

County Commission
Utility Financial Workshop
October 21, 2009; 9 AM

Workshop Goals:

- A. Gain understanding of financial policies and confirm commitment to execution and adherence
 - B. Gain understanding of short-term capital plans and execution of near-term next steps
1. Utility Credit Profile – developing an understanding of the key financial metrics that establish the framework for Commission decision making
 2. Union’s Financial “Best Management Practices” – developing an understanding of the key metrics and confirming their application to Commission decision making
 3. The Capital Improvement Plan – developing an understanding of projects designed to improve reliability, quality and capacity for community building
 4. Financial Feasibility – integrating the capital plan with the operating budget
 5. Conformance to Key Ratios
 6. Plan Affordability – Implication on Rates
 7. Next Step Decisions
 - A. Adopt revisions to Utility “Best Management Practices”
 - B. Adopt 2010-2013 Capital Improvement Plan and Financial Feasibility
 - C. Authorize staff to proceed with “near-term” utility next steps
 - D. Authorize staff to develop RFQ for the purpose of engaging financial consultants to conduct a comprehensive update of utility rates and capacity fees

Financial Management Assessment In U.S. Public Finance

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Standard & Poor's Ratings Services is enhancing its analysis of financial management policies and procedures in U.S. public finance with the introduction of the concept of the Financial Management Assessment (FMA), a transparent assessment of a government's financial practices. The purpose of the FMA is to highlight aspects of management that are common to most governments in a consistent manner. (For a complete description of the FMA criteria, see the companion report, "Public Finance Criteria: Financial Management Assessment," RatingsDirect, June 27, 2006)

Frequently Asked Questions

Q: What is the FMA?

A: The FMA is an analytic enhancement adopted by Standard & Poor's to improve the definition of our analysis of management practices and policies, and expand our methods of communicating analytic conclusions about policies and procedures.

The FMA encompasses seven areas most likely to affect credit quality. They are:

- Revenue and expenditure assumptions
- Budget amendments and updates
- Long-term financial planning
- Long-term capital planning
- Investment management policies
- Debt management policies
- Reserve and liquidity policies

***RatingsDirect
Publication Date***

June 27, 2006

The FMA is a word evaluation that offers a more transparent assessment of a government's financial practices as an integral part of our GO and appropriation credit rating process. The overall assessments will be communicated using the following terminology:

- "Strong" indicates that practices are strong, well embedded, and likely sustainable.
- "Good" indicates that practices are deemed currently good, but not comprehensive.
- "Standard" indicates that the finance department maintains adequate policies in most, but not all key areas.
- "Vulnerable" indicates that the government lacks policies in many of the areas deemed most critical to supporting credit quality.

Q: Why is Standard & Poor's introducing the FMA at this time?

A: A government's ability to implement timely and sound financial and operational decisions in response to economic and fiscal demands is an important component of credit quality. Standard & Poor's is introducing the FMA in order to make certain aspects of our analysis of management more transparent—specifically those concerned with policies and practices that are considered most critical to credit quality.

Q: What types of issuers will be assigned an FMA?

A: FMAs will be assigned only to general government tax-backed and annual appropriation-backed issues. Special districts (TIFs, MUDs, special tax districts) will not have an FMA assigned.

Q: Doesn't Standard & Poor's already assess management?

A: Yes. Management is one of the four key areas underpinning tax-backed analysis. More specifically, the areas considered by the FMA have already been detailed in previous articles focusing on management best practices. The FMA is best understood as a framework in which to apply existing criteria and communicate results in a transparent and consistent manner.

Q: How did you choose the various areas of focus, and why did you not include others?

A: By focusing on a government's policies and practices, the FMA is not an evaluation of the competency or aptitude of individual finance professionals; nor is it an evaluation of a finance department's ability to handle either ordinary occurrences or unique challenges. The purpose of the FMA is to highlight the most transparent aspects of management that are common to most governments in a consistent manner. Even with this narrow definition, other possible practices could be considered, such as accounting and disclosure practices, internal controls, and policies for knowledge retention and staff turnover. While each of these, and others have the potential to affect credit quality, the factors considered in the FMA are those that Standard & Poor's considers the most critical in determining credit quality.

Q: Is the assessment affected by the type or size of the government?

