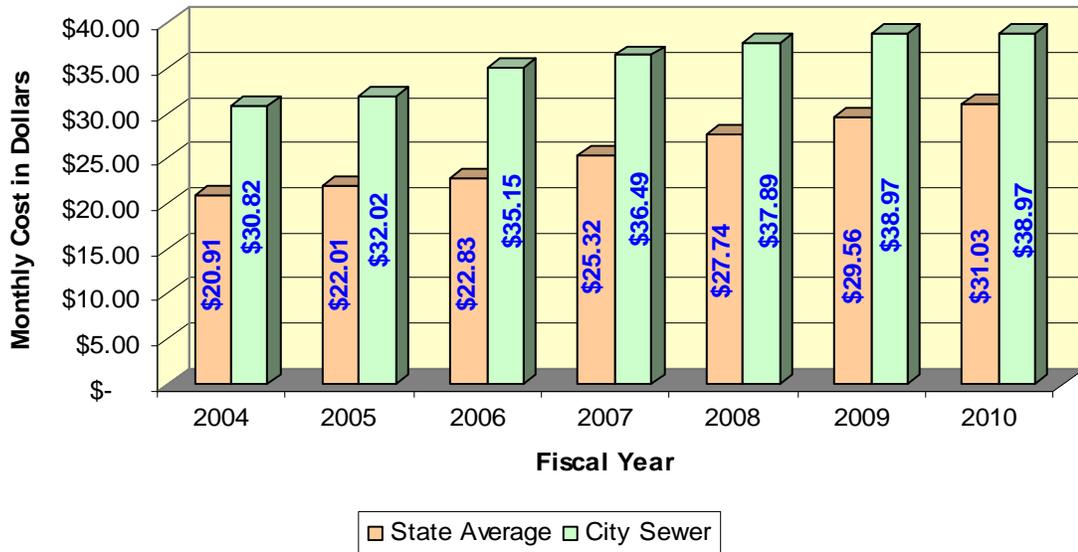
The City of Lynchburg's combined water and sewer rates are the lowest in the region including those of Amherst, Bedford, and Campbell Counties. Also, Lynchburg's rates are for water and sewer are lower than the City of Richmond, the State's other CSO city.

**Figure IV-2 Water Increases
(5000 Gallons per Month)**



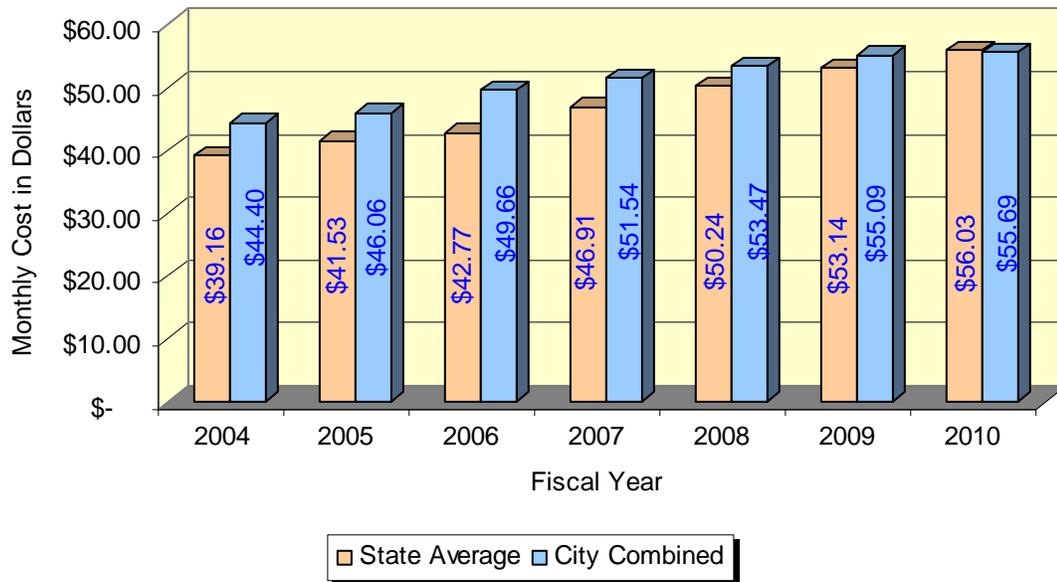
The City of Lynchburg's water rate is 49.5% below the statewide average when considering communities of all sizes and is 30.4% below those communities with the number of connection between 5,000 and 50,000. Since 2004 statewide water rates have increased by 37.0% while the City of Lynchburg water rates have increased by only 23.1%.

**Figure IV-3 Sewer Increases
(5000 Gallons per Month)**



The City of Lynchburg's sewer rate is 25.6% above the statewide average when considering communities of all sizes and is 26.5% above those communities with the number of connection between 5,000 and 50,000. Statewide sewer rates have increased by 48.4% since 2004 while the City of Lynchburg sewer rates have increased by only 26.4%.

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



Last year the City of Lynchburg’s water and sewer rates increased by 4% and 0% respectively, while average statewide water rates increased by 6.0% and sewer rates increased by 5.0%. As mentioned in the Executive Summary, for the first time in at least a decade, the City of Lynchburg’s combined water and sewer bill is less than the State average. Since 2004 the average statewide combined rate has increased 43.1% while the City of Lynchburg combined rate has increased by only 30.9%. What this tends to indicate is that despite the City’s challenges with CSO, we have been able to manage costs, regulatory mandates, and available resources very well when compared to other utilities across the state.

V. FY 2012 CAPITAL PROJECTS

The following is a list and description of the primary water and sewer capital projects that are planned for FY 2012.

Water Capital Projects

- Water Distribution System Improvements: \$3,500,000 - Water distribution system improvements to upgrade and replace aging water infrastructure throughout the City with the focus being on the Central Business District and areas with inadequately sized water lines.

- Water Facility Improvements: \$200,000 – This is for general replacement and renovation to major water treatment process equipment and structures located on thirteen separate sites.
- Water Tank Rehabilitation: \$300,000 - Continuance of the long-term maintenance program.
- CSO Water Line Replacement: \$1,088,000 - Replacement of existing small water line (1", 1-1/2", 2" and 4") located throughout the combined sewer area of the

Sewer Capital Projects

- Annual Sewer Extensions: \$500,000 - Provide for the extension of sanitary sewer lines into unserved areas of the City due to new construction, failed septic systems, economic development and reimbursements.
- CSO Program: \$7,710,000 - Replacement and/or rehabilitation of combined sewers and major interceptor replacement projects.
- Wastewater Treatment Plant Improvement Projects: \$500,000 – General repairs, replacement, or renovation to major plant process equipment or structures.
- Sewer System Evaluation and Rehabilitation: \$750,000 - Inspection and evaluation along with major repairs or replacement of the City's Wastewater Collection System.

VI. CONCLUSION

The past year for the Utilities Department has been highlighted by many noteworthy successes from awards and recognition to significant capital accomplishments. Thanks to the dedicated staff of Utilities there are many instances of significant cost savings through combination of innovative thinking and sheer hard work and determination. Similarly this dedication has resulted in Lynchburg's water system producing and delivering among the highest quality, most dependable, drinking water in Virginia. Both of the water plants, the Pedlar Dam, various water storage tanks, and miles of distribution system have recently been upgraded to serve the citizen's of Lynchburg well into the future. Significant progress has been made on the CSO Program and a major WWTP project is almost ready for construction. Meanwhile we strive and have been successful at keeping our employees safe. The staff of the Utilities Department is clearly committed to protecting the public health, the economic vitality of the City, and the protection of our natural environment.

While successful in many areas, it is also imperative that we continue to address the challenges. We must continue to invest in our infrastructure. Well operating and reliable water and wastewater systems are key components of a sustainable City. We are facing unprecedented regulatory challenges at a time economically that we can least afford them. It is imperative that we are engaged in the process and proactively address these challenges in order to ensure the best overall outcome possible.

The options of rate increases are never popular especially in challenging economies; however, the option to defer system maintenance only worsens the problems in later years.

In order to continue to meet the goals of our mission while addressing difficult challenges, staff recommends that the water rates be increased by 3%. A rate increase of 3% is needed in order to continue to meet the long term capital needs of the water system and invest in the distribution system at a rate of approximately \$3.5 million annually. Additionally, a sewer rate increase of 2% is needed in order to continue to comply with the CSO Consent Special Order. Despite these increases, the City's average rate increases have been significantly below the statewide average and for the first time in over a decade, the combined water and sewer rates are less than the state average. This again speaks to the innovation and efficient operations of the Utilities staff.



Appendix I

Water and Sewer Fund Financial Projections



DEPARTMENT OF UTILITIES

MEMORANDUM

To: The Honorable Mayor and Members of the City Council

From: Timothy A. Mitchell, P.E., Director of Utilities

Re: FY 2012 Rate Study and Annual Report

Date: February 22, 2011

We have assembled the accompanying financial projections of the Water and Sewer Funds of the City of Lynchburg for each of the six years ending June 30, 2016. The accompanying projections were prepared to help City Council evaluate the need for water and sewer rate adjustments and develop strategies for funding capital improvements.

The financial projections have been prepared based on the assumptions that are described in the notes to the financial projections. The key assumptions include the following:

1. The volume of water and sewer billed to non-contract customers in FY 2011 will be approximately equal to the average billed volume for the past five years. No appreciable increase or decrease in billed volume will occur thereafter.
2. The water volume rate will increase 3% effective July 1, 2011 and 4% every year thereafter.
3. The sewer volume rate will increase 2% effective July 1, 2011 and 3% every year thereafter.
4. The \$3.69 account charge will not be increased during the six year projections period.
5. The volume of water billed to Bedford and Campbell County will increase approximately 2% per year. The volume of water billed to Amherst County will remain constant at FY 2010 levels.
6. The volume of water and sewer billed to Rock Tenn. Company will decline approximately 25% due to economic conditions. However, the volume of water and sewer billed to Frito-Lay will increase approximately 15%.
7. Capital expenditures and debt financing will occur as planned (See pages W-1, S-1 and S-2).
8. No significant new sources of grant funds will become available after FY 2010 to fund CSO or other water and sewer needs.
9. Operations and maintenance expenses in FY 2010 and FY 2011 will be consistent with amounts included in the FY 2011 budget submission.

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10. After FY 2012 operations and maintenance expenses will generally increase at the rate of 3% per year.
 11. Debt financing for qualifying CSO projects will continue to be available at 0%; 30 year repayment terms. Debt financing for qualifying wastewater projects will also be available at 0%, 20 year repayment terms.
 12. Long term debt financing for other water and sewer capital expenditures will be available at 4.75%; 30 year repayment terms. Short term line of credit financing will be available at 2%.
 13. Implementation of storm water regulations will not have a material impact on the Water and Sewer Funds during the projection period..

You should be aware that there will usually be differences between projected and actual financial results, because events and circumstances frequently do not occur as expected, and those differences may be material.

The Special Order between the City and the Virginia Department of Environmental Quality (DEQ) requires the City to increase sewer rates so that the average annual sewer bill is at least 1.25% of MHI (Median Household Income). As of July 1, 2010, the average annual sewer bill was equal to 1.25% of MHI. Thus, no increase in the sewer rates was required in FY 2010. However, effective July 1, 2011, we assume that 2% annual sewer rate increases will be needed to maintain the 1.25% Special Order MHI requirement.

The 3% annual increase to the water rate effective July 1, 2011 and 4% per year thereafter is needed to finance increasing capital improvements, particularly improvements to the water distribution system. These increases are also needed to maintain Council's criteria to maintain a debt coverage ratio of at least 1.2 and a year end cash reserve of approximately 40% of operating expenses and debt service payments.

We the undersigned have participated in the preparation and review of the enclosed 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 and Sewer Funds for the projection period.



Timothy A. Mitchell, P.E., Director



Greg Poff, Assistant Director

**CITY OF LYNCHBURG
WATER CAPITAL FINANCING PLAN**

	Est.	Budget	Proj.	Proj.	Proj.	Proj.
	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
BEGINNING FUNDS	\$9,933,349	\$2,841,537	\$1,754,547	\$1,007,727	\$1,602,727	\$2,122,727
RECEIPTS						
Transfers	500,000	700,000	800,000	900,000	1,000,000	1,100,000
LOC borrowing	-	0	4,000,000	0	4,000,000	0
G.O. borrowings, net proceeds	-	6,000,000	0	4,000,000	0	4,000,000
total receipts	500,000	6,700,000	4,800,000	4,900,000	5,000,000	5,100,000
EXPENDITURES						
Unexpended appropriations @ 6/30/10	6,248,486	1,665,316	116,820	0	0	0
FY 2011 appropriation	1,343,326	3,541,674	0	0	0	
FY 2012 to FY 2016 CIP						
Annual water petitions	-	0	50,000	50,000	50,000	50,000
Distribution system improvements	-	1,750,000	3,500,000	3,500,000	3,500,000	3,500,000
Annual facility improvements	-	200,000	200,000	200,000	200,000	200,000
Water main replacements (CSO)	-	330,000	530,000	455,000	230,000	347,000
Water tank rehabilitation	-	300,000	300,000	100,000	500,000	400,000
Wingate Water Tank #2	-	0	850,000	0	0	0
total expenditures	7,591,812	7,786,990	5,546,820	4,305,000	4,480,000	4,497,000
ENDING FUNDS	\$2,841,537	\$1,754,547	\$1,007,727	\$1,602,727	\$2,122,727	\$2,725,727

Notes:

1. Beginning funds in FY 2010 equals cash and investments in the Water Capital Fund plus SNAP investments.
2. New G.O. borrowing assumed to occur in the first quarter of the fiscal year.
3. Unexpended appropriations at 7/1/210 total \$7,734,560 and represents unspent funds from prior year appropriations.

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

	Actual	Budget	Proj.	Proj.	Proj.	Proj.	Proj.
	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Revenues:							
Charges for services	\$9,308,584	\$9,854,890	\$9,987,869	\$10,406,040	\$10,767,910	\$11,144,037	\$11,535,004
Water contracts	2,720,442	2,633,615	2,649,695	2,767,215	2,889,952	3,022,082	3,160,475
Interest and other	51,820	131,000	131,000	111,000	111,000	111,000	111,000
total revenues	12,080,846	12,619,505	12,768,565	13,284,255	13,768,861	14,277,119	14,806,478
Expenses:							
Water treatment	2,863,241	2,948,302	3,109,528	3,202,814	3,298,898	3,397,865	3,499,801
Water line maintenance	1,602,504	1,599,862	1,573,277	1,620,475	1,669,090	1,719,162	1,770,737
Meter reading	860,680	884,772	895,496	922,361	950,032	978,533	1,007,889
Administration / engineering	2,447,918	2,808,851	2,820,509	2,918,584	3,006,141	3,096,325	3,189,215
Non-departmental	565,875	259,108	228,482	231,496	237,691	244,072	250,644
Capitalizable cost (1)	0	(110,000)	(115,000)	(118,450)	(122,004)	(125,664)	(129,434)
total expenses	8,340,218	8,390,895	8,512,292	8,777,280	9,039,849	9,310,294	9,588,853
Operating income	3,740,628	4,228,610	4,256,273	4,506,975	4,729,013	4,966,825	5,217,626
Debt Service	2,999,142	3,361,720	3,530,553	3,621,588	3,829,252	3,860,007	3,993,952
Net Revenue	\$741,486	\$866,890	\$725,720	\$885,387	\$899,761	\$1,106,818	\$1,223,674
Debt Coverage Ratio	1.25	1.26	1.21	1.24	1.23	1.29	1.31

Notes:

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

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

	Actual	Est.	Budget	Proj.	Proj.	Proj.	Proj.
	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Sources of Cash:							
Beginning cash balance	\$5,784,256	\$14,819,762	\$8,154,840	\$7,158,570	\$6,565,587	\$7,232,351	\$7,934,833
Net revenue plus capitalized costs	741,486	976,890	840,720	1,003,837	1,021,764	1,232,481	1,353,108
LOC borrowing	0	0	0	4,000,000	0	4,000,000	0
G.O. bond proceeds	15,643,388	0	6,000,000	0	8,000,000	0	8,000,000
total sources of cash	22,169,130	15,796,652	14,995,560	12,162,407	15,587,351	12,464,833	17,287,940
Uses of Cash:							
Capital Fund expenditures	2,905,902	7,591,812	7,786,990	5,546,820	4,305,000	4,480,000	4,497,000
Other capital expenditures	0	50,000	50,000	50,000	50,000	50,000	50,000
Repayment of LOC borrowing	4,000,000	0	0	0	4,000,000	0	4,000,000
Payments to other organizations	(29,170)	0	0	0	0	0	0
Change in working capital items	472,636	0	0	0	0	0	0
total uses of cash	7,349,368	7,641,812	7,836,990	5,596,820	8,355,000	4,530,000	8,547,000
Ending Cash	\$14,819,762	\$8,154,840	\$7,158,570	\$6,565,587	\$7,232,351	\$7,934,833	\$8,740,940

Cash in Capital Fund	\$9,933,349	\$2,841,537	\$1,754,547	\$1,007,727	\$1,602,727	\$2,122,727	\$2,725,727
Customer deposits	400,000	408,000	416,160	424,483	432,973	441,632	450,465
Unrestricted cash	4,486,413	4,905,303	4,987,863	5,133,377	5,196,652	5,370,473	5,564,748
Total cash	\$14,819,762	\$8,154,840	\$7,158,570	\$6,565,587	\$7,232,351	\$7,934,833	\$8,740,940
Unrestricted cash as a % of budget	40%	42%	41%	41%	40%	41%	41%

Notes:

1. G.O. Bond proceeds in FY 2014 and FY 2016 include funds to repay LOC borrowing.

**CITY OF LYNCHBURG
CHARGES FOR SERVICES**

	Actual	Est.	Budget	Proj.	Proj.	Proj.	Proj.
	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Water Sales							
HCF of use	3,155,289	3,200,000	3,200,000	3,200,000	3,200,000	3,200,000	3,200,000
Actual water rate	2.15	2.22	2.29	2.38	2.47	2.57	2.67
	\$6,791,713	\$7,104,000	\$7,317,120	\$7,609,805	\$7,914,197	\$8,230,765	\$8,559,995
% increase in revenues	3.86%	4.60%	3.00%	4.00%	4.00%	4.00%	4.00%
All Other:							
Account charge	591,657	600,000	600,000	600,000	600,000	600,000	600,000
Sewer Fund charge	1,100,000	1,381,000	1,280,000	1,390,500	1,432,215	1,475,181	1,519,437
Hydrant rentals-water	11,371	3,000	3,000	3,000	3,000	3,000	3,000
Hydrant rentals-equip.	10,920	5,000	2,000	2,000	2,000	2,000	2,000
General Fund hydrants	351,900	351,900	351,900	358,938	366,117	373,439	380,908
Cut-on/off-late fees	96,078	91,000	92,000	92,000	92,000	92,000	92,000
Meter removal	7,410	7,500	7,500	7,500	7,500	7,500	7,500
Delinquent account fee	78,671	85,000	85,000	85,000	85,000	85,000	85,000
Fire protection	85,176	91,990	99,349	107,297	115,881	125,151	135,164
Connection fee	68,422	60,000	60,000	60,000	60,000	60,000	60,000
Availability fee	82,970	45,000	60,000	60,000	60,000	60,000	60,000
Water cost plus & other	32,296	29,500	30,000	30,000	30,000	30,000	30,000
	2,516,871	2,750,890	2,670,749	2,796,235	2,853,713	2,913,272	2,975,008
	\$9,308,584	\$9,854,890	\$9,987,869	\$10,406,040	\$10,767,910	\$11,144,037	\$11,535,004

Notes:

1. HCF estimated and projected average use is based on the past five year billable use of 3,204,000.
2. Sewer Fund charge increase in FY 2011 due to transfer of General Fund staff to Utilities.
3. Fire protection fees assumed to increase 8% per year until the fees approximate cost of service levels.
4. Connection fees, availability fees and water cost plus charges are all lower than historical average due to slow-down in real estate development.