A: While larger governments typically have additional finance staff that may be capable of producing more complex or sophisticated analyses, we believe all types and sizes of governments can implement good practices in each of the areas covered by the FMA, at least in some form. While school districts may not use independent economic forecasts for revenue analysis, as do states, objective forecasts for

enrollment are still important. A local government dependent on state aid might argue that state politics make it too difficult to predict funding beyond the current budgetary term, but an understanding of how quickly expenditures will outpace revenues given an assumed revenue growth rate is still extremely important—even if the assumed growth rate does not prove correct.

Q: What is the expected relationship between FMAs and credit ratings?

A: The FMA is one component of an assigned rating; we will continue to evaluate all of the other factors—economic, financial condition, debt and management. Given what the FMA measures, it is possible that an entity with a strong FMA may be better able to tolerate weakness in the basic credit areas, or conversely, may be better able to take advantage of improving conditions. As a result, the practices that are captured by the FMA could contribute to rating changes, or allow a community to better prevent a downgrade. We do not expect a large number of rating changes to occur, as evaluation of the policies measured is already included in our analysis. The FMA is simply a different way of reporting analytic results.



Moody's Investors Service

New Issue: MOODY'S UPGRADES UNION COUNTY'S (NC) WATER AND SEWER REVENUES BONDS TO A1 IN CONJUNCTION WITH SALE OF \$20 MILLION OF VARIABLE RATE

Global Credit Research - 12 Aug 2009

UPGRADE AFFECTS \$63.2 MILLION IN PARITY DEBT OUTSTANDING, INCLUDING THE CURRENT ISSUE

Water/Sewer
NC

Moody's Rating

ISSUE	RATING
Variable Rate Enterprise System Revenue Bonds, Series 2009	A1
Sale Amount	\$20,000,000
Expected Sale Date	08/19/09
Rating Description	Revenue Bonds

Opinion

NEW YORK, Aug 12, 2009 -- Moody's Investors Service has assigned an A1 rating to Union County's (NC) \$20 million Variable Rate Enterprise System Revenue Bonds, Series 2009. Concurrently, we have upgraded to A1 from A2 the rating on \$43.2 million of parity revenue debt outstanding. The current issue, which is secured by net revenues of the system, will be used to reimburse the county for a number of projects which had been temporarily cash funded. The upgrade reflects the more than doubling of the system's customer base over the last seven years, improved senior lien coverage levels, which have averaged 5.7 times over the last five years and a very strong liquidity positions that we expect will remain well above average given a conservative liquidity policy. The A1 rating also reflects the system's average debt ratio, with the need for additional capital over the next five years and moderation in growth in the service area, which is proximate to Charlotte (GO rated Aaa/stable).

SATISFACTORY LEGAL PROVISIONS; ABSENCE OF A DEBT SERVICE RESERVE FUND ON CURRENT ISSUE MITIGATED BY SYSTEM'S STRONG LIQUIDITY

Legal provisions are adequate and include a 1.2 times rate covenant, with the use of 20% of the Surplus Fund, and a requirement of sum sufficient coverage of all system debt, without the use of the Surplus Fund. The additional bonds test is essentially the requirement to meet the rate covenant. The current issue has no debt service reserve. This relative weakness of the legal structure is mitigated by the system's very strong liquidity and a policy of maintaining cash at a level equal to one year's operations and depreciation. Over the medium term, cash is not expected to equal less than \$35 million, which is projected to be approximately two times operations. The two previous revenue bonds issues, Series 2003A and 2003B are both secured by a cash funded reserve equal to the lesser of 125% average annual debt service, 10% of par, or maximum annual debt service.

TREMENDOUS GROWTH IN SERVICE AREA HAS MODERATED GIVEN NATIONAL ECONOMIC CONDITIONS; SYSTEM SERVES HALF OF UNION COUNTY

The utility provides water and sewer service to all major parts of the county excluding the City of Monroe (GO rated A1) with a total of 38,900 water customers and 27,800 sewer customers, reflecting a more than doubling since 2002. Approximately 50% of the total county population is served by the county water system. Population increases and ongoing residential and commercial development largely in the western side of the county adjacent to Mecklenburg County (GO rated Aaa) has driven growth in the water and sewer customer growth to by 8% and 10.5% annually. Growth has slowed, in line with economic trends, and 2009 growth has been just 1.8% and 2.8% respectively.

The county's treatment capacity is 22 MGDs, with an average daily demand for water at 10.3 MGD for fiscal

2008 and a peak of 21.7 MGD. The majority of treatment is from the Catawba River water treatment plant, jointly owned by the county with Lancaster County, SC, currently able to treat 18 MGD (total treatment capacity of the plant is 36 MGD - county entitled to 50% by contract with Lancaster County). Officials recognize the need to expand capacity at the plant and expect to expand the total treatment capacity at the plant to 54 MGD, 9 MGD of which will be allocated to Union County. In addition to their own capacity, the county maintains contractual water supply with both Anson County (rated A3) water system and the City of Monroe, both under long-term contracts. The county maintains a minimum purchase requirement of 1 MGD from Anson County and can increase up to 4 MGD. The contract with the City of Monroe is to meet emergency needs and the county is not contracted to any minimum purchase requirement under that agreement.

Sewer plant capacity, currently at 8.15 MGD, is slightly above the county's current 6.66 MGD average daily flows, however, the county maintains contractual relationships with the City of Monroe for 2.65 MGD and with the Charlotte/Mecklenburg Utility's McAlpine Creek plant for 3 MGD. While current capacity and these agreements are expected to be sufficient for the near-term, officials plan to expand the county's largest plant from 6 MGD to 9 MGD to meet the long-range growth needs. This expansion is included in the current five-year capital improvement program.

The county's service area is primarily residential in nature but contains commercial, industrial and governmental users. The 10 largest users account for approximately 10% of water and sewer revenues. The largest user of both water and sewer is Pilgrim's Pride, a poultry processor located in the eastern part of the county, with 3.6% of water and sewer revenues. This reflects, a significant reduction from six years ago when the company accounted for 10% and 8% of revenues, respectively.

STRONG HISTORICAL COVERAGE REFLECTS HEALTHY CONNECTION FEE REVENUE; FORECASTS SHOW REDUCED ALBEIT HEALTH COVERAGE MOVING FORWARD

System growth has benefited the financial position as connection and tap fees have generated significant revenues over the past decade, averaging an impressive 5.7 times senior lien coverage. Favorably, management has a policy to use these one time revenues solely for one time purposes, thereby buffering the impact of recent slowdown of growth. Additionally, senior lien coverage net of connection fees, which are considered revenue available for debt service under the indenture, has also been strong averaging 2.94 times over the last five years. Fiscal 2009 projected results are slightly depressed at 2.72 times net of connection fees, albeit still healthy, from historical levels given draught conditions in North Carolina, which resulted in water conservation measures being put in place. Total coverage, including the system's GO debt, was 1.41 times, net of connection fees. Forecasted coverage ratios, based on the county's projections, show coverage approximating 2 times, net of connection fees. Projections do not incorporate the system's expected two \$20 million of debt issuance in fiscal 2012 and 2013, nor do they reflect any rate increases.

Heavily factored into the upgrade is the system's strong liquidity with over four years' operating cash on hand (\$65 million), a portion of which is expected to be spent down in the medium term. However given the system's policy of maintaining one year's operations and depreciation in cash, Moody's expects liquidity will remain a strength. Management reports a coverage target level of between 1.25 and 1.5 times of all coverage, and given the relatively high level of subordinate debt (approximately 25% of outstanding debt), senior lien coverage is positioned to remain strong.

BELOW AVERAGE DEBT RATIO EXPECTED TO INCREASE; CONSIDERABLE EXPOSURE TO VARIABLE RATE DEBT AND SWAPS

The system's debt ratio is average at 30.6%, including the current issue, but expected to increase given plans for two issuances of \$20 million each in years 2012 and 2013. On a pro forma basis, the additional debt is projected to increase the debt ration to a still manageable 40%. Included in the capital plan is the expectation that approximately 25% of needs over the next five years will be cash funded. A relatively high 40% of the system's debt, including the current issue, is variable rate. This exposes the system to liquidity risk and increased interest expense. Important to Moody's analysis of the impact of the variable rate debt is the system's unusually strong liquidity (see above section for more information).