**CITY OF LYNCHBURG
WATER CONTRACTS**

	Actual	Est.	Budget	Proj.	Proj.	Proj.	Proj.
	FY2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
AMHERST							
HCF of use	49,895	55,000	55,000	55,000	55,000	55,000	55,000
Rate	2.20	2.05	2.04	2.10	2.16	2.23	2.30
	\$109,785	\$112,750	\$112,200	\$115,566	\$119,033	\$122,604	\$126,282
BEDFORD							
HCF of use	725,571	740,082	754,884	769,982	785,381	801,089	817,111
Rate	2.12	2.10	2.04	2.10	2.16	2.23	2.30
	\$1,536,978	\$1,554,173	\$1,539,963	\$1,617,886	\$1,699,751	\$1,785,758	\$1,876,117
CAMPBELL							
HCF of use	215,854	220,171	224,575	229,066	233,647	238,320	243,087
Rate	2.15	2.00	2.04	2.10	2.16	2.23	2.30
	\$465,070	\$440,342	\$458,132	\$481,313	\$505,668	\$531,255	\$558,136
ROCK TENN							
HCF of use	397,713	300,000	300,000	300,000	300,000	300,000	300,000
Rate	1.16	1.21	1.24	1.27	1.30	1.34	1.38
	\$459,817	\$363,000	\$372,000	\$381,000	\$390,000	\$401,700	\$413,751
FRITO-LAY							
HCF of use	125,509	135,000	135,000	135,000	135,000	135,000	135,000
Rate	1.19	1.21	1.24	1.27	1.30	1.34	1.38
	\$148,792	\$163,350	\$167,400	\$171,450	\$175,500	\$180,765	\$186,188
	\$2,720,442	\$2,633,615	\$2,649,695	\$2,767,215	\$2,889,952	\$3,022,082	\$3,160,475

Notes:

1. County rates in FY 2010 and FY 2011 include year end settlement adjustments.
2. County rates in FY 2011 and FY 2012 assume no peak use factors. FY 2012 revenues do not include FY 2011 settlement adjustments.
3. FY 2012 to FY 2016 County rates assumed to increase 3% per year.
4. Rock Tenn and Frito-Lay rates are based on contract rates up to FY 2014 and 3% per increases thereafter.
5. Rock Tenn use is projected to be lower in FY 2011 due to economic conditions.

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

	Est.	Budget	Proj.	Proj.	Proj.	Proj.	Proj.
	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Interest revenues	22,207	120,000	120,000	100,000	100,000	100,000	100,000
All other	29,613	11,000	11,000	11,000	11,000	11,000	11,000
	\$51,820	\$131,000	\$131,000	\$111,000	\$111,000	\$111,000	\$111,000

Note:

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

**CITY OF LYNCHBURG
ADMIN. / ENGINEERING**

	Actual	Est.	Proj.	Proj.	Proj.	Proj.	Proj.
	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Personal services	\$1,016,363	\$1,184,804	\$1,135,498	\$1,169,563	\$1,204,650	\$1,240,789	\$1,278,013
Fringe benefits	353,529	423,610	442,561	455,838	469,513	483,598	498,106
Supplies & materials	27,736	35,960	40,660	41,880	43,136	44,430	45,763
Gasoline / fuel	5,398	7,000	6,000	6,180	6,365	6,556	6,753
Internal service charges	14,326	17,364	16,100	16,583	17,080	17,593	18,121
Rentals & leases	4,365	4,000	3,500	3,605	3,713	3,825	3,939
Communication charges	8,939	11,000	12,800	13,184	13,580	13,987	14,407
Contractual services	94,569	90,550	101,540	104,586	107,724	110,955	114,284
Training & travel	10,799	16,650	16,500	16,995	17,505	18,030	18,571
Indirect costs	756,622	856,622	807,321	845,000	870,350	896,461	923,354
City engineering charges	0	0	75,000	77,250	79,568	81,955	84,413
Self - insurance	148,191	148,191	146,529	150,925	155,453	160,116	164,920
Miscellaneous	7,081	13,100	16,500	16,995	17,505	18,030	18,571
	\$2,447,918	\$2,808,851	\$2,820,509	\$2,918,584	\$3,006,141	\$3,096,325	\$3,189,215

Notes:

1. FY 2011 and FY 2012 amounts are based on budget worksheets submitted as part of the FY 2012 budget process.
2. Personal services in FY 2012 assumes 22.6 staff positions will be filled throughout the year.
3. Salaries decrease in FY 2012 occurs due to transfer of positions to other utility departments.
4. Indirect costs decrease in FY 2013 due to policy change to exclude PW engineering from indirect cost allocations.
5. City engineering charges represent a best estimate of the fully loaded cost of staff time in the PW Engineering Department that work on water projects.
6. After FY 2012, all costs assumed to increase 3% per year unless noted otherwise.

**CITY OF LYNCHBURG
WATER TREATMENT**

	Actual	Est.	Budget	Proj.	Proj.	Proj.	Proj.
	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Personal services	\$937,283	\$919,140	\$968,556	\$997,613	\$1,027,541	\$1,058,367	\$1,090,118
Fringe benefits	370,133	380,032	410,199	422,505	435,180	448,236	461,683
Supplies & materials	104,608	185,600	119,400	122,982	126,671	130,472	134,386
Chemicals	378,446	400,000	496,400	511,292	526,631	542,430	558,703
Gasoline / fuel	7,969	8,600	8,700	8,961	9,230	9,507	9,792
Internal service charges	27,370	28,002	27,700	28,531	29,387	30,269	31,177
Rentals & leases	3,203	3,500	3,500	3,605	3,713	3,825	3,939
Communication charges	10,749	10,750	11,550	11,897	12,253	12,621	13,000
Utilities	686,755	700,978	719,457	741,041	763,272	786,170	809,755
Contractual services	279,641	246,491	275,566	283,833	292,348	301,118	310,152
Training & travel	4,456	14,000	14,000	14,420	14,853	15,298	15,757
Misc., incl. operations fee	52,628	51,209	54,500	56,135	57,819	59,554	61,340
	\$2,863,241	\$2,948,302	\$3,109,528	\$3,202,814	\$3,298,898	\$3,397,865	\$3,499,801

Notes:

1. FY 2011 and FY 2012 amounts are based on budget worksheets submitted as part of the FY 2012 budget process.
2. Personal services in FY 2012 assumes 24 staff positions will be filled throughout the year.
3. Personal services and fringe benefits increase in FY 2012 due to assumption that all positions will be filled which was not the case in FY 2011.
4. Utilities are higher in FY 2011 due to more use than normal of James River Water.
5. After FY 2012, all costs assumed to increase 3% per year.

**CITY OF LYNCHBURG
WATER LINE MAINTENANCE**

	Actual	Est.	Budget	Proj.	Proj.	Proj.	Proj.
	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2015
Personal services	\$633,184	\$634,519	\$613,830	\$632,245	\$651,212	\$670,749	\$690,871
Fringe benefits	230,848	246,743	247,015	254,425	262,058	269,920	278,018
Supplies & materials	414,055	419,900	373,750	384,963	396,511	408,407	420,659
Gasoline / fuel	29,942	33,000	33,800	34,814	35,858	36,934	38,042
Internal service charges	126,074	105,224	95,600	98,468	101,422	104,465	107,599
Rentals & leases	3,523	3,400	3,000	3,090	3,183	3,278	3,377
Communication charges	3,022	5,850	5,550	5,717	5,888	6,065	6,247
Contractual services	161,301	147,158	195,782	201,655	207,705	213,936	220,354
Training & travel	555	4,000	4,250	4,378	4,509	4,644	4,783
Miscellaneous	0	68	700	721	743	765	788
	\$1,602,504	\$1,599,862	\$1,573,277	\$1,620,475	\$1,669,090	\$1,719,162	\$1,770,737

Notes:

1. FY 2011 and FY 2012 amounts are based on budget worksheets submitted as part of the FY 2012 budget process.
2. Personal services in FY 2012 assumes 15.5 staff positions will be filled throughout the year.
3. After FY 2012, all costs assumed to increase 3% per year.

**CITY OF LYNCHBURG
METER READING**

	Actual	Budget	Proj.	Proj.	Proj.	Proj.	Proj.
	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Personal services	241,558	\$255,301	\$266,809	\$274,813	\$283,058	\$291,549	\$300,296
Fringe benefits	97,512	105,935	114,131	117,555	121,082	124,714	128,455
Supplies & materials	428,116	435,100	423,110	435,803	448,877	462,344	476,214
Gasoline / fuel	15,139	16,000	17,000	17,510	18,035	18,576	19,134
Internal service charges	28,766	31,749	33,700	34,711	35,752	36,825	37,930
Rentals & leases	63	63	100	103	106	109	113
Communication charges	2,916	3,350	2,850	2,936	3,024	3,114	3,208
Contractual services	46,514	34,824	36,096	37,179	38,294	39,443	40,626
Training & travel	96	2,250	1,500	1,545	1,591	1,639	1,688
Miscellaneous	0	200	200	206	212	219	225
	\$860,680	\$884,772	\$895,496	\$922,361	\$950,032	\$978,533	\$1,007,889

Notes:

1. FY 2011 and FY 2012 amounts are based on budget worksheets submitted as part of the FY 2012 budget process.
2. Personal services in FY 2012 assumes 8.8 staff positions will be filled throughout the year.
3. After FY 2012, all costs assumed to increase 3% per year.

**CITY OF LYNCHBURG
WATER NON-DEPARTMENTAL**

	Actual	Est.	Budget	Proj.	Proj.	Proj.	Proj.
	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2015
Financial audit	\$21,952	\$38,454	\$22,000	\$22,660	\$23,340	\$24,040	\$24,761
Interest on customer deposits	6,455	15,914	10,000	10,300	10,609	10,927	11,255
OPEB/Retirees health/WC insurance	129,917	150,990	148,482	152,936	157,525	162,250	167,118
Utility billing upgrades & other	411	3,000	3,000	0	0	0	0
Allowance for doubtful accounts	10,631	25,750	20,000	20,600	21,218	21,855	22,510
Project costs charged to operations	396,509	25,000	25,000	25,000	25,000	25,000	25,000
	\$565,875	\$259,108	\$228,482	\$231,496	\$237,691	\$244,072	\$250,644

Notes:

1. FY 2011 and FY 2012 amounts are based on budget worksheets submitted as part of the FY 2012 budget process.
2. Project cost charged to operations in FY 2010 includes work at Pedlar Dam.
3. After FY 2012, 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 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
P&I on borrowings o/s @ 6/30/10 (1)	\$3,604,931	\$3,639,653	\$3,578,188	\$3,458,991	\$3,329,746	\$3,308,015
Interest on LOC borrowing	0	0	10,000	40,000	10,000	40,000
Interest only payments						
\$6.0 million issued in FY 2012		142,500	285,000			
\$8.0 million issued in FY 2014				190,000	380,000	
Level debt service payments:						
Level P&I on \$6.0 million				391,861	391,861	391,861
Level P&I on \$8.0 million						505,676
IRS rebate	(243,211)	(251,600)	(251,600)	(251,600)	(251,600)	(251,600)
	\$3,361,720	\$3,530,553	\$3,621,588	\$3,829,252	\$3,860,007	\$3,993,952

Notes:

1. Based on bond refunding schedules.
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 4.75%.
4. Level debt service assumed on all new G.O issues starting two years after year of issue.

**CITY OF LYNCHBURG
SEWER NON-VCWRLF CAPITAL FINANCING PLAN**

	Est.	Budget	Proj.	Proj.	Proj.	Proj.
	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
BEGINNING FUNDS (1)	\$9,795,790	\$4,265,267	\$2,006,012	\$1,456,056	\$1,521,723	\$1,422,056
RECEIPTS						
Transfers	2,500,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000
LOC borrowing	0	0	3,000,000	0	3,000,000	0
G.O. borrowings	0	3,500,000	0	4,000,000	0	4,000,000
Total Receipts	2,500,000	5,500,000	5,000,000	6,000,000	5,000,000	6,000,000
EXPENDITURES						
Unexpended Appropriations (2)	3,680,275	514,015	0	0	0	0
CSO Locally Funded Projects	2,850,248	3,745,240	3,149,956	3,119,333	2,249,667	3,519,000
FY 2011 appropriation	1,500,000	1,750,000	250,000	0	0	0
FY 2012 to FY 2016 CIP						
Rainleader disconnect program	0	0	0	65,000	100,000	100,000
Annual sewer extensions	0	500,000	500,000	500,000	500,000	500,000
SSES Program	0	750,000	1,000,000	1,000,000	1,000,000	1,000,000
WWTP improvements	0	500,000	500,000	500,000	500,000	500,000
WWTP control building renovation	0	0	150,000	750,000	750,000	0
Total Expenditures	8,030,523	7,759,255	5,549,956	5,934,333	5,099,667	5,619,000
ENDING FUNDS	\$4,265,267	\$2,006,012	\$1,456,056	\$1,521,723	\$1,422,056	\$1,803,056

Notes:

34% 65% 55% 62% 47% 49%

1. Beginning funds in FY 2011 equals cash and investment accounts in the Sewer Capital Fund.
2. Unexpended appropriations represents unspent funds applicable to FY 2010 and prior year appropriations, excluding CSO projects..

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

	Est.	Budget	Proj.	Proj.	Proj.	Proj.
	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
BEGINNING FUNDS	\$43,045,153	\$27,383,395	\$15,027,382	\$6,776,807	\$3,740,674	\$5,989,541
Receipts						
Grant proceeds (STAG)	772,000	0	0	0	0	0
VCWRLF loan approvals - 0%	0	9,000,000	0	0	0	0
VCWRLF loan approvals - 0%	10,100,000	7,000,000	7,000,000	7,000,000	7,000,000	7,000,000
Total Receipts	10,872,000	16,000,000	7,000,000	7,000,000	7,000,000	7,000,000
EXPENDITURES						
James River Interceptor projects	16,878,533	17,715,000	5,000,000	5,000,000	0	0
WWTP - Secondary treatment upgrades	0	4,500,000	4,500,000	0	0	0
Long Term Control Plan	1,167,095	389,032	0	0	0	0
Sewer separation projects	8,488,130	5,751,981	5,750,575	5,036,133	4,751,133	7,238,600
Total Expenditures	26,533,758	28,356,013	15,250,575	10,036,133	4,751,133	7,238,600
ENDING FUNDS	\$27,383,395	\$15,027,382	\$6,776,807	\$3,740,674	\$5,989,541	\$5,750,941

Notes:

1. Beginning funds and VCWRLF loan approvals are funds held by DEQ on behalf of the City. No interest is earned on these unexpended funds.

2. Beginning Funds consists of the following:

VCWRLF receivables / GL	\$35,739,400
ARRA reimbursement receivable / GL	2,741,034
ARRA remaining balance / Schedule 1	10,205,825
Fund 4022 accounts payable & retainages	(4,745,447)
June expenditures	(895,659)
	<u>\$43,045,153</u>

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

	Actual	Est.	Budget	Proj.	Proj.	Proj.	Proj.
	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Revenues:							
Charges for services	\$16,085,465	\$16,208,742	\$17,214,694	\$17,733,009	\$18,263,667	\$18,811,205	\$19,357,331
Sewer contracts	2,991,035	2,856,303	2,969,544	3,042,566	3,199,589	3,283,516	3,375,053
Interest and other	358,982	299,000	249,000	106,000	106,000	106,000	106,000
Total Revenues	19,435,482	19,364,045	20,433,238	20,881,575	21,569,256	22,200,721	22,838,384
Expenses:							
WWTP	6,007,354	6,621,485	6,686,590	6,814,668	7,046,508	7,235,153	7,455,208
Sewer line maintenance	2,304,797	2,495,284	2,510,748	2,520,025	2,595,626	2,673,494	2,753,699
Stormwater	25,479	567,092	716,576	738,073	760,215	783,022	806,513
Non-departmental	390,034	352,074	364,276	371,454	360,394	373,002	380,442
Capitalizable cost (1)	0	(264,000)	(210,000)	(216,300)	(222,789)	(229,473)	(236,357)
Total Expenses	8,727,664	9,771,935	10,068,190	10,227,920	10,539,954	10,835,198	11,159,504
Operating Income	10,707,818	9,592,110	10,365,048	10,653,655	11,029,302	11,365,523	11,678,880
Debt service	7,106,820	7,441,372	8,095,061	8,561,713	9,331,805	9,534,270	9,855,628
Net Revenue	\$3,600,998	\$2,150,738	\$2,269,987	\$2,091,942	\$1,697,498	\$1,831,253	\$1,823,252
Debt Coverage	1.51	1.29	1.28	1.24	1.18	1.19	1.18

Notes:

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

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

	Est.	Budget	Proj.	Proj.	Proj.	Proj.	Proj.
	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Sources of Cash:							
Beginning cash balance	\$14,466,696	\$14,091,371	\$7,926,586	\$5,767,318	\$5,179,304	\$4,812,468	\$4,414,054
Net revenue plus capitalized costs	3,600,998	2,150,738	2,269,987	2,091,942	1,697,498	1,831,253	1,823,252
LOC Borrowing	0	0	0	3,000,000	0	3,000,000	0
G.O. bond proceeds, net	3,531,996	0	3,500,000	0	7,000,000	0	7,000,000
VCWRLF loan draw downs	8,715,676	26,533,758	28,356,013	15,250,575	10,036,133	4,751,133	7,238,600
ARRA grants	11,352,000	0	0	0	0	0	0
Proceeds from other organizations	0	0	0	0	0	0	0
Other capital grants	(208,079)	0	0	0	0	0	0
total sources of cash	41,459,287	42,775,867	42,052,586	26,109,835	23,912,934	14,394,854	20,475,906
Uses of Cash:							
Capital & VCWRLF expenditures	25,738,184	34,564,281	36,115,268	20,800,531	15,970,466	9,850,800	12,857,600
Other capital expenditures (1)	0	285,000	170,000	130,000	130,000	130,000	130,000
Repayment of LOC borrowing	0	0	0	0	3,000,000	0	3,000,000
Change in working capital items	1,629,732	0	0	0	0	0	0
total uses of cash	27,367,916	34,849,281	36,285,268	20,930,531	19,100,466	9,980,800	15,987,600
Ending Cash	\$14,091,371	\$7,926,586	\$5,767,318	\$5,179,304	\$4,812,468	\$4,414,054	\$4,488,306

Cash in capital fund	\$9,795,790	\$4,265,267	\$2,006,012	\$1,456,056	\$1,521,723	\$1,422,056	\$1,803,056
Unrestricted cash	4,295,581	3,661,319	3,761,306	3,723,248	3,290,745	2,991,998	2,685,250
Total cash	\$14,091,371	\$7,926,586	\$5,767,318	\$5,179,304	\$4,812,468	\$4,414,054	\$4,488,306
Unrestricted cash as a % of budget (2)	27%	21%	21%	20%	17%	15%	13%

Notes:

1. Other capital expenditures includes capital outlays in Sewer Operating Fund.

**CITY OF LYNCHBURG
CHARGES FOR SERVICES**

	Actual	Est.	Budget	Proj.	Proj.	Proj.	Proj.
	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
CITY CUSTOMERS							
HCF of use	2,582,089	2,600,000	2,600,000	2,600,000	2,600,000	2,600,000	2,600,000
Rate	5.54	5.54	5.65	5.82	5.99	6.17	6.36
	\$14,304,772	\$14,404,000	\$14,692,080	\$15,132,842	\$15,586,828	\$16,054,433	\$16,536,065
% increase in revenues	4.4%	0.7%	2.0%	3.0%	3.0%	3.0%	3.0%
ALL OTHER:							
Account charge	416,215	420,000	420,000	420,000	420,000	420,000	420,000
VDOT reimbursement	0	0	661,576	681,423	701,866	722,922	744,610
College Hill backwash	112,600	115,978	119,457	123,041	126,732	130,534	134,450
Leachate treatment	60,471	62,285	64,154	66,078	68,061	70,102	72,206
Septic hauler charges	372,119	390,725	410,261	430,774	452,313	474,929	489,176
Industrial pre-treatment	3,650	4,500	4,500	4,500	4,500	4,500	4,635
Industrial surcharges	484,051	508,254	533,666	560,350	588,367	617,785	636,319
Industrial monitoring	45,546	25,000	30,000	35,000	35,000	35,000	36,050
Cut-on penalties	86,549	81,000	82,000	82,000	83,000	84,000	86,520
Connection charges	78,678	75,000	75,000	75,000	75,000	75,000	75,000
Availability charges	99,050	100,000	100,000	100,000	100,000	100,000	100,000
Sewer cost plus	11,739	12,000	12,000	12,000	12,000	12,000	12,000
Collection & Tax Lien Fees	10,025	10,000	10,000	10,000	10,000	10,000	10,300
All other	0	0	0	0	0	0	0
	1,780,693	1,804,742	2,522,614	2,600,166	2,676,839	2,756,773	2,821,266
	\$16,085,465	\$16,208,742	\$17,214,694	\$17,733,009	\$18,263,667	\$18,811,205	\$19,357,331

Notes:

1. No rate increase in FY 2011; thereafter 3% per increases assumed.
2. No increase in account charge is assumed during the projection period.
3. Septic hauler charges assumed to increase 5% per year.
4. Industrial sur-charges assumed to increase 5% per year.