The system is party to three interest-rate swap agreements. The first transaction has a current notional amount of \$14.5 million and creates synthetic fixed-rate debt for the county's Series 2003B variable rated debt. The notional amount declines in accordance with the amortization schedule of the related bonds. The county pays a fixed rate of 2.99% Citibank NA, rated A1 and receives a floating rate (61.5% of LIBOR plus

.36%). As of July 31, 2009, the system's mark-to-market valuation of the swap was a negative \$587,992.

The second derivative agreement is a basis swap with an outstanding notional amount of \$24.6 million related to the system's Series 2003 fixed rate debt. The county pays Citibank NA a floating rate based upon the SIFMA index and receives 70% of LIBOR plus .4% semi annually. As of July 31, 2009, the system's mark-to-market value of the swap was a negative \$306,327.

The third derivative agreement is a floating-to-fixed swap against the current issue, with a current notional amount of \$20 million. The county pays a fixed rate of 3.82% to Citibank NA and receives 70% of LIBOR. As of July 31, 2009, the county's mark-to-market value of the swap was a negative \$2.5 million.

KEY STATISTICS

Number of customers: 38,900 water customers; 27,800 sewer customers

2008 Operating ratio: 62.3%

2008 Net take-down: 59.5%

2008 senior lien debt service coverage: 6.04 times (excluding 20% of net assets)

2008 combined senior lien coverage, excluding connection fees: 3.38 times (excluding 20% of net assets)

2008 combined senior lien and G.O. debt service coverage, excluding connection fees: 1.8 times (excluding 20% of net assets)

2008 Debt ratio: 30.6%

Principal Payout (10 years): 49.5%

RATING METHODOLOGIES USED AND LAST RATING ACTION TAKEN

The principal methodology used in rating of Union County's (NC) Enterprise System revenue bonds was "Analytical Framework for Water and Sewer System Ratings" which can be found at www.moody.com in the Credit Policy & Methodologies directory, in the Index of Special Reports - U.S. Public Finance. Other methodologies and factors that may have been considered in the process of rating this issuer can also be found in the Credit Policy & Methodologies directory.

The last rating action was on May 21, 2003 when Moody's Investors Service assigned an A2 to system's revenue bonds.

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Union County, North Carolina

Credit Profile		
US\$20. mil var rate enterprise sys rev bnds ser 2009 due 06/01/2034		
Unenhanced Rating	AA-(SPUR)/Stable	New
Union Cnty var rate enterprise sys rev bnds ser 2009 due 06/01/2034		
Long Term Rating	AAA/A-1	Rating Assigned
Unenhanced Rating	AA-(SPUR)/Stable	Rating Assigned
Union Cnty wtr & swr		
Unenhanced Rating	AA-(SPUR)/Stable	Affirmed

Rationale

Standard & Poor's Ratings Services has assigned its 'AAA/A-1' rating to Union County, N.C.'s variable rate enterprise systems revenue bonds series 2009 based on the application of the low correlation joint criteria table using a letter of credit (LOC) provided by Bank of America (A+/Stable/A-1) and Union County, N.C.'s water and sewer senior lien revenue bonds ('AA-').

The LOC provides coverage for payment of principal and interest on the bonds, including payment of unremarketed tendered bonds. The initial LOC provides for 190 days of interest at the 12% maximum rate. The anticipated expiration date of the LOC is Aug. 20, 2012, unless earlier terminated. Upon the expiration date, the rating will be withdrawn unless the LOC is extended pursuant to its terms or an alternative LOC is delivered.

The bonds are subject to mandatory tender upon the following occurrences:

- On the day following the last day of each commercial paper (CP) or term rate period;
- Date bonds are converted to another mode;
- On the effective date of a substitute LOC;
- On the second business day preceding each expiration date;

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- On each termination date which is the date event of default under the reimbursement agreement notice is received by the trustee (at least 25 days following trustee's receipt of such notice but no later than the business day prior to the termination date);
- During daily and weekly on the date designated by the county (10 business days' notice).

The bonds will initially bear interest in the weekly and may be later converted to the daily, CP, term, and fixed rate modes. The LOC will provide coverage for the weekly and daily rate modes, and during these modes bondholders may tender their bonds upon providing appropriate notice. The bonds are also subject to optional and mandatory redemptions as fully outlined in the indenture.

Standard & Poor's also affirmed its 'AA-' underlying rating (SPUR) on Union County, N.C.'s water and sewer senior lien revenue bonds, reflecting our view of the system's:

- Access to the Charlotte, N.C. employment base;
- Maintenance of strong debt service coverage of senior lien revenue bonds; and
- Very strong liquidity, with more than 1,100 days' cash, and an adopted policy to maintain unrestricted cash above 365 days.

In our view, these factors are partially mitigated by a substantial capital improvement plan (CIP) and the system's exposure to economically-sensitive connection fees.

The system serves Union County, whose population has grown 56% since 2000, to about 193,000 in 2008. The county is located in southern North Carolina, adjacent to Charlotte ('AAA' GO rating) and bordering South Carolina. The county's proximity to Charlotte and the extension of highway infrastructure have contributed to rapid growth in population. In addition, the county has a local employment base that is anchored by manufacturing and construction activities. Median household effective buying income (EBI) is strong, in our view, at 114% of the nation, and per capita EBI is good in our view, at 99%. The county's May 2009 unemployment rate was 10.8%, about equal to the state level but about 2 percentage points higher than the national level.

In our opinion, total debt service coverage was very strong in fiscal 2008, and while it declined in fiscal 2009, it remained good. In 2008, total debt service coverage and senior-lien coverage was 3.2x and 5.9x, respectively, including connection fees. Without connection fees, total debt service coverage and senior lien coverage drop to 1.9x and 3.6x, respectively. Total debt service includes revenue bonds, state utility loans, and some GO bonds used for water and sewer construction. Unaudited figures for fiscal 2009 indicate a \$1.2 million decline in service revenue—which was attributed to conservation restrictions—and a \$6.3 million decline in connection fee revenue—due to a decline in residential construction. Coverage without connection fees declined to 1.4x and 2.6x for total and senior-lien debt, respectively. In our view, liquidity is very strong, with 1,141 days' unrestricted cash, and the debt to plant ratio is low at 20%. The county has an adopted policy of maintaining at least 365 days' unrestricted cash on hand, and has been above its policy amount for more than five fiscal years.

While the water system has ample treatment capacity (22 million gallons per day; mgd), compared with average demand, the system's largest plant is over capacity on peak days, and management projects that the plant will be expanded along with Union County's partner in the plant, Lancaster County, S.C. The sewer system is at 55% of treatment capacity (13.8 mgd). The system has a very diverse customer base, after declines in customer concentration in recent years. The 10 leading water and sewer customers account for about 10% of both water and sewer revenues. The top user, Pilgrim's Pride, a poultry processing plant, accounts for about 4% of water and sewer revenues. The number of water accounts increased by 1.6% in fiscal 2009, a much slower rate than the double-digit growth in

fiscals 2006 and 2007. The average monthly combined water and sewer bill in Union County is competitive compared with that of other municipalities in the area at about \$56 per 7,500 gallons. The rates have not been adjusted since 2003.

The county's 2010-2013 CIP totals \$111 million, of which \$55 million is for the water system and \$56 million is for the sewer system, primarily to expand treatment capacity. In addition to this \$20 million issue, officials project that \$40 million of additional revenue debt will be issued during the next four years.

Outlook

The stable outlook assigned to the SPUR reflects what we consider strong management of the system's growth and planning for future capacity needs, and also reflects our expectation that the county will maintain good debt service coverage.

Debt Derivative Profile: 1.5

Union County has been assigned a Standard & Poor's Debt Derivative Profile (DDP) overall score of '1.5' on a scale of '1' to '4', with '1' representing the lowest risk and '4' the highest. The DDP score of '1.5' reflects Standard & Poor's view that Unions County's water and sewer-related swap portfolio reflects a very low credit risk at this time due to the following factors:

- A highly rated counterparty that must post collateral if its rating is lowered to below 'BBB+';
- The average economic viability of the swap portfolio during stressful economic cycles; and
- Good management practices.

These strengths are offset by possible collateral posting by the county on the two new swaps if the water and sewer rating falls to 'BBB'.