**CITY OF LYNCHBURG
SEWER CONTRACTS**

	Actual	Est.	Budget	Proj.	Proj.	Proj.	Proj.
	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
AMHERST							
Operating	\$178,777	\$168,244	\$173,851	\$177,181	\$183,209	\$188,114	\$193,835
Existing capital amort.	217,355	212,978	209,743	206,507	203,271	200,036	200,036
Future capital. - WWTP	0	56,820	56,820	56,820	107,958	107,958	107,958
Future capital -Interceptor	0	0	0	0	0	0	0
	396,132	438,042	440,414	440,508	494,438	496,108	501,829
BEDFORD							
Operating	265,665	194,127	200,598	204,440	211,395	217,055	223,656
Existing capital amort.	218,766	215,362	212,845	210,329	188,432	185,915	185,915
Future capital. - WWTP	0	22,725	22,725	22,725	43,178	43,178	43,178
Future capital -Interceptor	0	0	19,600	19,600	19,600	19,600	19,600
	484,431	432,214	455,768	457,094	462,605	465,748	472,349
CAMPBELL							
Operating	159,785	161,773	167,165	170,367	176,163	180,879	186,380
Existing capital amort.	104,209	101,549	100,139	98,729	97,318	95,908	90,611
Future capital. - WWTP	0	22,725	22,725	22,725	43,178	43,178	43,178
Future capital -Interceptor	0	0	16,333	16,333	16,333	16,333	16,333
	263,994	286,047	306,362	308,154	332,992	336,298	336,502
INDUSTRIAL							
Rock Tenn	1,154,074	900,000	927,000	954,810	983,454	1,012,958	1,043,347
Frito-lay	692,404	800,000	840,000	882,000	926,100	972,405	1,021,025
	1,846,478	1,700,000	1,767,000	1,836,810	1,909,554	1,985,363	2,064,372
	\$2,991,035	\$2,856,303	\$2,969,544	\$3,042,566	\$3,199,589	\$3,283,516	\$3,375,053

Notes:

1. County operating revenues based on % of WWTP expenses (Amherst-2.6%, Bedford-3%, Campbell-2.5%.
2. Rock Tenn revenues are assumed to decrease in FY 2011 due to economic conditions.
3. Frito-Lay revenues are assumed to increase in FY 2011 based on recent billing history and changes in sampling methods.

**CITY OF LYNCHBURG
OTHER SEWER REVENUES**

	Actual	Est.	Budget	Proj.	Proj.	Proj.	Proj.
Other Revenues	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Interest Revenue	250,000	200,000	150,000	100,000	100,000	100,000	100,000
State highway maintenance	93,000	93,000	93,000	0	0	0	0
Miscellaneous Revenue	15,982	6,000	6,000	6,000	6,000	6,000	6,000
	\$358,982	\$299,000	\$249,000	\$106,000	\$106,000	\$106,000	\$106,000

Notes:

1. State highway maintenance revenue is an allocation of funds received by the City from the State. Starting in FY 2013 this revenue is all transferred to the Stormwater Fund.

**CITY OF LYNCHBURG
WASTEWATER TREATMENT**

	Actual	Est.	Proj.	Proj.	Proj.	Proj.	Proj.
	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Personal services	\$1,256,045	\$1,279,253	\$1,355,643	\$1,465,312	\$1,509,271	\$1,554,550	\$1,601,186
Fringe benefits	467,944	498,898	551,096	587,096	604,709	622,850	641,536
Supplies & materials	386,799	374,410	360,500	371,315	382,454	393,928	405,746
Sludge disposal - landfill	581,518	615,000	600,000	618,000	636,540	655,636	675,305
Chemicals	575,017	646,050	639,000	658,170	677,915	698,253	719,200
Gasoline / fuel	14,221	13,100	50,000	51,500	53,045	54,636	56,275
Internal service charges	84,753	101,880	110,000	113,300	116,699	120,200	123,806
Rentals & leases	16,989	10,000	10,000	10,300	10,609	10,927	11,255
Communication charges	10,647	9,950	8,000	8,240	8,487	8,742	9,004
Electricity	667,331	670,000	670,000	690,100	710,803	732,127	754,091
Other utilities	83,788	110,250	164,250	169,178	174,253	179,480	184,865
Contractual services	689,804	916,825	767,771	790,804	814,528	838,964	864,133
Training & meetings	11,339	15,014	14,800	15,244	15,701	16,172	16,658
Indirect costs	357,934	344,874	352,560	462,400	476,272	490,560	505,277
Self-insurance	73,047	73,047	48,470	49,924	51,422	52,964	54,553
Admin/OH Pmts to Water Fund	707,921	911,460	782,000	805,460	829,624	854,513	880,148
Nutrient payments	0	4,250	175,000	20,000	20,000	20,600	21,218
Nutrient sales	0	0	0	(100,000)	(75,000)	(100,000)	(100,000)
Misc.	22,257	27,224	27,500	28,325	29,175	30,050	30,951
	\$6,007,354	\$6,621,485	\$6,686,590	\$6,814,668	\$7,046,508	\$7,235,153	\$7,455,208

Notes:

1. FY 2011 and FY 2012 amounts are based on budget worksheets submitted as part of the FY 2012 budget process.
2. Personal services in FY 2012 assumes 32.6 staff positions will be filled throughout the year.
3. Staff positions increase to 35.6 in FY 2013 due to need for additional drivers to haul sludge.
4. Personal services and fringe benefits increases in FY 2013 are due to additional drivers.
5. Sludge disposal cost in FY 2012 is based on 24,000 tons of sludge x \$25 tipping fee.
6. Chemicals increase in FY 2011 is due to additional amounts for sludge stabilization and effluent deformer.
7. Gasoline / fuel increases due to closing of landfill and need to haul to Campbell County landfill or Maplewood.
8. Other utilities increase due to increase in natural gas needs.
9. Contractual services are higher in FY 2011 due to higher than normal building maintenance and use of temporary labor.
10. Indirect costs increase in FY 2013 due to policy change in allocation between WWTP and Sewer Line Maintenance.
11. Nutrient payments and credits based on best available information as of date of projections.
12. Unless noted otherwise, all expenses after FY 2012 are assumed to increase 3% per year.

City landfill closes 1/1/2012

Campbell landfill opens same date

City will need to go to Maplewood first 6 months of FY 2012 due to slope concerns at City landfill

Distance will increase from 5,000 miles to 50,000 miles / year due to closure of City landfill.

Fuel increase in FY 2013 assumes 50,000 + miles @ 3 gpm @ \$2.50 / gallon.

WWTP capital project is for rehab of clarifergs - will allow for more flow during rain events.
thus part of CSO strategy.

**CITY OF LYNCHBURG
SEWER LINE MAINTENANCE**

	Actual	Est.	Proj.	Proj.	Proj.	Proj.	Proj.
	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Personal services	\$588,341	\$585,136	\$615,746	\$603,432	\$621,535	\$640,181	\$659,386
Fringe benefits	230,604	239,552	261,970	255,123	262,776	270,660	278,780
Supplies & materials	137,779	152,800	177,500	182,825	188,310	193,959	199,778
Gasoline / fuel	49,958	55,000	56,400	58,092	59,835	61,630	63,479
Internal service charges	258,784	248,200	238,300	245,449	252,812	260,397	268,209
Rentals & leases	948	1,700	1,500	1,545	1,591	1,639	1,688
Communication charges	4,101	4,450	8,550	8,807	9,071	9,343	9,623
Contractual services	192,549	170,139	168,609	173,667	178,877	184,244	189,771
Training & meetings	1,441	5,000	5,250	5,408	5,570	5,737	5,909
Indirect costs	327,285	442,928	231,216	217,600	224,128	230,852	237,777
Self-insurance	120,839	120,839	152,257	156,825	161,529	166,375	171,367
City engineering charges	0	0	225,000	231,750	238,703	245,864	253,239
Admin/OH Pmts to Water Fund	392,079	469,540	368,000	379,040	390,411	402,124	414,187
Miscellaneous Expenses	89	0	450	464	477	492	506
	\$2,304,797	\$2,495,284	\$2,510,748	\$2,520,025	\$2,595,626	\$2,673,494	\$2,753,699

Notes:

1. FY 2011 and FY 2012 amounts are based on budget worksheets submitted as part of the FY 2012 budget process.
2. Personal services in FY 2012 assumes 16.5 staff positions will be filled throughout the year.
3. Personal services and fringe benefits increase in FY 2012 due to transfer of CSO/Water Quality Mgr. from Adm to Sewer Line Maintenance net of impact of two Line Tech positions to be transferred to Stormwater Fund effective 1/1/2012.
4. Personal services and fringe benefits decrease in FY 2013 due to impact of two Line Tech position transfers.
5. Indirect cost decrease in FY 2013 due to policy change to exclude PW engineering from indirect allocations. due to policy.
6. Adm / OH payments to Water Fund reduced due to direct charging certain staff position in FY 2012.
7. Unless noted, all expenses after FY 2012 increase 3% per year.

**CITY OF LYNCHBURG
STORMWATER**

	Actual	Est.	Proj.	Proj.	Proj.	Proj.	Proj.
	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Personal services			\$212,880	\$219,266	\$225,844	\$232,620	\$239,598
Fringe benefits			86,597	89,195	91,871	94,627	97,466
Supplies & materials	19,387	30,100	54,650	56,290	57,978	59,718	61,509
Gasoline / fuel			8,889	9,156	9,430	9,713	10,005
Internal service charges			42,183	43,448	44,752	46,095	47,477
Rentals & leases		627	0	0	0	0	0
Communication charges			2,000	2,060	2,122	2,185	2,251
Contractual services	6,092	35,572	174,377	179,608	184,997	190,546	196,263
Training & meetings		793	5,000	5,150	5,305	5,464	5,628
Admin/OH Pmts to Water Fund			130,000	133,900	137,917	142,055	146,316
Miscellaneous Expenses		500,000	0	0	0	0	0
	\$25,479	\$567,092	\$716,576	\$738,073	\$760,215	\$783,022	\$806,513

Notes:

By Activity:

1. FY 2011 and FY 2012 amounts are based on budget worksheets submitted as part of the FY 2012 budget process.
2. Personal services in FY 2012 assumes 4.5 staff positions will be filled throughout the year.
3. Miscellaneous expenses in FY 2011 include start-up cost on a capital project assumed to be closed in FY 2011.
3. Unless noted, all expenses after FY 2012 increase 3% per year.

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

	Actual	Est.	Budget	Proj.	Proj.	Proj.	Proj.
	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Financial audit	\$16,787	\$29,406	\$17,000	\$17,510	\$18,035	\$18,576	\$19,134
Allowance for doubtful accounts	5,629	25,750	25,000	25,750	26,523	27,318	28,138
OPEB/Retirees health/WC insurance	147,883	126,523	182,276	187,744	174,922	185,716	191,288
Legal & professional (CSO)	13,912	45,395	15,000	15,450	15,914	16,391	16,883
Major sewer line cleaning	40,080	100,000	100,000	100,000	100,000	100,000	100,000
Project costs charged to operations	165,743	25,000	25,000	25,000	25,000	25,000	25,000
	\$390,034	\$352,074	\$364,276	\$371,454	\$360,394	\$373,002	\$380,442

Notes:

1. Retirees health insurance for FY 2011 and FY 2012 based on information provided by Human Resources Dept.

**CITY OF LYNCHBURG
SEWER FUND BONDS PAYABLE**

	Est.	Budget	Proj.	Proj.	Proj.	Proj.
	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
P&I on debt o/s @ 6/30/10 (1)	7,485,793	8,057,889	8,411,416	8,143,608	7,976,490	7,924,548
Interest only payments						
Interest on LOC borrowing			30,000	60,000	30,000	60,000
\$3.5 million issue in FY 2012		83,125	166,250			
\$7.0 million issue in FY 2014				166,250	332,500	
Principal payments on VCWRLF						
\$10.1 million loan closed 6/11 - 0%				336,667	336,667	336,667
\$9.0 million loan closed 7/11 - 0%				450,000	450,000	450,000
\$7.0 million loan closed 6/12 - 0%					233,333	233,333
\$7.0 million loan closed 6/13 -0%						233,333
Level debt service payments on Bond issues						
\$3.5 million issue in FY 2012				221,233	221,233	221,233
\$7.0 million issue in FY 2014						442,466
IRS rebate	(44,421)	(45,953)	(45,953)	(45,953)	(45,953)	(45,953)
	\$7,441,372	\$8,095,061	\$8,561,713	\$9,331,805	\$9,534,270	\$9,855,628

NOTES:

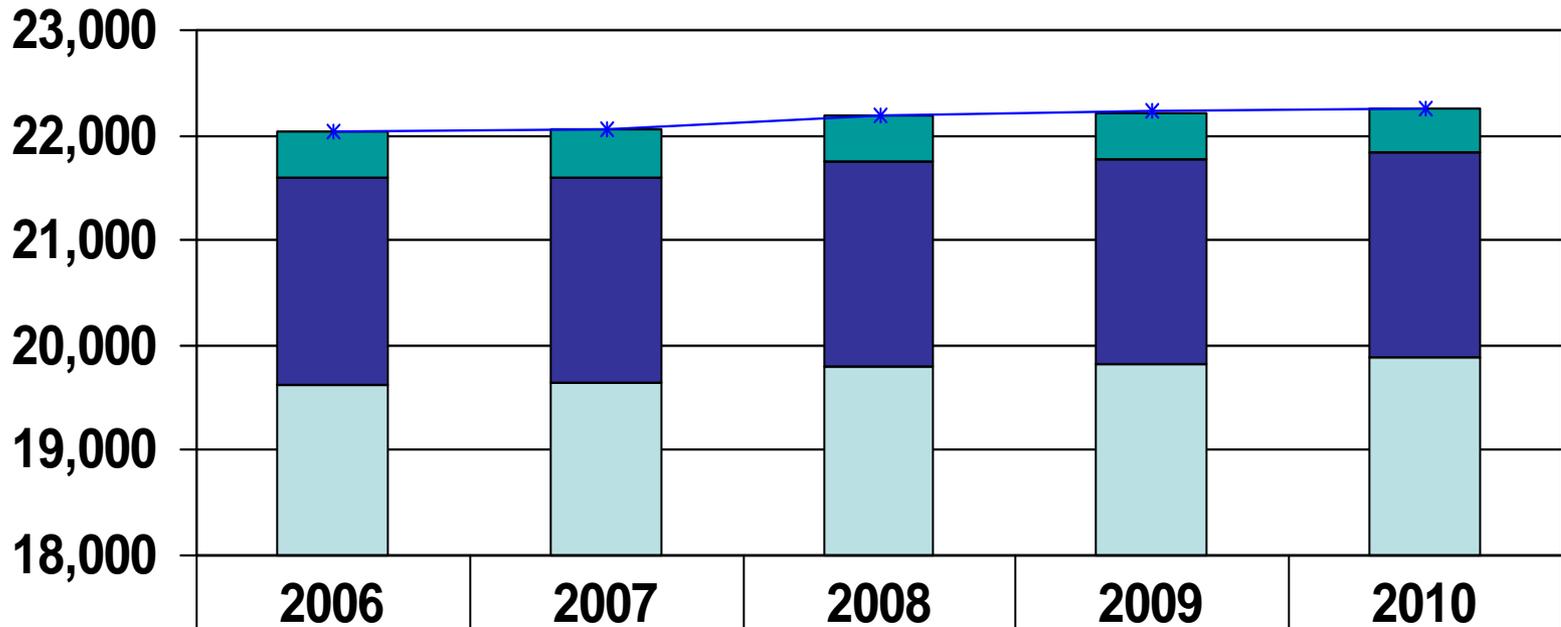
1. Based on bond refunding schedules.
2. All VCWRLF loans are at 0% interest. The \$9.0 million loan is payable over 20 years, the other loans are payable over 30 years.
3. Principal payments on VCWRLF loans starts two years and six months after date loans are closed.
4. G.O bonds assumed to be issued in first quarter of year shown. Principal on G.O bonds starts 2 years after year of issue.
5. Interest on new G.O bonds assumed to be at 4.75% and starts 6 months after issue date.
6. Interest on LOC borrowing based on 2% annual rate.

Appendix II

Department of Utilities Statistical and Financial Data

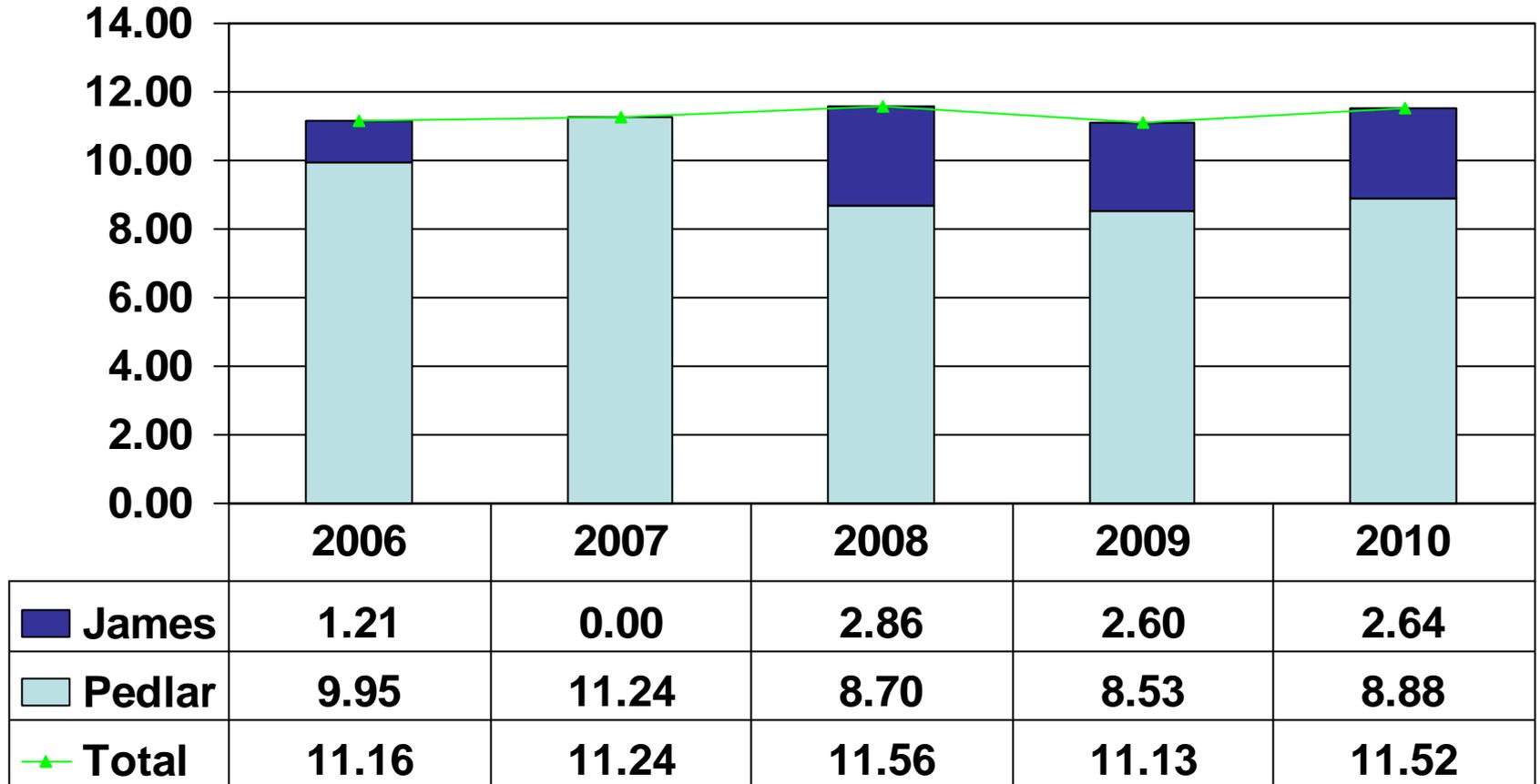
Water Fund Statistics

Number of Water Customers

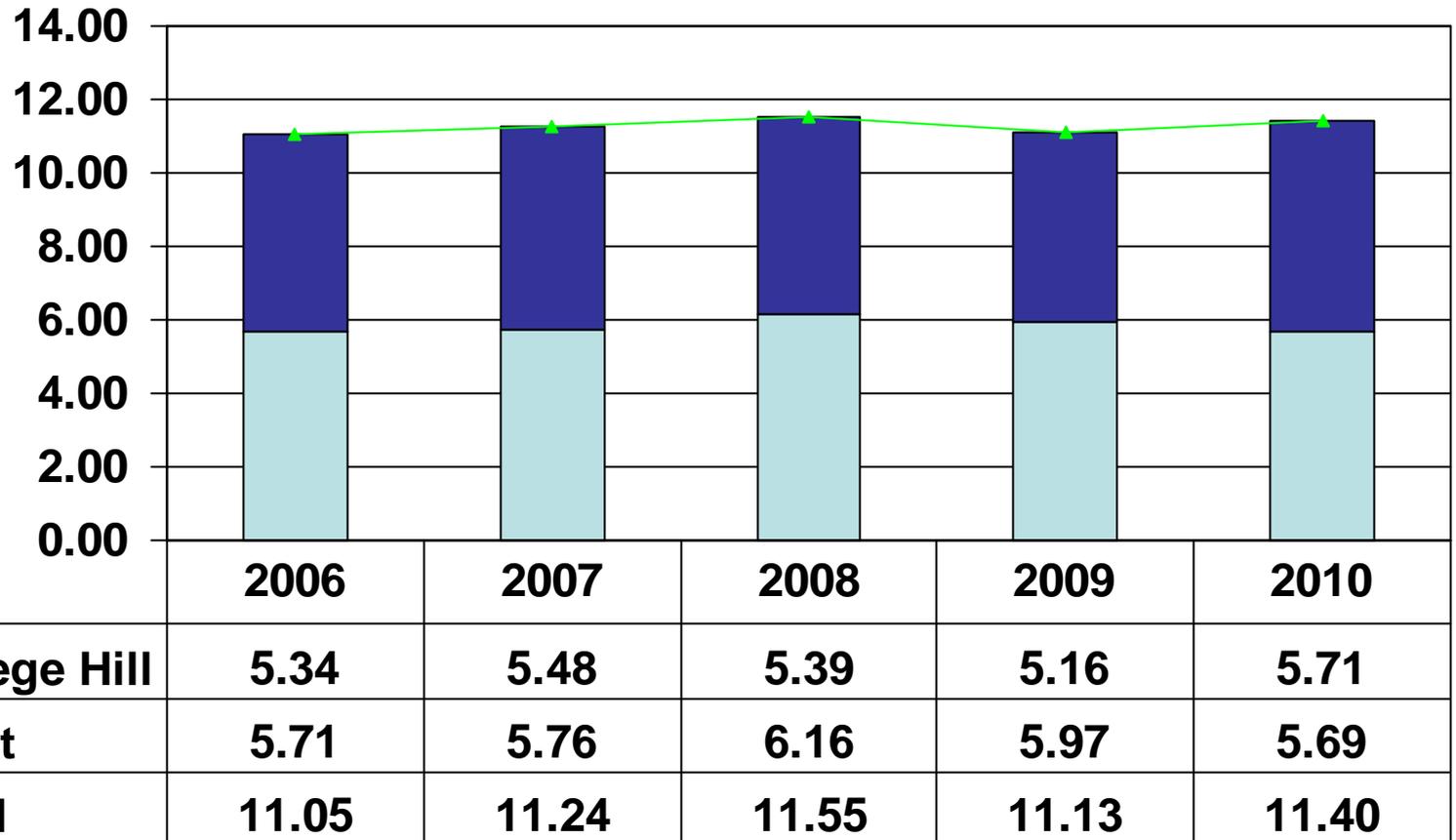


	2006	2007	2008	2009	2010
Other	440	456	430	430	431
Business	1,958	1,951	1,950	1,950	1,951
Domestic	19,628	19,653	19,807	19,830	19,883
Total	22,026	22,060	22,187	22,240	22,265

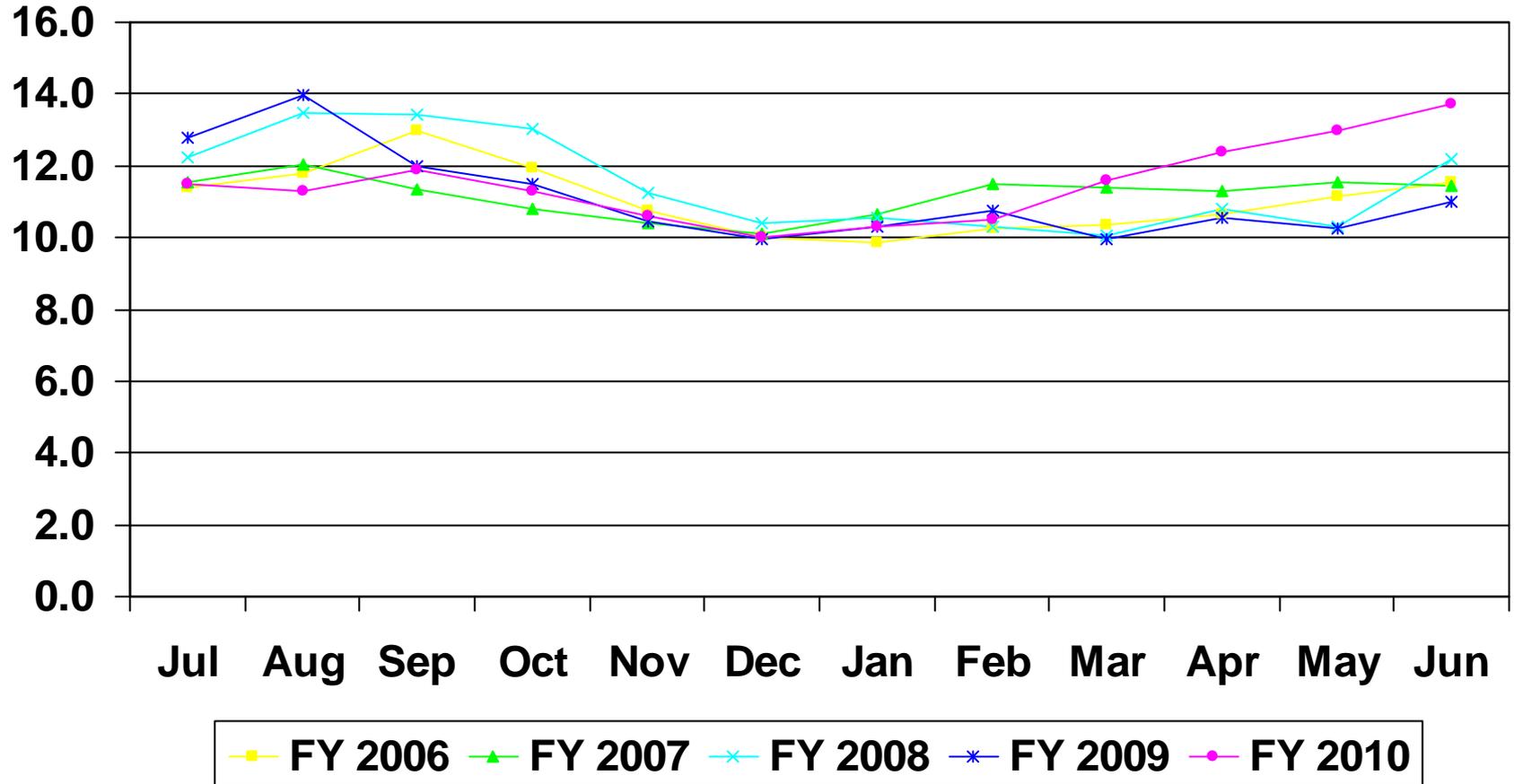
Water Withdrawals in MGD



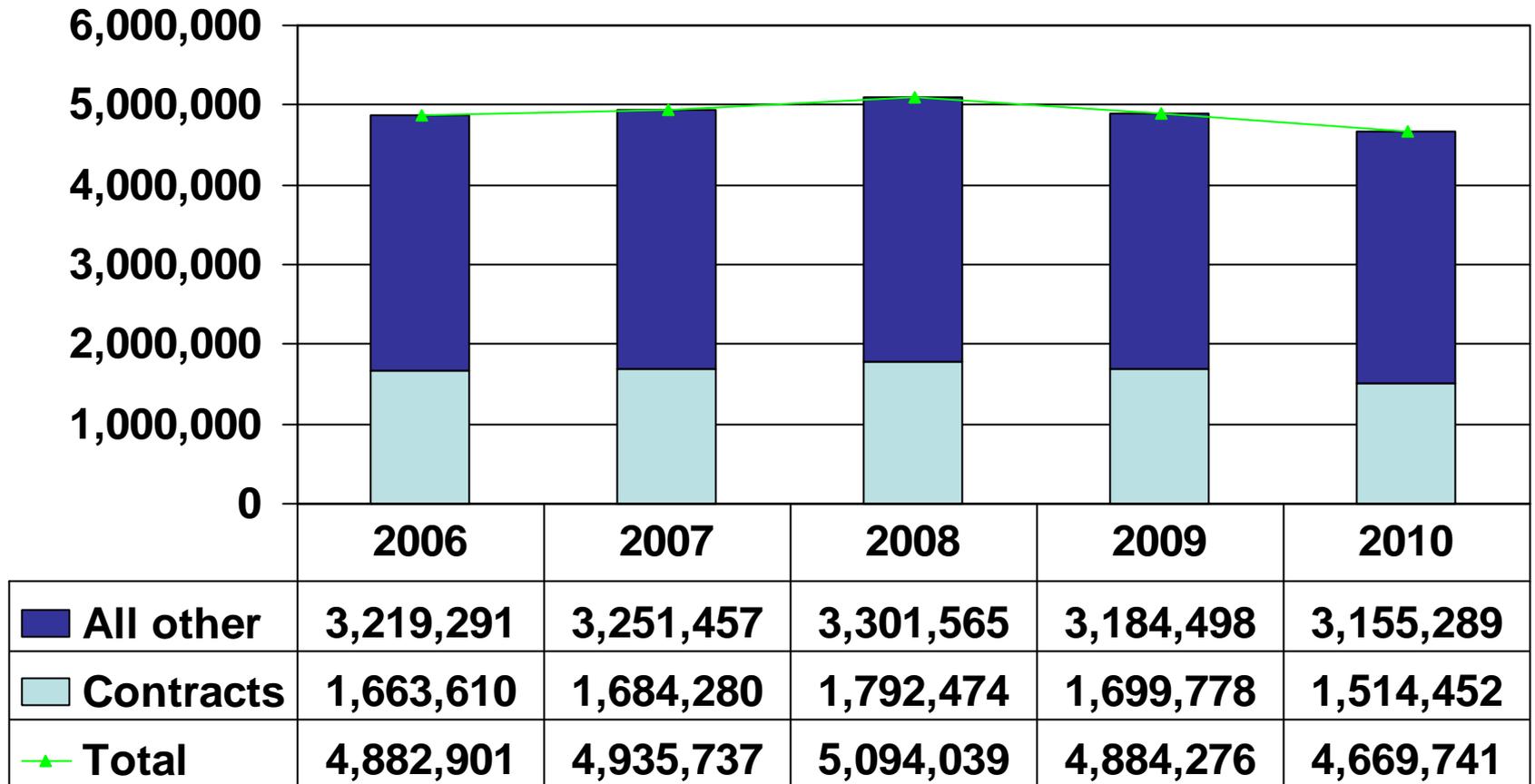
Water Production in MGD



Monthly Production in MGD



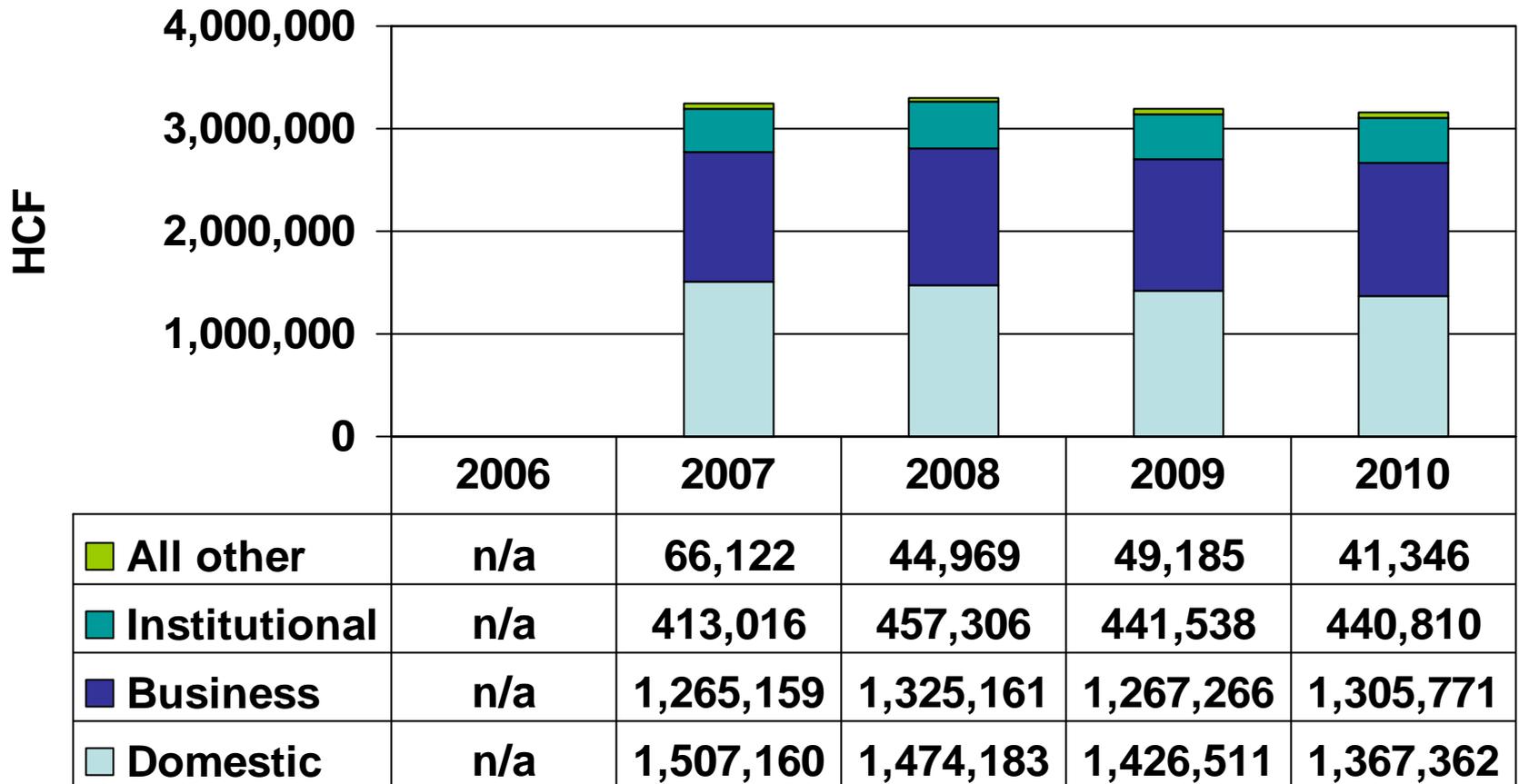
Water Sold in HCF



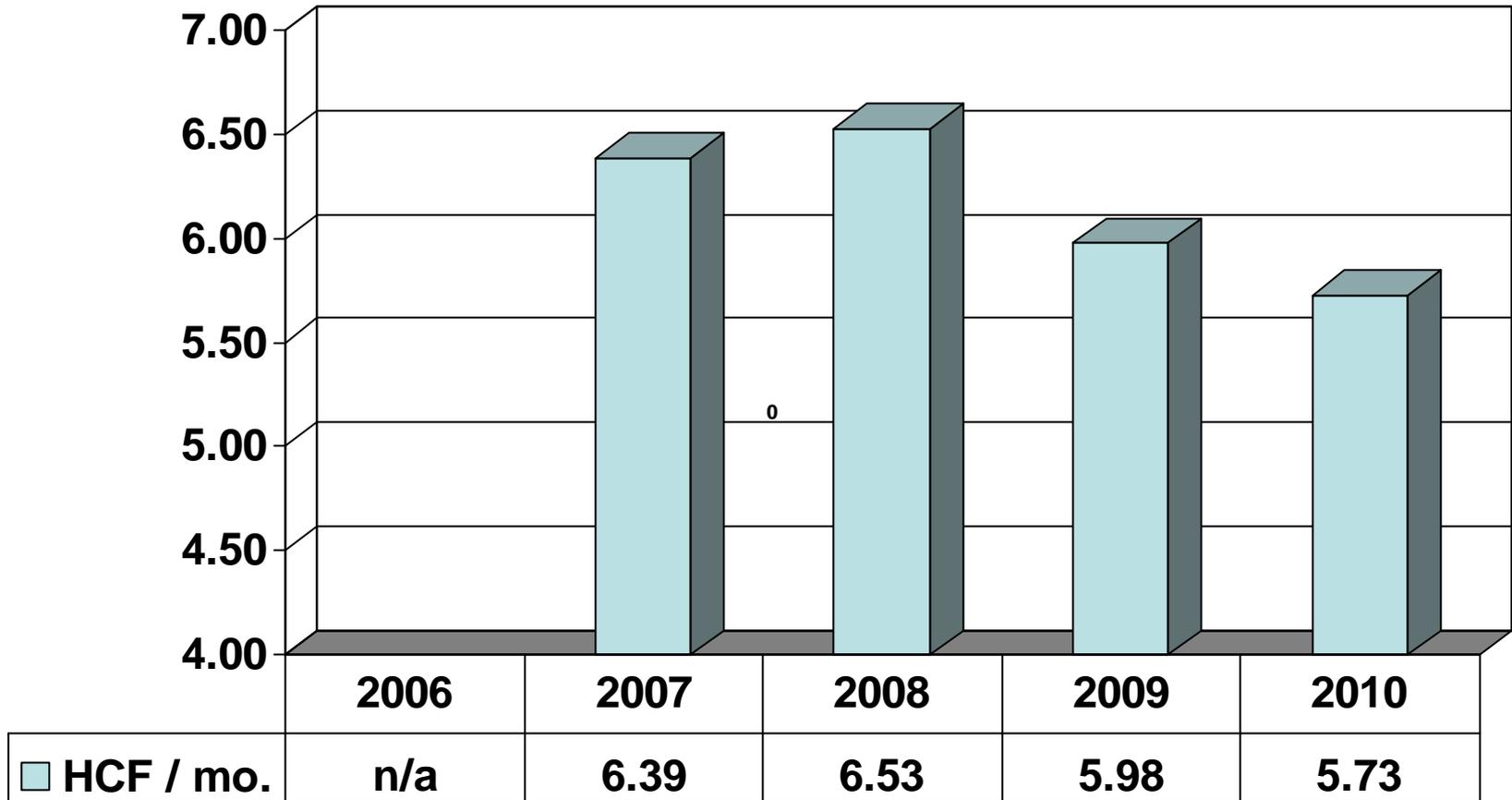
Contract Water Use in HCF

Customer	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010
Amherst	67,320	62,125	54,410	55,355	49,805
Bedford	706,242	722,722	806,541	798,263	725,571
CCUSA	284,389	287,918	268,788	250,826	215,854
Frito-Lay	197,058	174,554	181,668	155,245	125,509
Rock Tenn	408,601	436,961	481,067	440,087	397,713
Total contract use	1,663,610	1,684,280	1,792,474	1,699,776	1,514,452
Total use	4,882,901	4,935,737	5,094,093	4,884,276	4,669,741
Contract % of use	34%	34%	35%	35%	32%

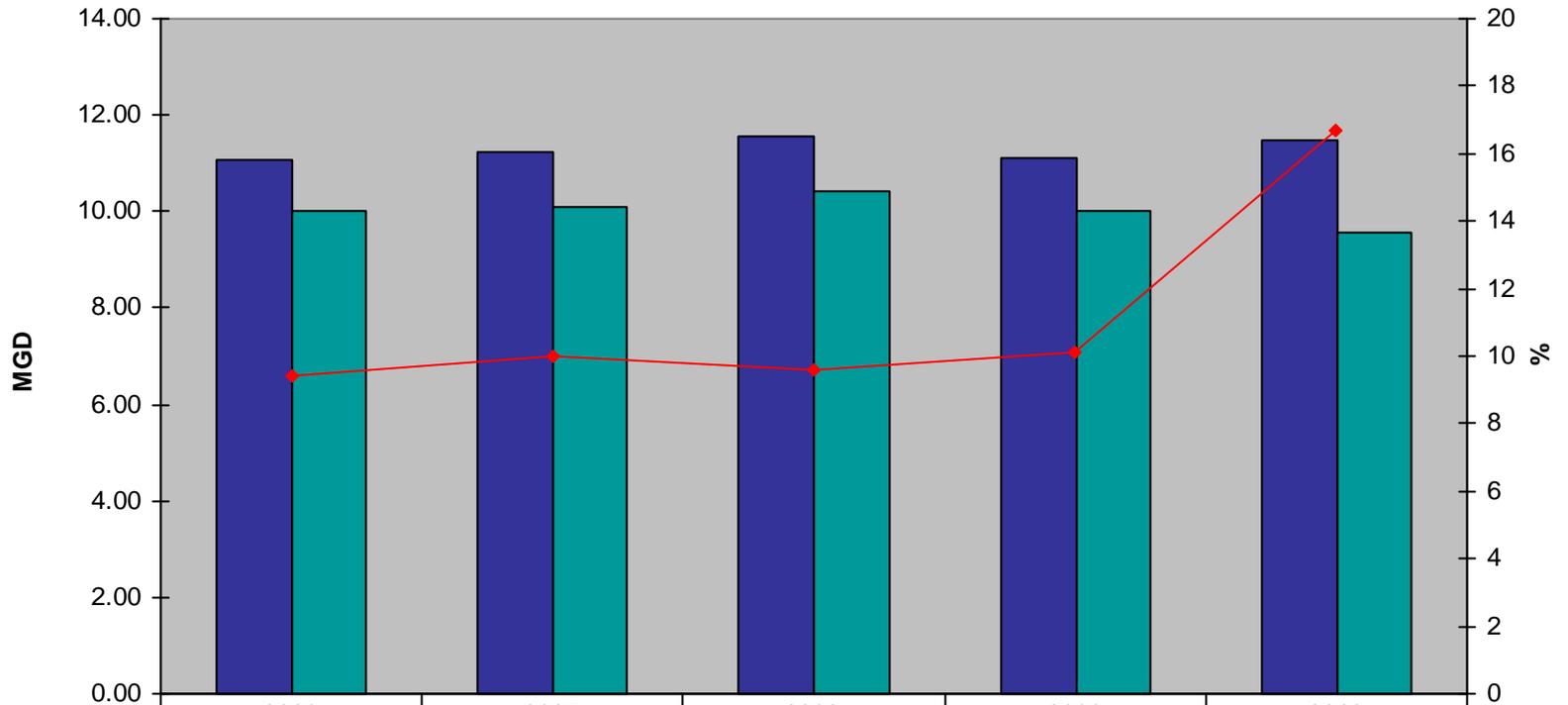
Non-Contract Water Sales in HCF



Avg. Monthly Water Sold Domestic Customers



Non Revenue Water



	2006	2007	2008	2009	2010
Production	11.05	11.24	11.55	11.13	11.49
Sales	10.00	10.11	10.41	10.01	9.57
NRW %	9.4	10.0	9.6	10.1	16.7