The county has entered into three swaps with Citibank N.A. (A+/Stable/A-1): a floating-to-fixed rate swap on its variable rate 2003B bonds, a basis swap on the 2003A bonds, and floating-to-fixed rate swap on this current variable rate issue. The credit support annex was amended under the new swaps to include collateral posting by the county as well as the bank; under the first swap, the county did not post any collateral. The additional credit event for the bank and the county are the same: the ratings falling below 'BBB-'. In addition, the county has executed a credit support annex such that the bank must post collateral if its ratings fall below 'BBB+'.

Under one floating-to-fixed-rate swap, the county receives 61.5% of LIBOR plus 0.36% and pays 2.995%, and under the other floating-to-fixed-rate swap, the county will pay 3.82% and receive 70% of LIBOR.

Under the basis swap the county will pay the Bond Market Association rate and receive 70% of LIBOR. The county manages its debt and swap program with adopted swap and debt management policies.

Related Research

- Criteria: Methodology And Assumptions: Approach To Evaluating Letter Of Credit-Supported Debt, July 6, 2009
- USPF Criteria: "Municipal Applications For Joint Support Criteria," June 25, 2007
- Criteria: "Joint Support Criteria Update," April 22, 2009

- USPF Criteria: “ Standard & Poor’s Revises Criteria For Rating Water, Sewer, And Drainage Utility Revenue Bonds,” Sept. 15, 2008

Ratings Detail (As Of 14-Aug-2009)		
Union Cnty wtr & swr		
Unenhanced Rating	AA-(SPUR)/Stable	Affirmed
Long Term Rating	AAA/A-1/Negative	Affirmed

Many issues are enhanced by bond insurance.

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Fitch Rates Union County, North Carolina's \$20MM Enterprise Sys Revs 'A+'; Outlook Stable

Ratings

04 Aug 2009 4:54 PM (EDT)

Fitch Ratings-New York-04 August 2009: Fitch Ratings assigns an 'A+' rating to Union County, North Carolina's (the county) \$20 million variable rate enterprise systems revenue bonds, series 2009 bonds. The bonds are scheduled for a negotiated sale on Aug. 19, 2009 with proceeds being used to fund various capital improvements of the county's water and sewer utility system (the system). Fitch will assign a short-term rating to the series 2009 bonds based on a letter of credit provided by Bank of America, N.A. closer to the sale date. With the issuance of the series 2009 bonds, the county plans to enter into a variable-to-fixed interest rate swap with Citibank, N.A., rated 'A+/F1+' by Fitch. In addition, Fitch affirms the 'A+' rating on the county's approximately \$80 million in outstanding parity debt. The Rating Outlook is Stable.

The 'A+' rating reflects the system's ample supply and treatment capacity and healthy financial profile marked by substantial cash reserves, strong operating margins, and solid debt service coverage levels. The rating is somewhat tempered by an exceptionally high rate of customer growth experienced over the years coupled with the current lack of a longer-term capital improvement plan, though Fitch believes the system maintains significant debt capacity and rate flexibility needed to meet the challenge of operating in a high-growth service area. While residential development within the service area as well as the larger region has slowed dramatically, a rebound in the housing market and return to rapid residential construction activity could pressure the system's operations and treatment and supply capacity in the future. Also of concern to Fitch are weaker than average legal covenants that allow for a portion of reserves to be applied to debt service coverage calculations and the county's substantial exposure to variable rate debt obligations and interest rate swap risk.

Located southeast of Charlotte, the county's population grew 47% in the 1990's and by an additional 50% through the current decade to reach an estimated 193,200 in 2008. With an employment base somewhat concentrated in construction and manufacturing, the county's unemployment rate climbed to almost 11% in May 2008, slightly better than regional and statewide averages, though still above the national figure. Income levels are well above average.

A jointly owned water treatment facility between Union County and neighboring Lancaster County, SC Water and Sewer District provides ample treatment capacity to the water system's nearly 38,000 customers. A planned expansion of the water treatment plant will increase capacity by 50% and help absorb growth in customer accounts that has averaged almost 10% annually over the last 10 years. The county also purchases additional treatment capacity from the nearby Anson County pursuant to a 20-year agreement that expires in 2014. Raw water is drawn from the Catawba River. Despite a similar rate of growth in wastewater customers, the system's five wastewater treatment facilities coupled with purchased capacity from neighboring utilities provides adequate capacity. However, to meet future demand, a portion of the current borrowing will fund the expansion of an existing county facility and the design phase of an additional treatment plant. Concern about customer concentration has dissipated over the years as the county's top users have diversified somewhat, though Pilgrim's Pride, a poultry producer, still accounts for about 3.5% of water and sewer revenues.