Water Complaints

Type of Complaint	FY 2006	FY 2007	FY 2008	FY2009	FY 2010
1. Discolored water	59	100	171	131	140
2. Odor / taste	8	3	4	8	2
3. No water	-	-	-	28	40
4. High pressure	2	9	4	7	27
5. Low pressure	55	117	137	87	59
6. Water line leaks	67	152	135	211	133
7. Main breaks	-	-	-	39	46
8. Meter leaks	45	62	69	79	32
9. Missing / broken valve / meter cover	29	21	12	55	43

Water Fund Financial Data

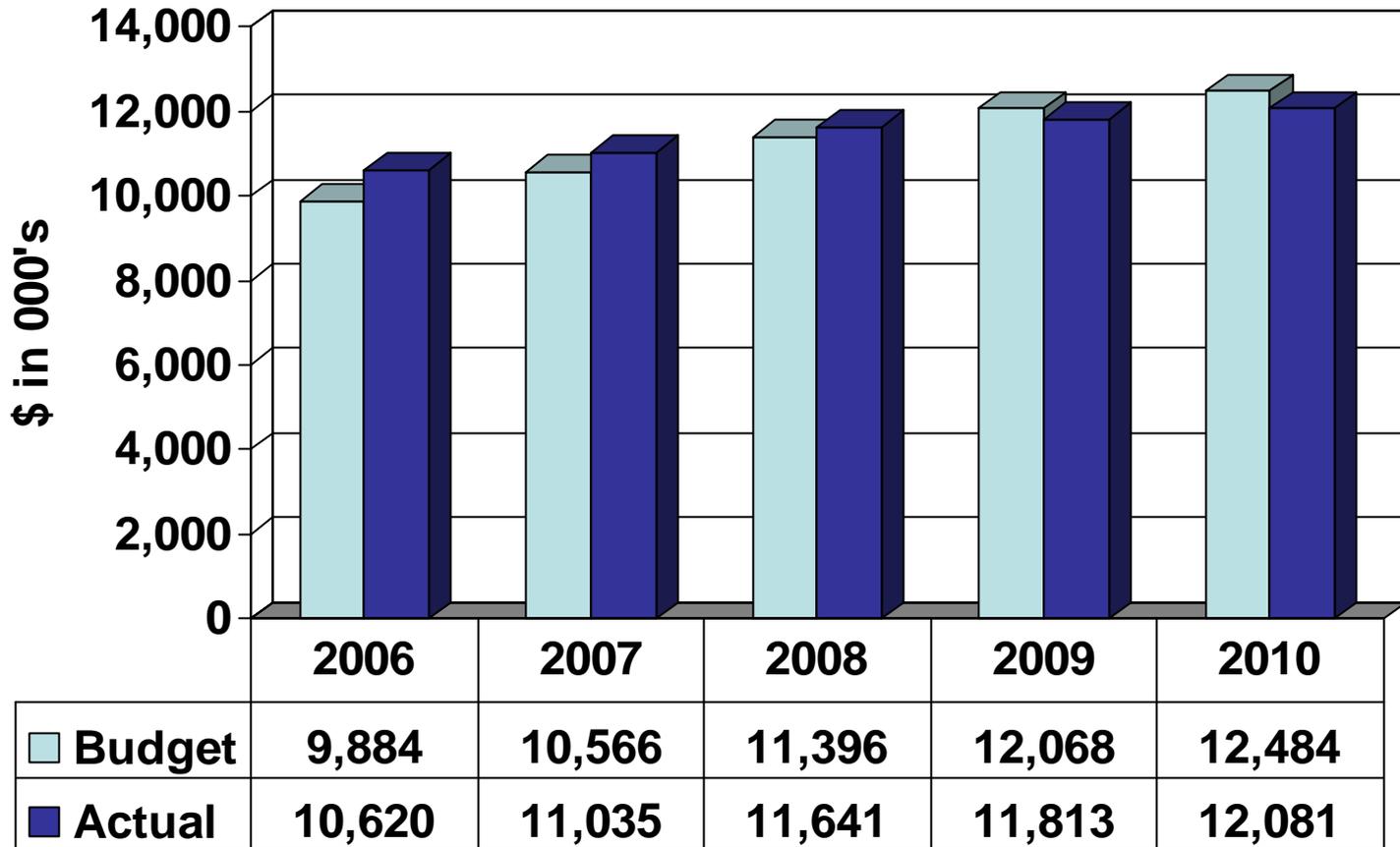
Water Fund Debt Coverage

(\$ in 000's)

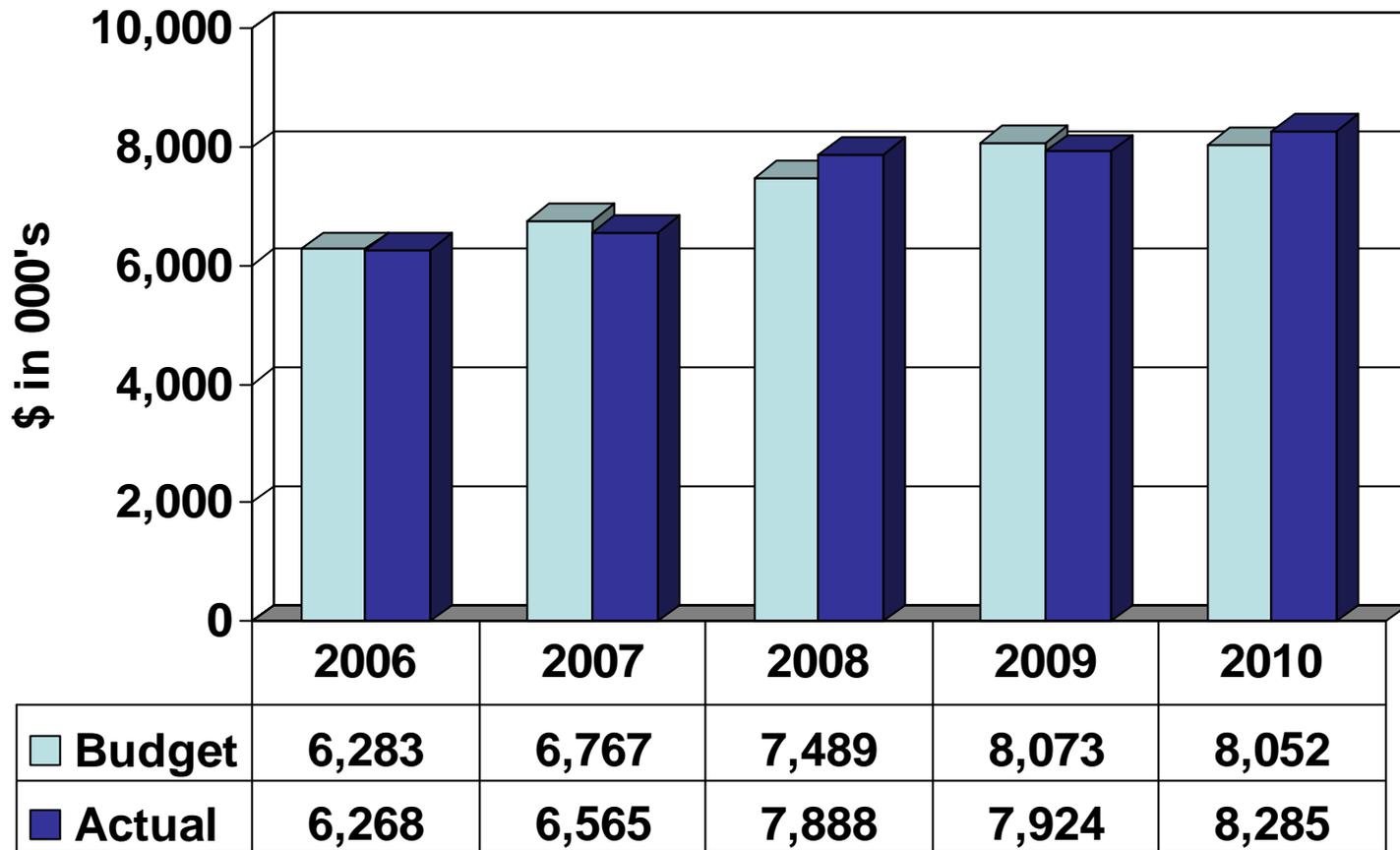
	FY 2006	FY 2007	FY 2008	FY2009	FY 2010
Revenues:					
Charges for services	\$7,880	\$7,985	\$8,763	\$9,034	\$9,309
Water contracts	2,469	2,412	2,502	2,690	2,720
Interest & other	271	638	376	89	52
	10,620	11,035	11,641	11,813	12,081
Expenses:					
Water treatment	2,209	2,260	2,683	2,954	2,863
Water line maintenance	1,157	1,205	1,400	1,548	1,603
Meter reading	486	646	879	821	861
Administration	2,193	2,170	2,478	2,440	2,448
Non-departmental	111	147	133	128	168
Project expenses	112	137	315	33	397
	6,268	6,565	7,888	7,924	8,340
Operating income	4,352	4,470	3,753	3,889	3,741
Debt service, net of IRS rebate	2,659	2,980	2,877	2,703	2,999
Debt coverage	1.64	1.50	1.30	1.44	1.25

Water Revenues

Adopted Budget vs. Actual



Water Operating Expenses Adopted Budget vs. Actual



Largest Water Customers

(\$ in 000's)

Customer	FY 2006	FY 2007	FY 2008	FY2009	FY 2010
1. Bedford County	\$1,259	\$1,195	\$1,326	\$1,389	\$1,537
2. CCUSA	534	527	432	473	465
3. Rock Tenn	386	431	472	436	460
4. Liberty University	165	184	217	215	233
5. Frito-Lay	169	156	179	169	149
6. Azdel	85	50	91	56	143
7. Central Health	174	163	213	173	124
8. Griffin Pipe	104	110	106	120	115
9. Amherst County	122	102	93	97	110
10 .Kroger / Westover	98	102	122	105	108
11. Tri-Tech	25	32	64	67	106
12. RR Donelly	97	93	111	115	102
Total top 12	3,218	3,145	3,426	3,415	3,652
Total water revenues	10,620	11,035	11,641	11,813	12,081
Top 12 % of total	30%	29%	29%	29%	30%

Customers with total billings in excess of \$100,000 / year.

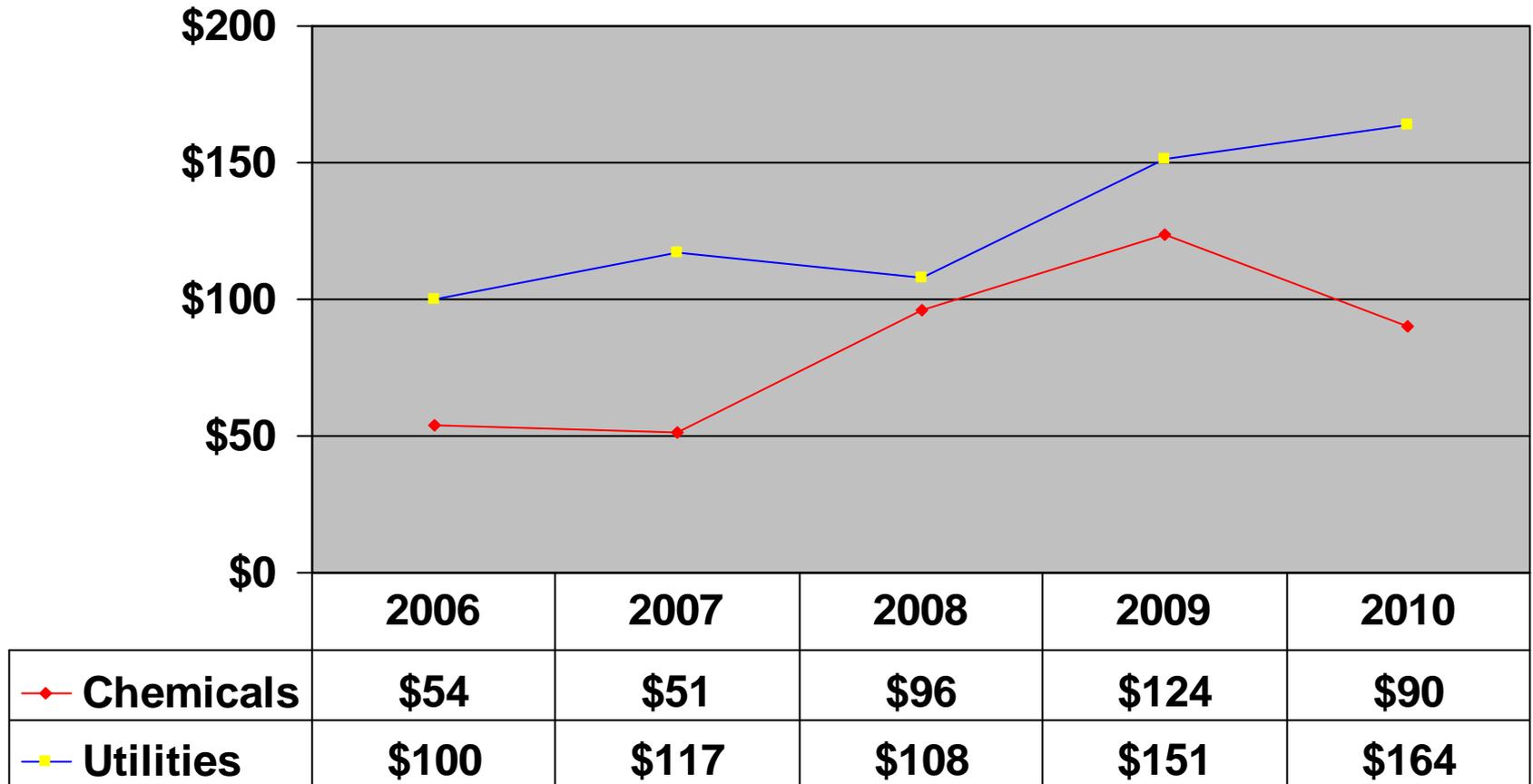
Water Expenses by Object

(\$ in 000's)

Expenses by object	FY 2006	FY 2007	FY 2008	FY2009	FY 2010
Personal services	\$2,122	\$2,208	\$2,636	\$2,764	\$2,828
Fringe benefits	762	862	969	1,023	1,052
Supplies & materials	617	705	994	959	974
Contractual services	600	454	603	479	582
Utilities, including natural gas	403	480	455	614	687
Chemicals	217	210	404	504	378
General Fund allocations	1,088	1,100	1,105	1,026	905
All other, Including project expenses	459	546	722	540	879
Total	\$6,268	\$6,565	\$7,888	\$7,909	\$8,285
% increase	8.1%	4.7%	20.2%	0.3%	4.8%

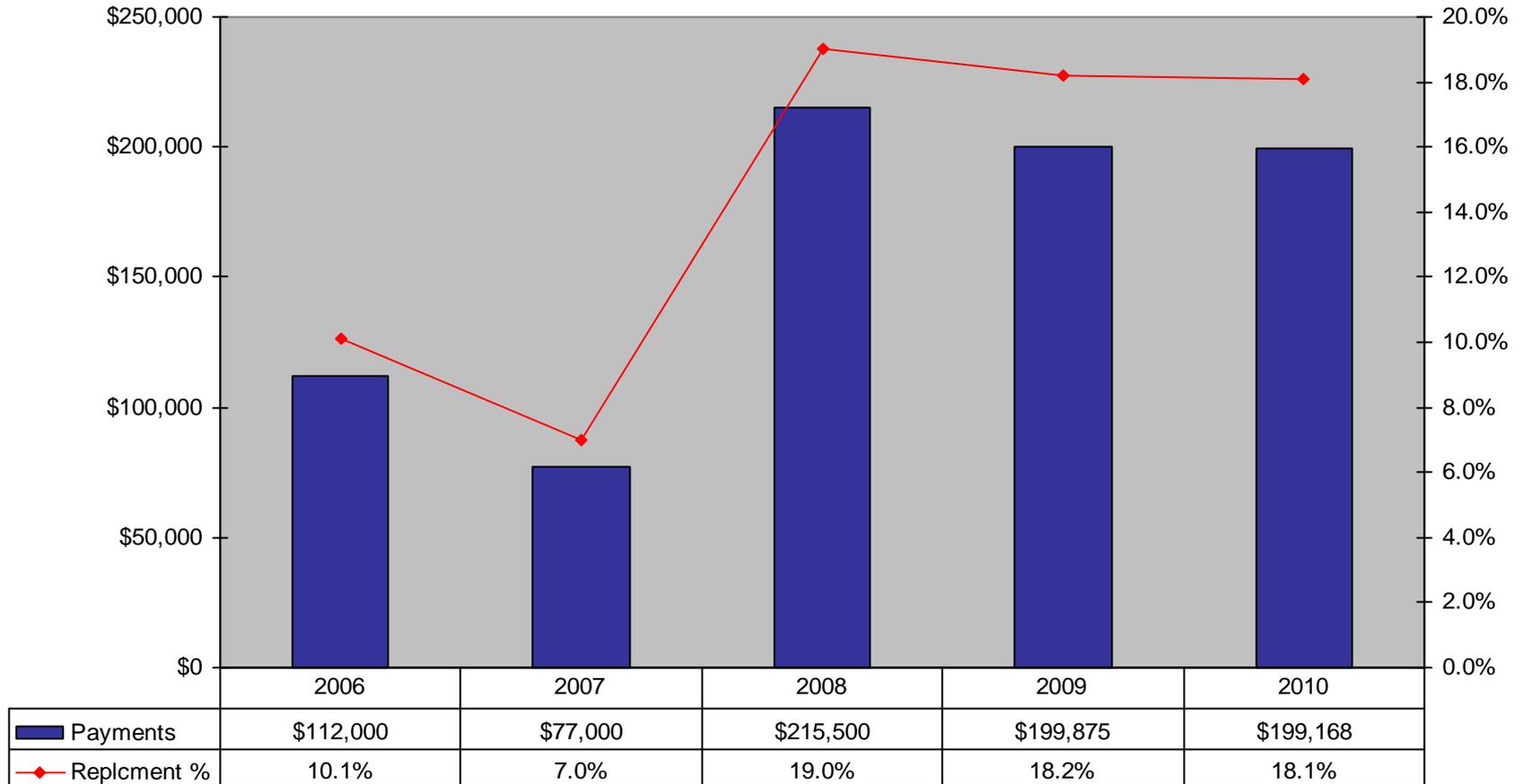
FY 2008 increase due to new staff positions and project costs that were expensed.

Water Variable Expenses / MG



Water Vehicle Costs

Total cost of all vehicles (\$1.1 million)



Water Capital Expenditures

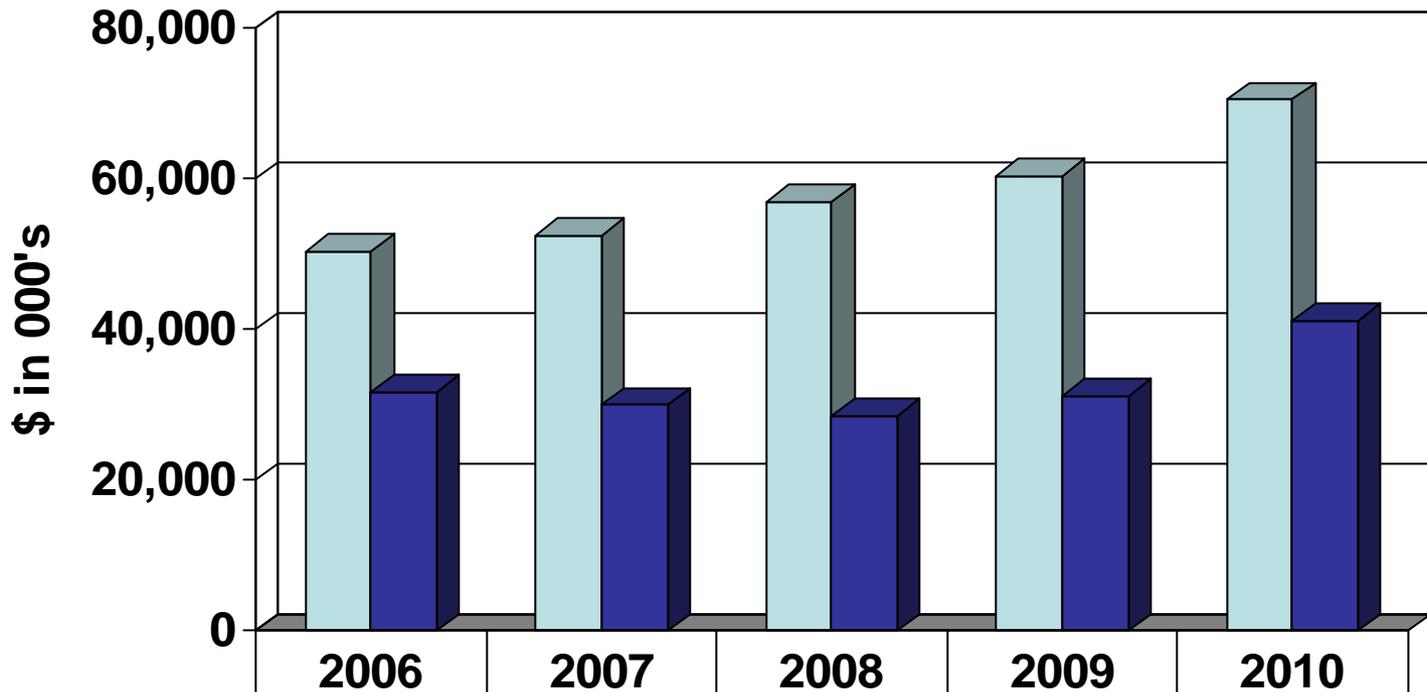
\$ in 000's

Capital Expenditures	FY 2006	FY 2007	FY 2008	FY2009	FY 2010
Source of supply	0	0	45	220	463
Treatment plants	1,441	1,114	4,347	2,349	83
Storage tanks	489	1,424	683	733	98
Petitions & extensions	241	439	840	211	239
Distribution & CSO improvements	1,790	1,087	804	1,765	1,795
Other	0	0	0	182	778
Total	3,961	4,064	6,719	5,460	3,456

Other in 2009 includes work mgt. system and GIS upgrades.

Other 2010 includes warehouse and meter shop rehab.

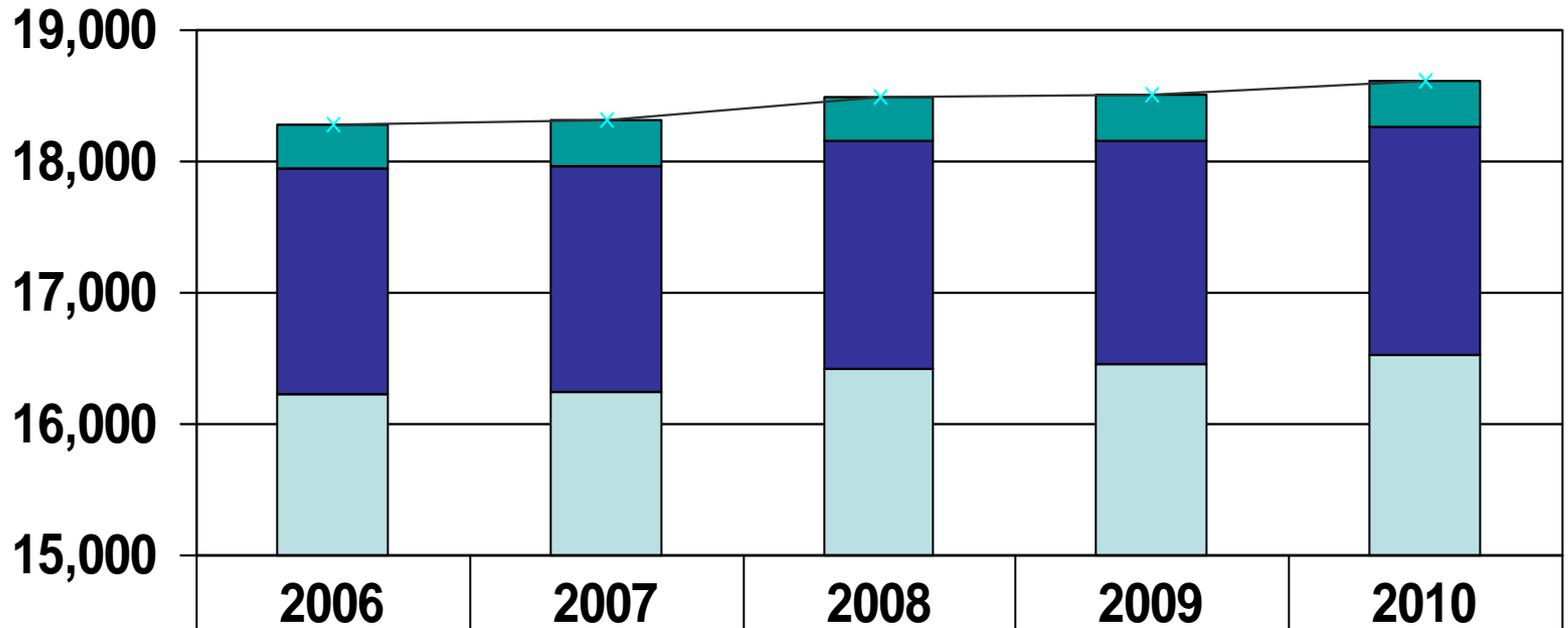
Net Water Capital Assets



 Net fixed assets	50,439	52,562	57,028	60,391	70,596
 Bonds & notes	31,649	29,942	28,572	31,138	41,164

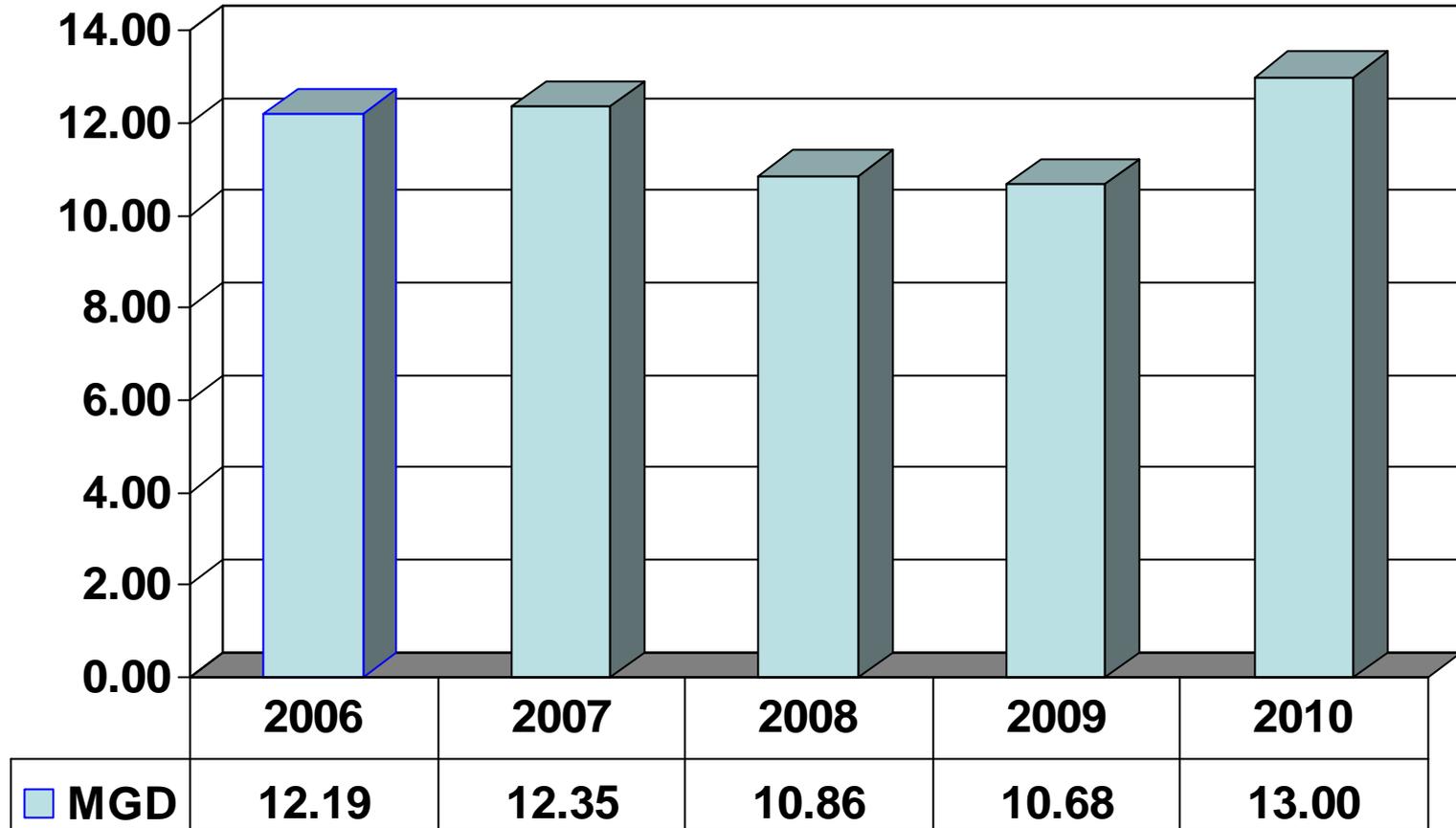
Wastewater Statistics

Number of Sewer Customers

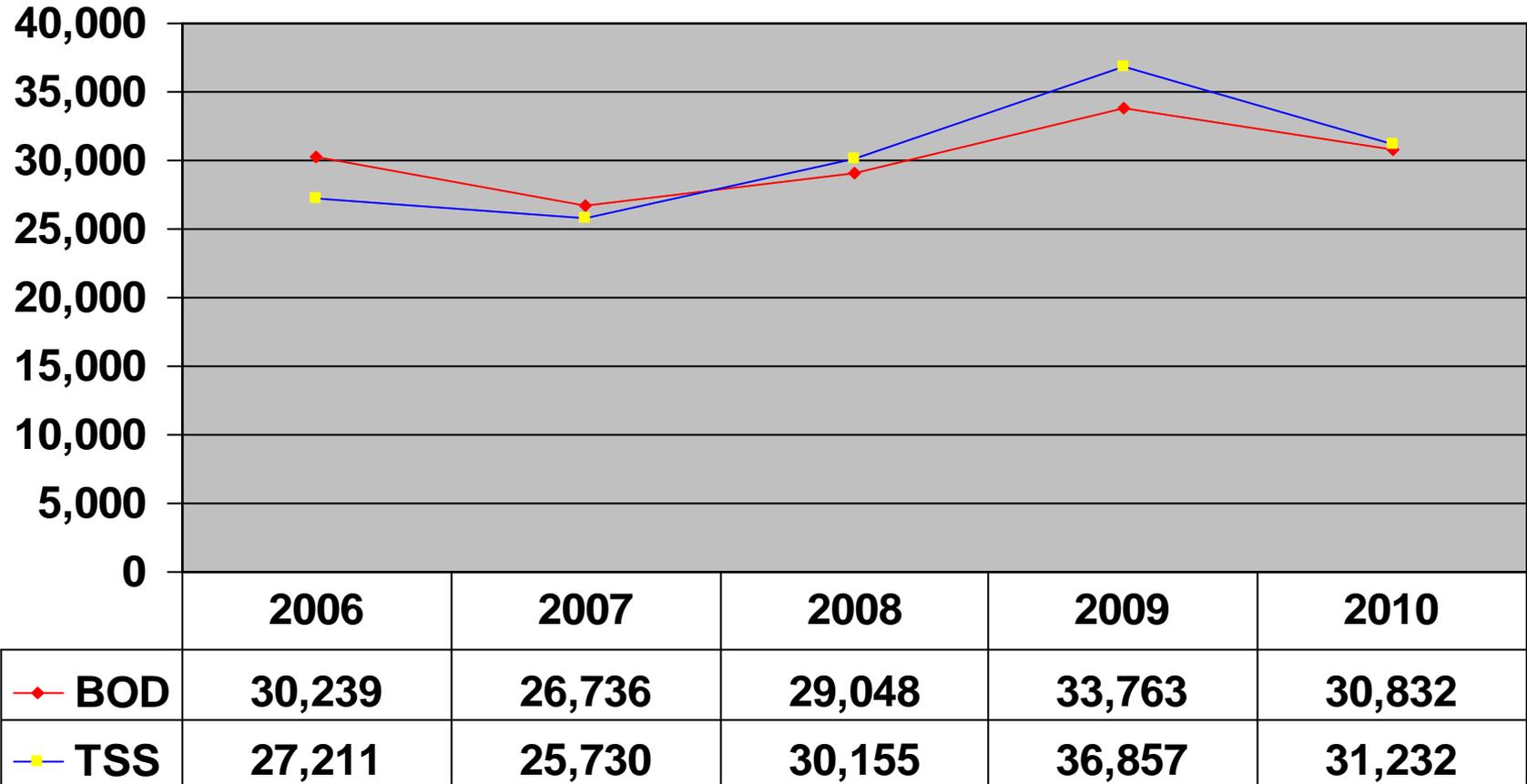


Other	338	338	336	340	345
Business	1,728	1,721	1,734	1,715	1,743
Domestic	16,222	16,251	16,416	16,450	16,518
Total	18,288	18,310	18,486	18,505	18,606

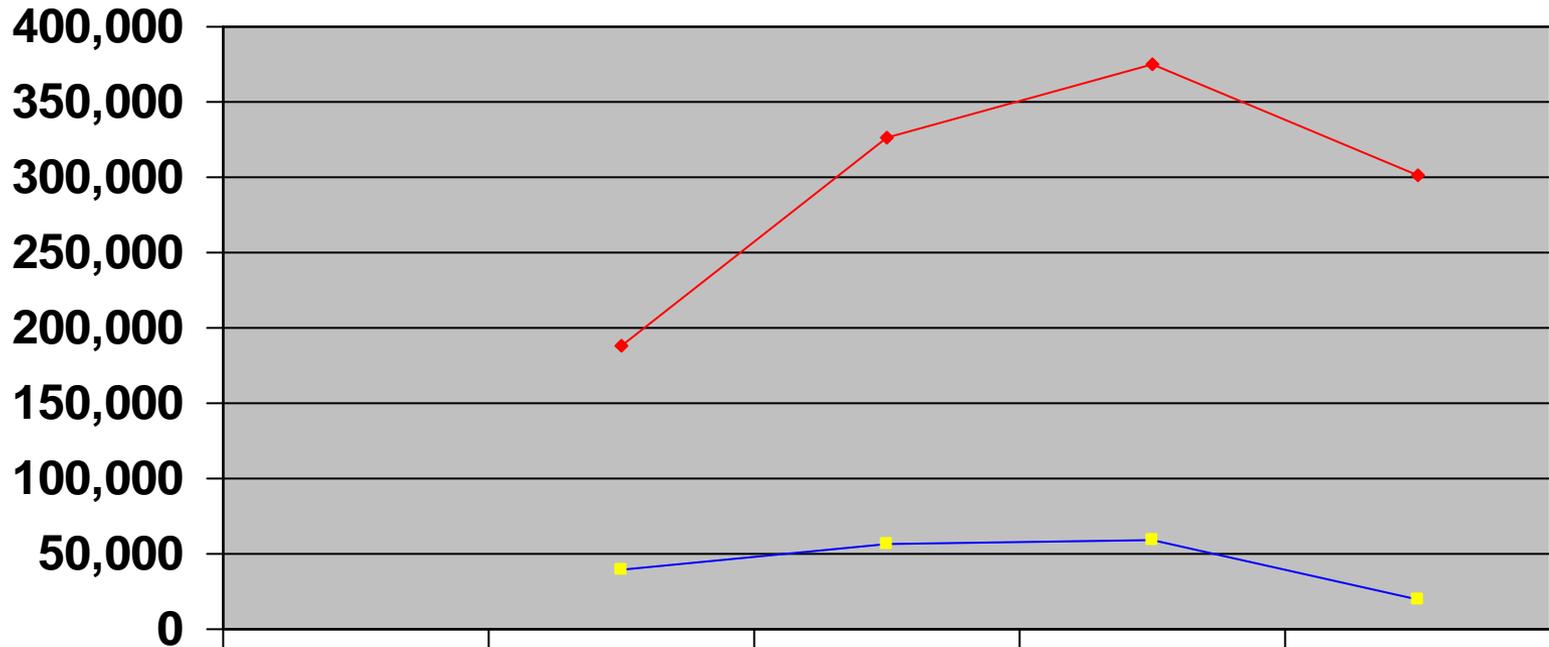
Wastewater Effluent in MGD



BOD / TSS Loadings in lbs. / Day

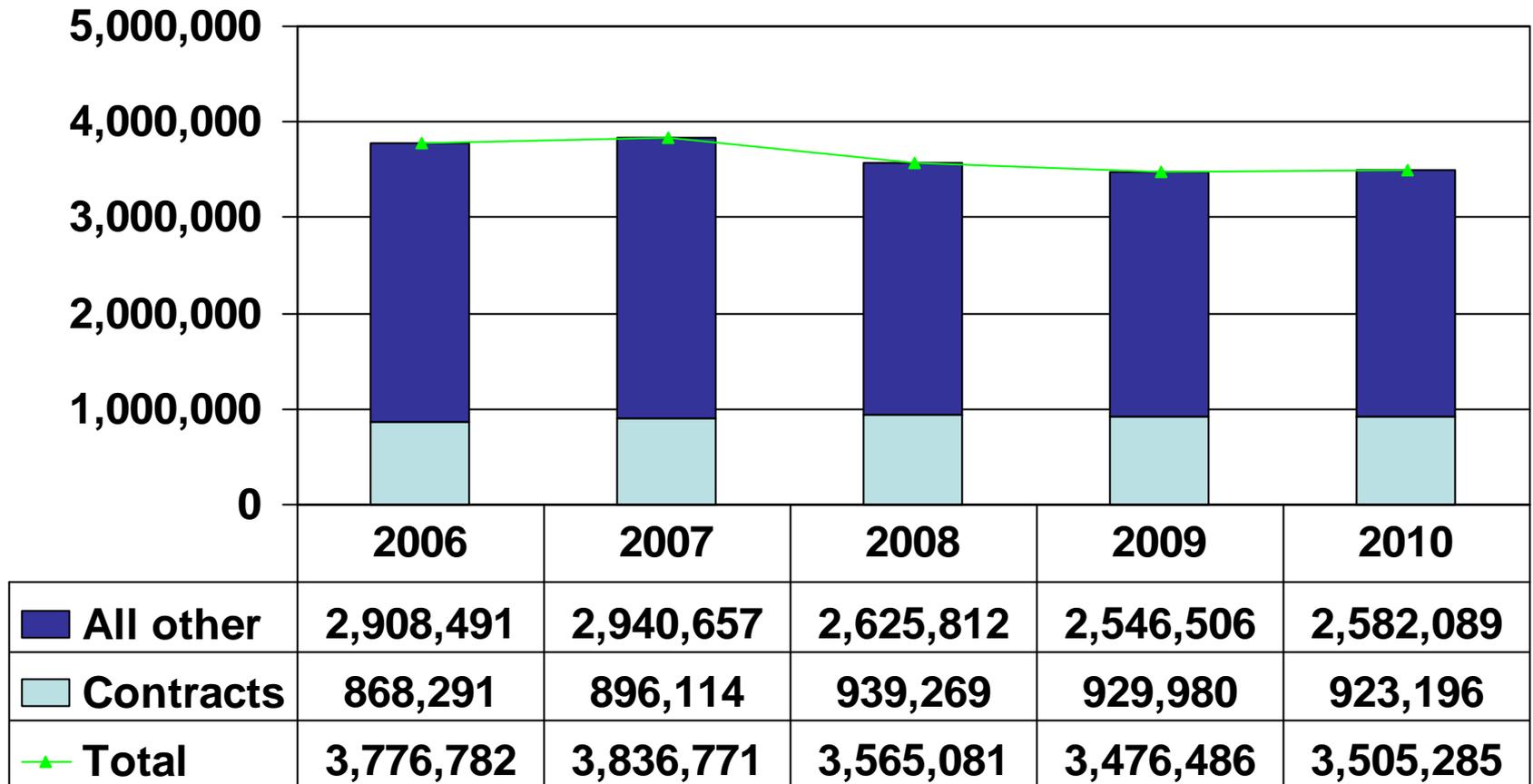


Nitrogen / Phosphorus Annual Discharge in lbs

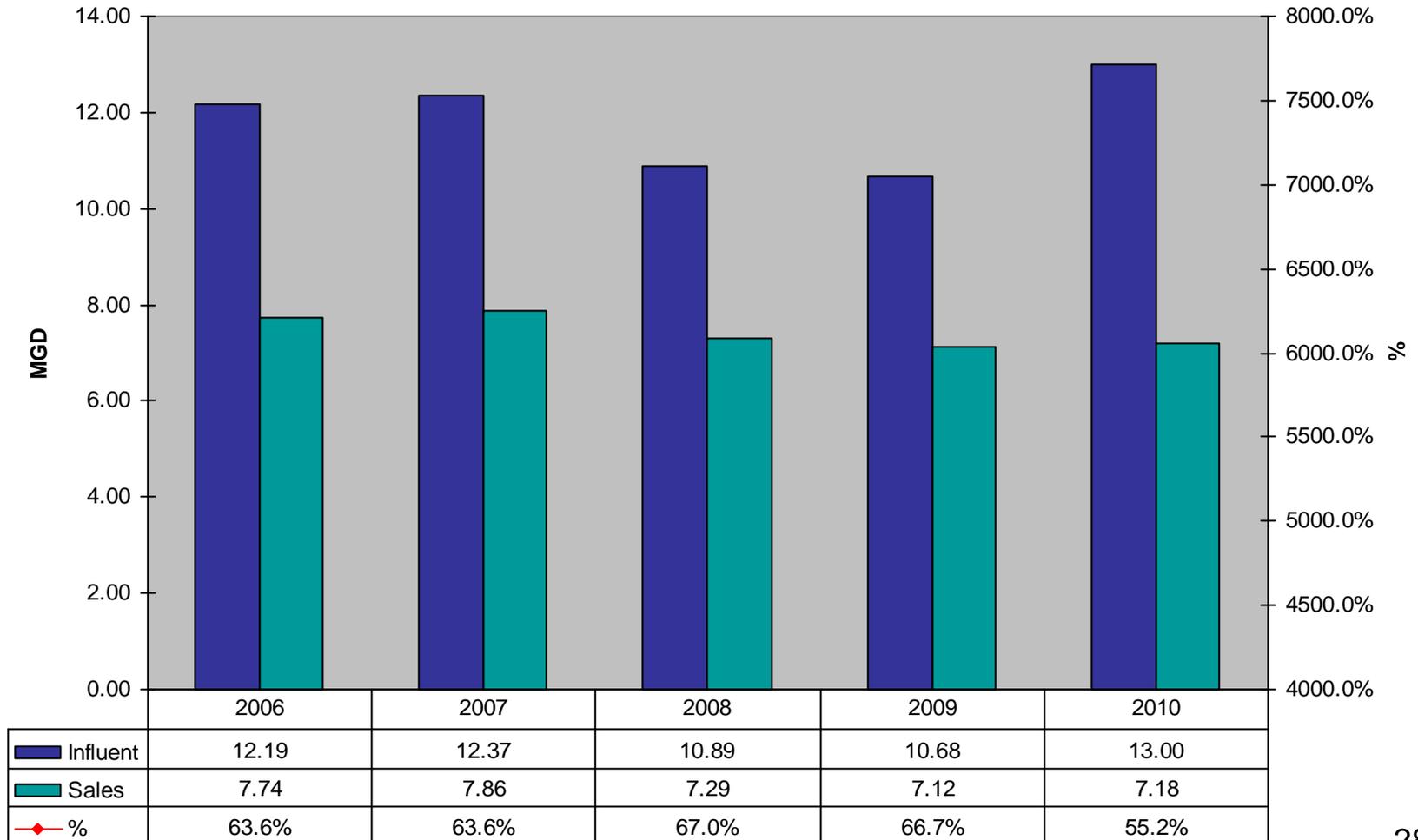


	2006	2007	2008	2009	2010
◆ Nitrogen	n/a	187,987	326,623	375,106	301,208
■ Phosphorus	n/a	39,709	56,539	59,343	19,597

Sewer Sold in HCF



Sewer Sales to Influent



Sewer Complaints

Type of Complaint	FY 2006	FY 2007	FY 2008	FY2009	FY 2010
1. Cave-in / broken sewer line	16	7	21	29	25
2. Sewer odor	19	31	45	76	45
3. Sewer overflow	20	30	27	58	183
4. Rats	19	30	24	27	15
5. Clogged inlet	75	98	123	146	132
6. Missing / broken manhole cover	25	34	40	39	63
7. Missing / broken inlet cover	25	23	38	74	63
8. Missing / broken cleanout	4	12	6	8	8

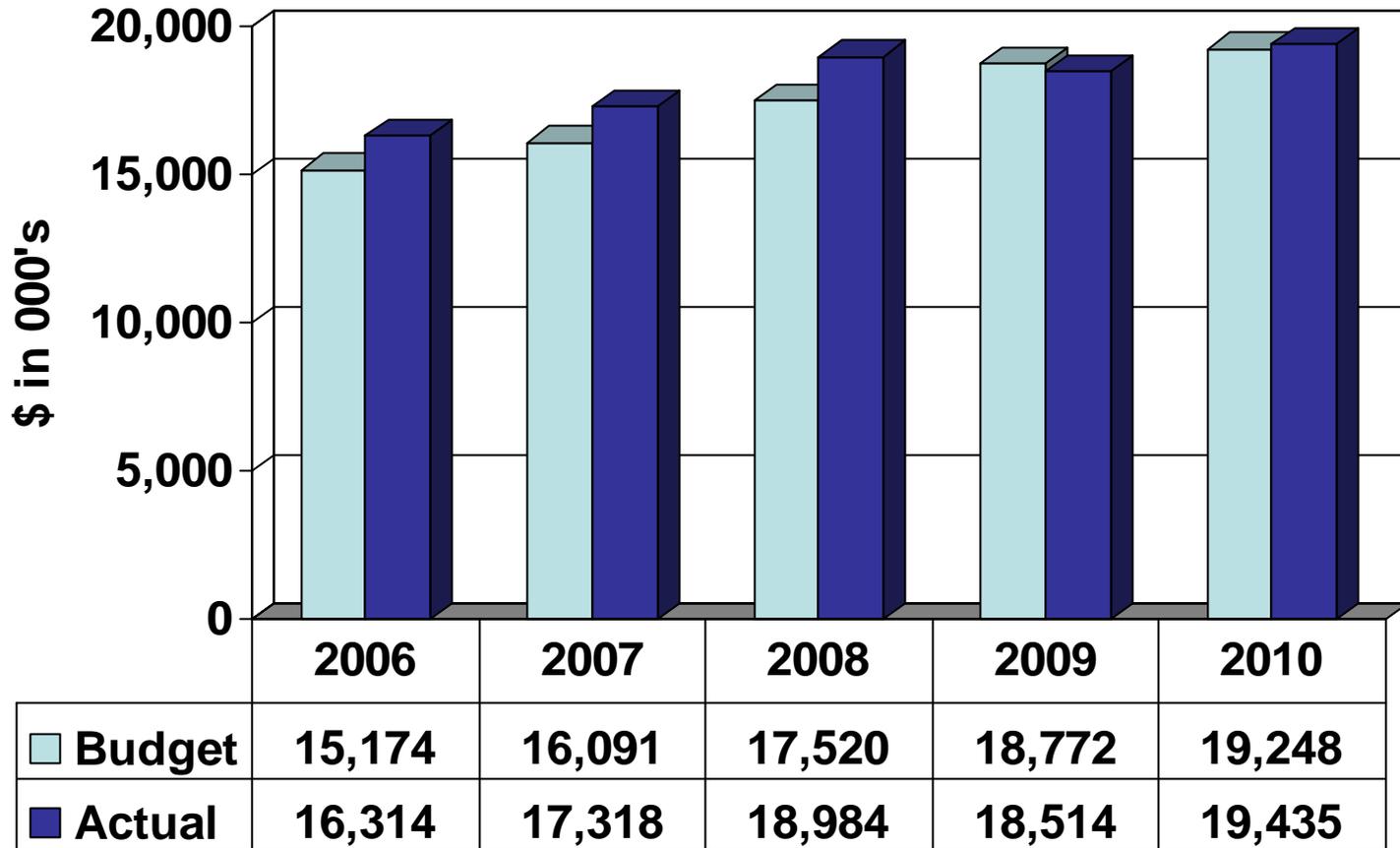
Sewer Fund Financial Data

Sewer Fund Debt Coverage

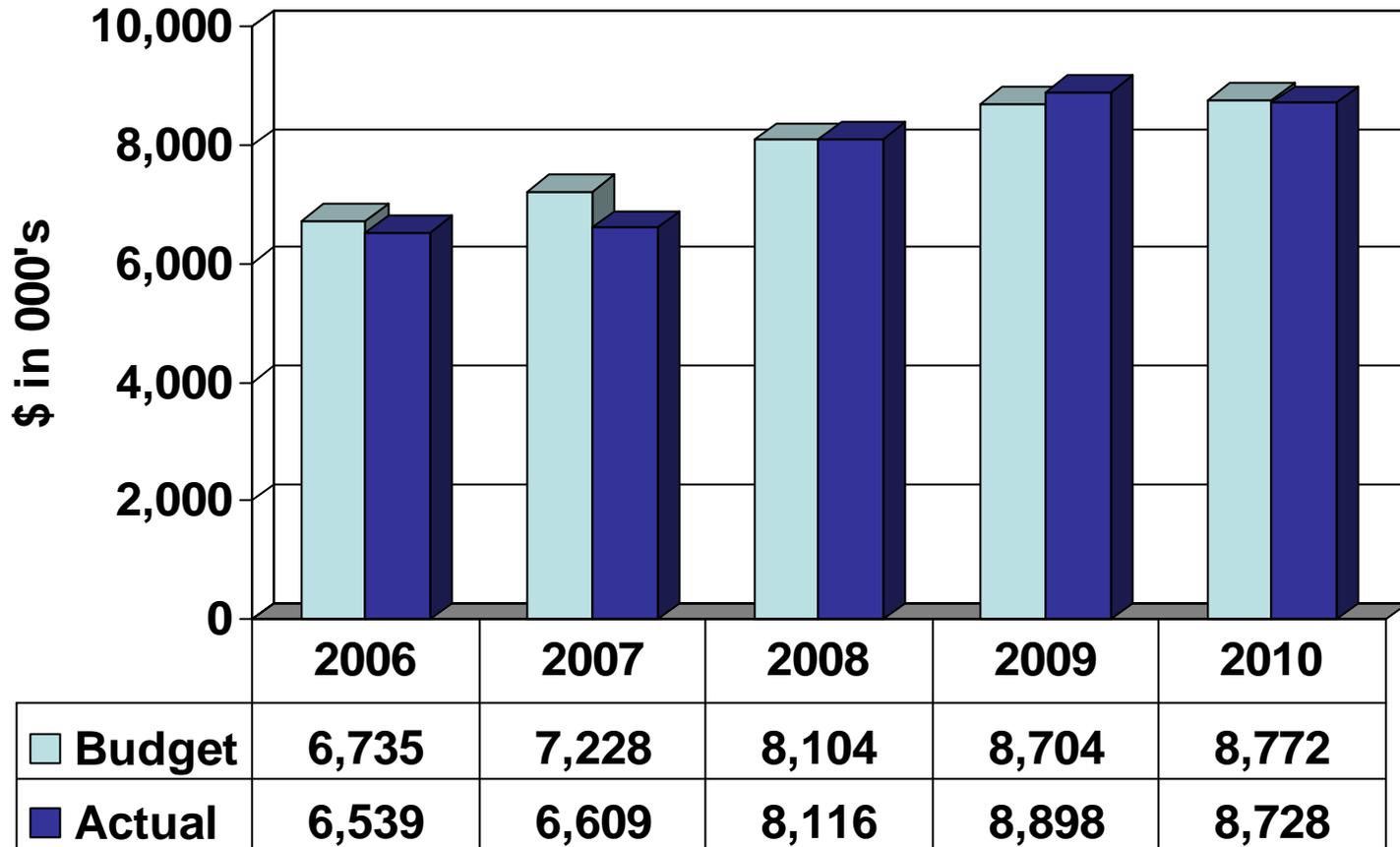
	FY 2006	FY 2007	FY 2008	FY2009	FY 2010
Revenues:					
Charges for services	13,910	14,187	15,525	15,542	16,085
Water contracts	2,001	2,342	2,836	2,562	2,991
Interest & other	403	789	623	410	359
	16,314	17,318	18,984	18,514	19,435
Expenses:					
WWTP	4,011	4,230	4,721	5,052	6,007
Sewer line maintenance	1,473	1,546	1,687	1,921	2,305
Non-departmental	1,047	747	1,283	1,278	250
Project expenses	8	86	425	647	166
	6,539	6,609	8,116	8,898	8,728
Operating income	9,775	10,709	10,868	9,616	10,707
Debt service, net of IRS rebate	6,421	6,846	6,959	6,569	7,107
Debt coverage	1.52	1.56	1.56	1.46	1.51

Sewer Revenues

Adopted Budget vs. Actual



Sewer Operating Expenses Adopted Budget vs. Actual



Ten Largest Sewer Customers

(\$ in 000)

Customers	FY 2006	FY 2007	FY 2008	FY2009	FY 2010
1. Rock Tenn	\$801	\$1,015	\$1,431	\$1,139	\$1,154
2. Frito-Lay	431	499	578	613	692
3. Azdel	238	162	312	175	519
4. Bedford County	300	323	320	365	484
5. Liberty University	222	212	262	469	476
6. Central Health	405	381	278	382	450
7. Amherst County	290	302	303	337	396
8. Kroger / Westover Dairy	354	387	443	276	203
9. Griffin Pipe	475	314	298	295	280
10. CCUSA	179	202	205	246	264
Total top 10	3,695	3,797	4,430	4,297	4,918
Total sewer revenues	16,314	17,318	18,984	18,514	19,252
Top ten % of total	23%	22%	23%	23%	26%

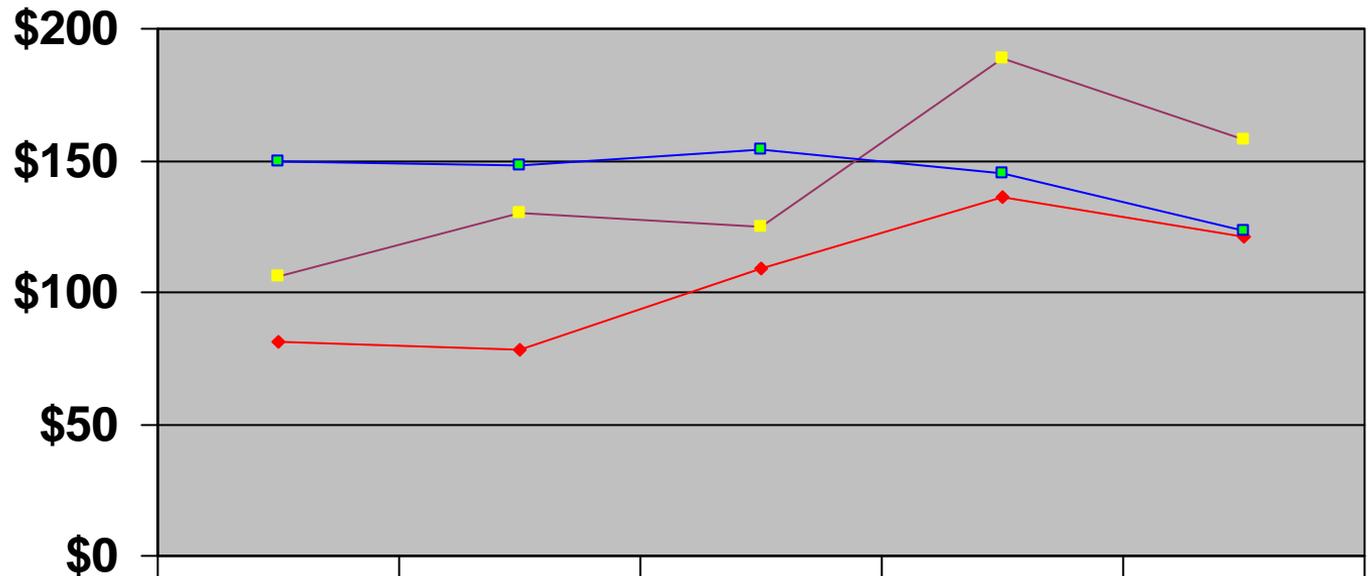
Billings include sewer charges and industrial sur-charges.

Sewer Expenses by Object

\$ in 000's

Expenses by object	FY 2006	FY 2007	FY 2008	FY2009	FY 2010
Personal services	1362	1439	1660	1761	1,844
Fringe benefits	490	475	630	674	699
Supplies & materials	477	484	464	493	544
Contractual expenses	456	412	826	807	888
Sludge disposal	669	669	614	531	582
Utilities	470	586	498	690	751
Chemicals	360	352	434	496	575
General & Water Fund Allocations	1,613	1,663	1,815	2,112	1,979
All other	642	529	1,175	1,304	866
Total	\$6,539	\$6,609	\$8,116	\$8,868	8,728
% Increase	7.2%	1.1%	22.8%	9.3%	-1.6%

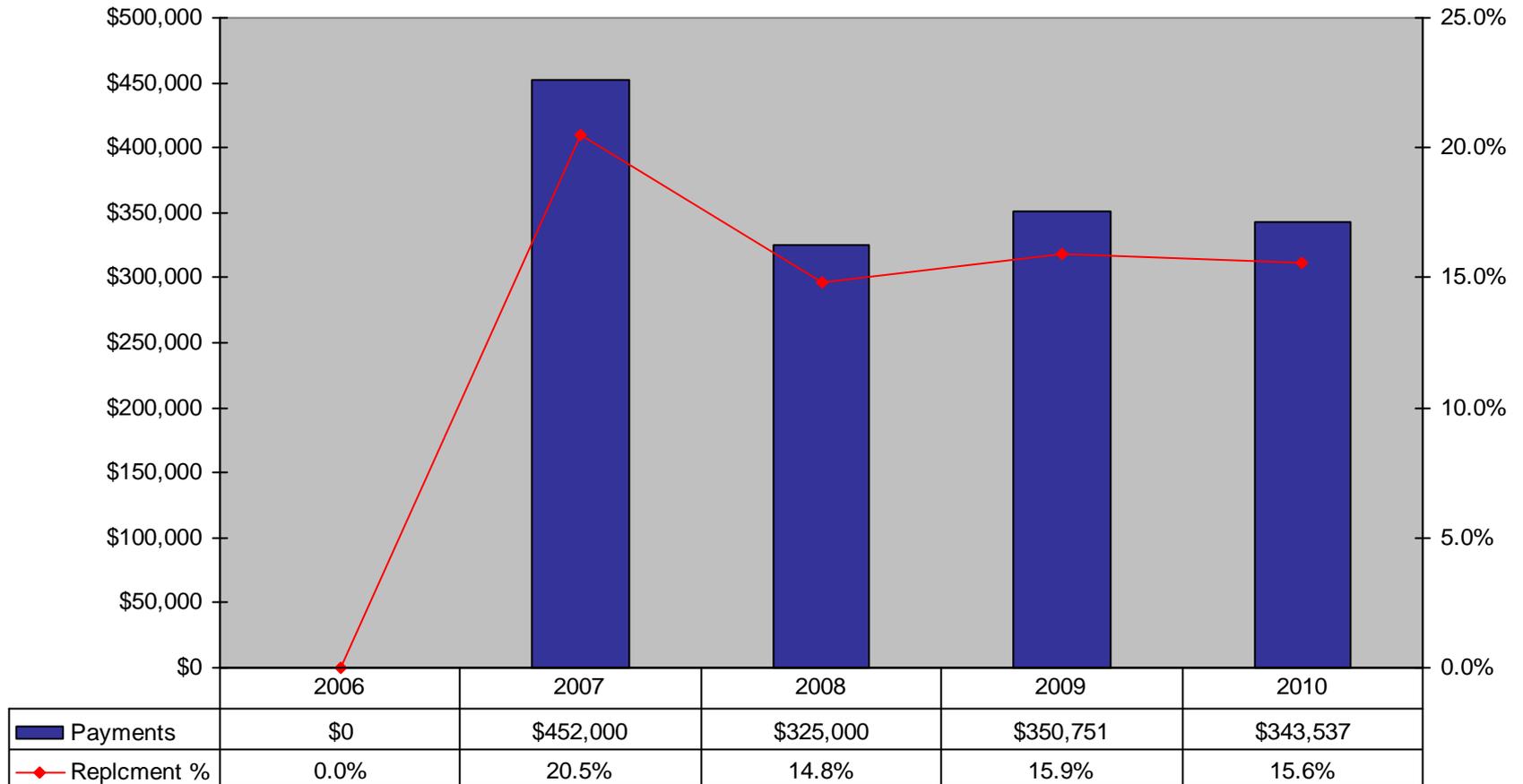
Sewer Variable Expenses / MG



	2006	2007	2008	2009	2010
◆ Chemicals	\$81	\$78	\$109	\$136	\$121
■ Utilities	\$106	\$130	\$125	\$189	\$158
■ Sludge disposal	\$150	\$148	\$154	\$145	\$123

Sewer Vehicle Costs

Total cost of all vehicles (\$2.2 million)



Sewer Capital Expenditures

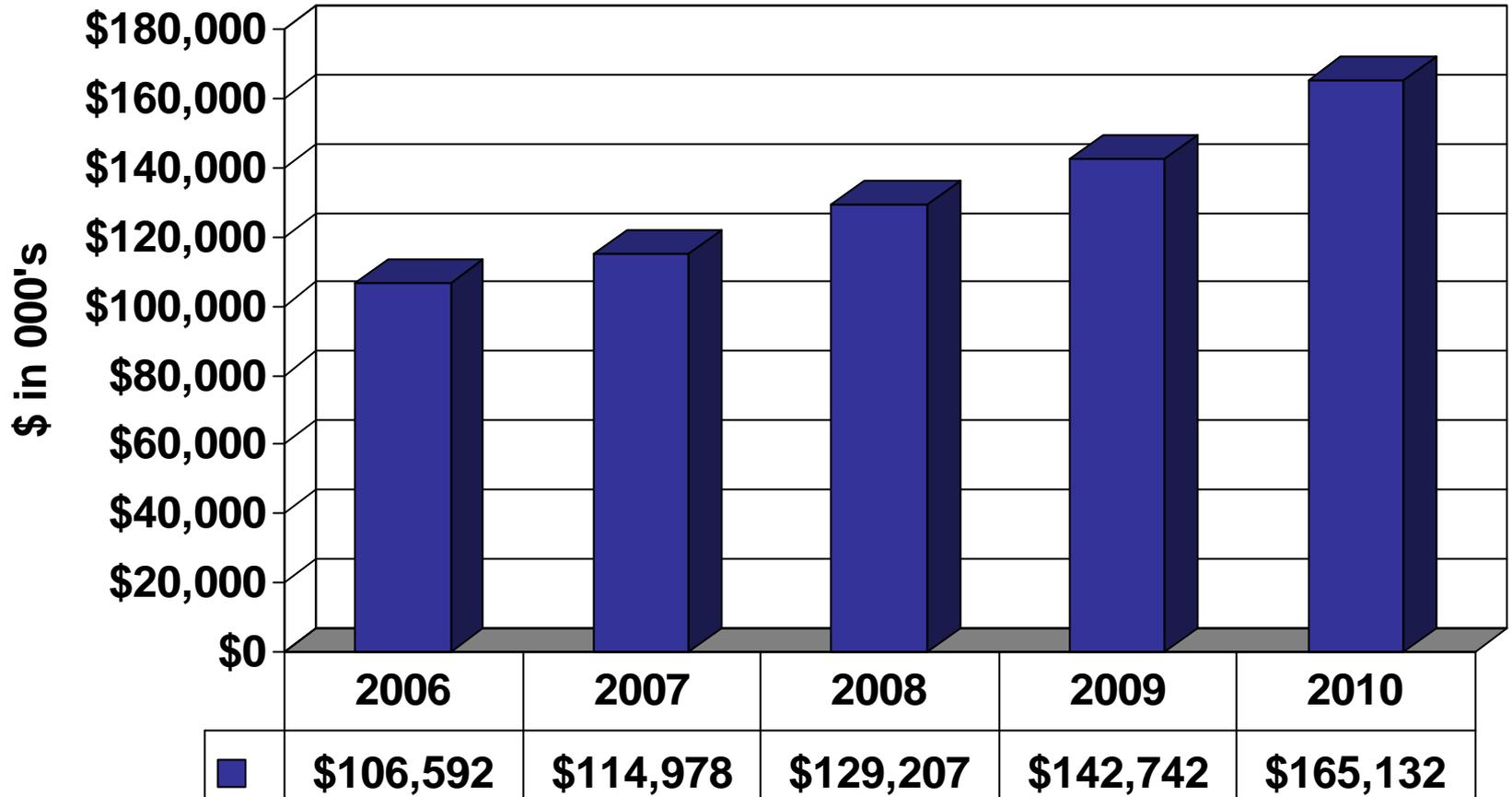
\$ in 000's

Capital Expenditures	FY 2006	FY 2007	FY 2008	FY2009	FY 2010
Sewer extensions	541	401	829	572	596
Treatment plant	404	276	630	2,564	1,612
Collection system repairs	58	299	103	309	464
CSO - separation & RDP	7,621	7,996	7,703	8,007	7,387
Interceptors	43	371	6,530	6,060	14,003
Other	304	115	102	218	1,092
Total	8,971	9,458	15,897	17,730	25,154

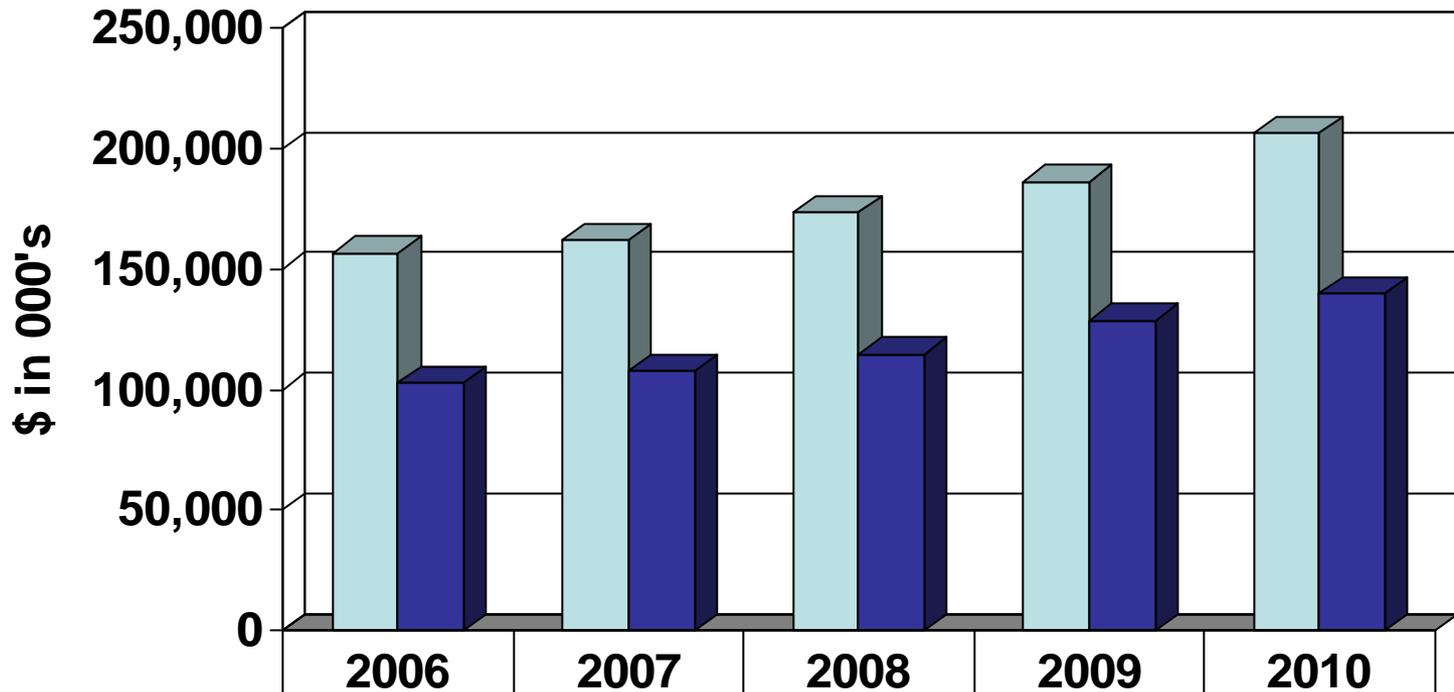
Other in 2009 includes work mgt. system and GIS upgrades.

Other in 2010 includes Stormwater studies (146), Office/warehouse (117), Street projects (664) and College Hill (153).

Cumulative CSO Expenditures



Net Sewer Capital Assets



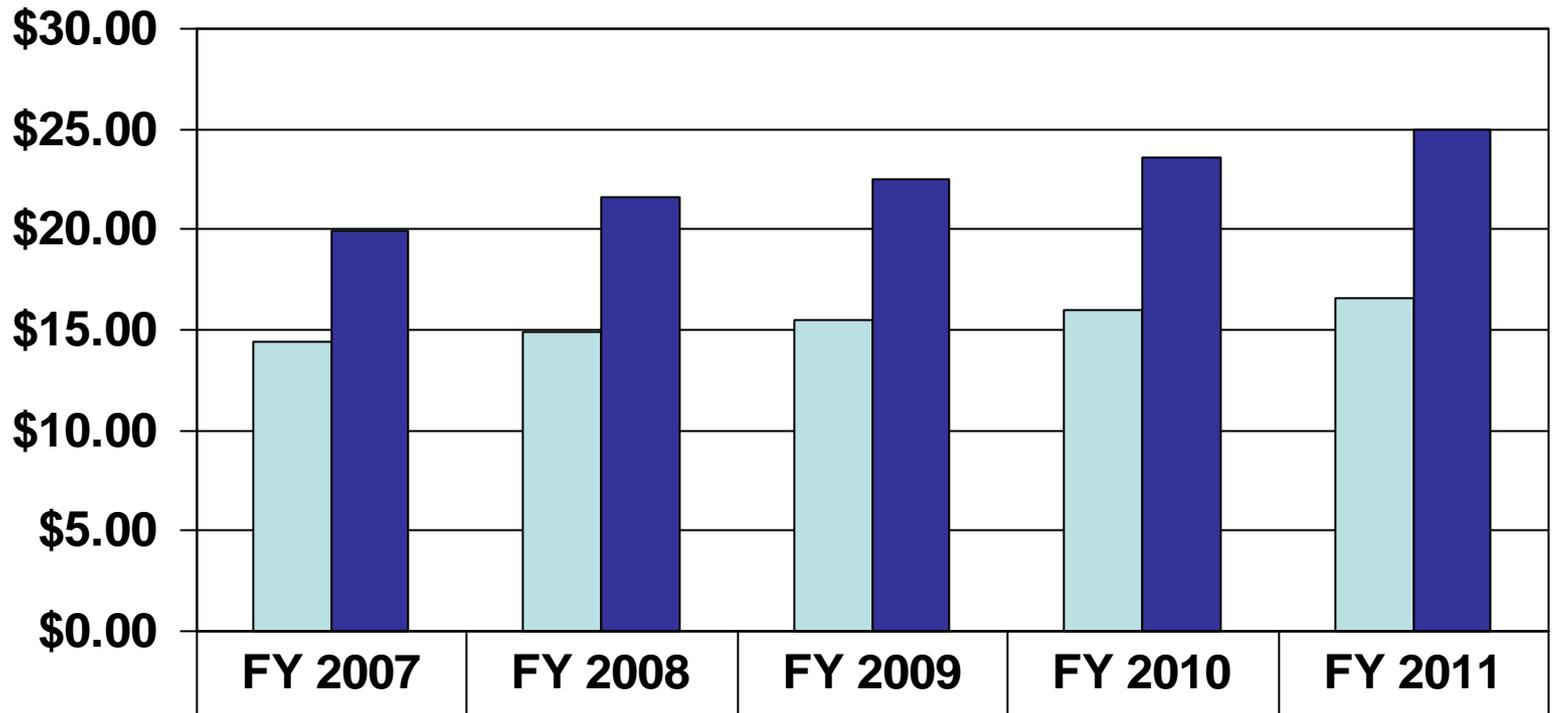
 Net fixed assets	156,788	162,064	173,491	186,190	206,611
 Bonds & notes	102,745	107,769	114,694	128,757	139,951

Rate & Bill Data

Water & Sewer Rates

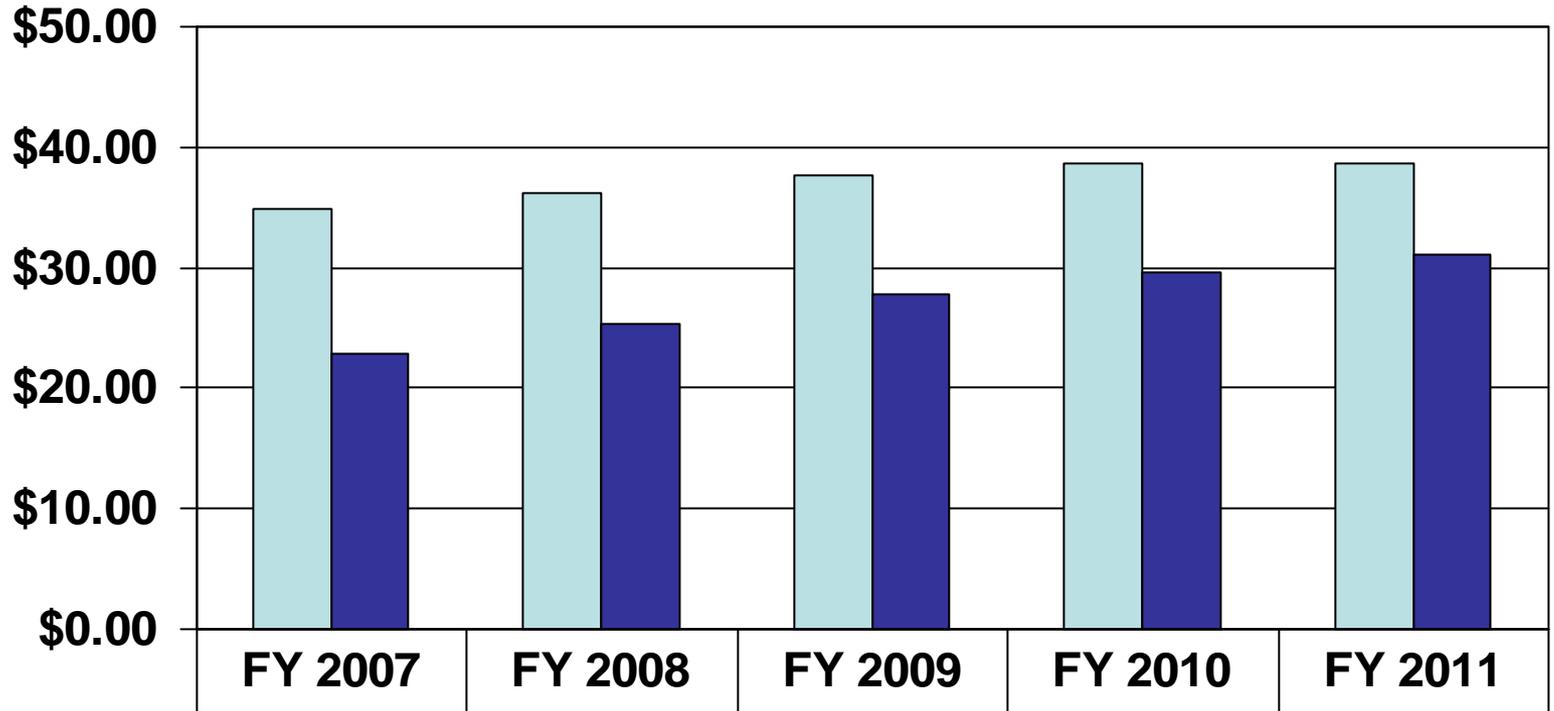
	7/1/2006	7/1/2007	7/1/2008	7/1/2009	7/1/2010
Water volume charge / hcf	\$1.89	\$1.97	\$2.05	\$2.13	\$2.22
Sewer					
Volume charge / hcf	4.97	5.17	5.38	5.54	5.54
BOD / 100 lbs	16.78	18.46	18.46	18.46	20.31
TSS / 100 lbs.	18.98	20.88	20.88	20.88	22.97
Septic hauler charge	177.00	177.00	177.00	177.00	185.5
Avg. industrial pre-treatment / permit fee	1,460	1,460	1,460	1,460	1,606
Sewer only	38.48	39.88	41.35	42.47	42.27
Account charge					
	3.69	3.69	3.69	3.69	3.69
Water Connection fees					
3/4" & 5/8" meters	775	850	950	950	950
1" service - 5/8" meter	790	870	1,000	1,000	1,000
1" service - 1" meter	935	1,030	1,150	1,150	1,150
Greater than 1" minimum	935	1,030	1,150	1,150	1,150
Sewer Connection Fees					
4" line	875	965	1,100	1,100	1,100
Greater than 4" - minimum	950	1,045	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	17.99	17.99	19.79
10" fire line	32.30	32.30	32.30	32.30	35.53
12" fire line	51.25	51.25	51.25	51.25	56.38
Cut-on charge					
	15	15	15	15	15
Cut-off charge					
	25	25	25	25	25

Water Bill Comparison @ 5,000 gallons / month



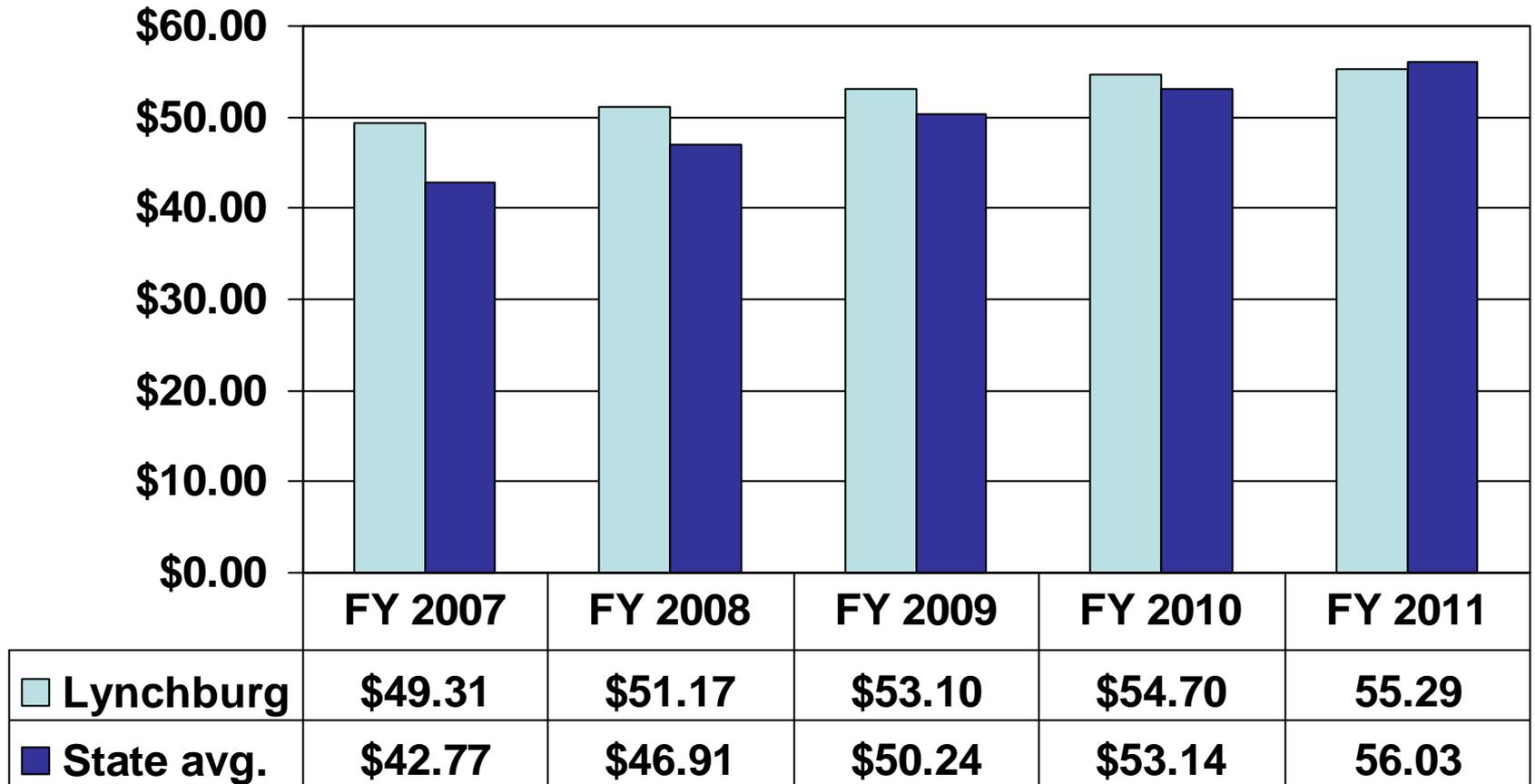
■ Lynchburg	\$14.41	\$14.94	\$15.47	\$16.00	\$16.60
■ State avg.	\$19.94	\$21.59	\$22.50	\$23.58	\$25.00

Sewer Bill Comparison @ 5,000 gallons / month



■ Lynchburg	\$34.90	\$36.23	\$37.63	\$38.69	38.69
■ State avg.	\$22.83	\$25.32	\$27.74	\$29.56	31.03

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



Contract Rates

	FY 2006	FY 2007	FY 2008	FY2009	FY2010
Water Contract rates					(2)
Amherst	1.75	1.72	1.94	1.89	1.99
Bedford	1.66	1.67	1.90	1.93	2.00
CCUSA	1.75	1.65	1.79	1.80	1.98
Frito-Lay	0.87	0.90	0.97	1.086	1.18
Rock Tenn	0.93	0.95	0.97	1.086	1.18
Sewer Contract rates					
Amherst (1)	0.96	0.98	1.27	1.47	1.27
Bedford (1)	0.92	0.98	1.27	1.47	1.27
CCUSA (1)	0.96	0.98	1.27	1.47	1.27
Frito-Lay	1.39	1.43	1.57	1.7279	2.51
Rock Tenn	1.52	1.53	1.56	1.7279	1.84

1. Volume rate only.
2. Per contract settlements

Annual Sewer Bill as a % of MHI

Annual Sewer Bill

FY	Bill	MHI	%
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%

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