A growing customer base has helped the system generate healthy operating margins and strong debt service coverage through the years. Pledged revenues covered annual senior lien debt service by a strong 3.4 times (x) in fiscal 2008. Factoring in subordinate lien obligations, including general obligation bonds and state loans, coverage was still solid at 1.8x. Exceptional cash balances equal to well over 1,000 days worth of operating expenses somewhat mitigate Fitch's concern regarding the system's significant exposure to variable rate debt and outstanding swaps. Almost half of the system's outstanding debt is variable rate, and all of it remains hedged with a negative valuation. Financial projections show annual senior-lien debt service coverage remaining close to 2.0x through fiscal 2014, although the forecast does not incorporate additional debt issuance or further rate hikes. Fitch believes the system's rates are relatively low, equal only to about 1.0% of the county's median household income level.

The fiscal years 2010-2013 capital improvement plan (CIP) totals \$111 million and centers on the expansion of existing water and sewer treatment facilities to meet future growth. Funding is expected to come from the current offering, about \$40 million in additional parity debt, and on a pay-go basis from existing reserves and excess operating revenues. With outstanding debt equal only to about 40% of system assets, Fitch believes the system is well positioned to absorb the additional debt included in the CIP.

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Overview

These “best management practices”, adopted by the Board of County Commissioners on March 15, 2004, are influenced by the North Carolina Local Government Budget and Fiscal Control Act, sound financial principles and credit guidelines advocated by the rating agencies and Local Government Commission. Operating independently of changing circumstances and conditions, these practices guide the Board in policy decision making and provide the Manager with a framework in developing budgetary and financial planning recommendations – both in the short term (the annual budget) and long-term (capital planning and financial forecasting).

The practices were modified November 1, 2004, to include parameters defining the use of derivative products to mitigate the County’s interest rate exposure, October 17, 2005, to include limitations regarding the duration in which independent accounting firms may conduct the annual audit, October 15, 2007, to include parameters regarding the imposition of user fees, and September 15, 2008, to reflect refinements in the tax-supported debt capacity limits.

Operating Budget

1. The County will annually adopt a balanced budget by June 30, which will provide an operational plan for the upcoming fiscal year.
2. The Manager will develop a budget which contains detailed budget recommendations for the next succeeding fiscal year (year 1) and financial targets for next budget year (year 2) following the first succeeding year.
3. The County will maintain a system of budgetary controls to ensure adherence to the budget.
4. Current operating revenues will be sufficient to support current operating expenditures. Fund balance appropriated for recurring expenditures will not exceed an amount that the County can reasonably expect to save during the fiscal year.
5. The County will maintain an appropriated contingency account. The contingency account will not exceed 5 percent of all other appropriations within the same fund.
6. Debt, proceeds or non-recurring revenues will not be used to finance recurring operating and recurring capital expenditures.

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Accounting

7. The County will establish and maintain an accounting system in accordance with the North Carolina Local Budget and Fiscal Control Act.
8. An annual audit will be performed by an independent accounting firm in accordance with generally accepted accounting principles.
9. Auditing independence is enhanced by requiring that the independent accounting firm be replaced at the end of the audit contract period – a period of at least five years.
10. Financial systems will be maintained to monitor revenues and expenditures on a continual basis.

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Debt – Tax Supported

11. Tax supported debt to be issued over a 5-year capital planning period will be managed to a projected ratio of no more than 3 percent of the assessed valuation of taxable property of the County, may exceed the 3 percent ratio in any single year during the 5-year capital planning period, with the 5-year capital planning trend at or below 3 percent.
12. Payout of aggregate principal outstanding shall be no less than 50% repaid within 10 years.
13. Capital projects will be financed for a period not to exceed the expected useful life of the project.
14. The County will maintain its financial condition in order to maintain a minimum bond rating in the “AA” category for outstanding G.O. debt and “A” category for outstanding installment financing agreements from at least one nationally recognized municipal debt rating service.
15. Bond referendum and voted and non-voted debt issuance shall be considered only after inclusion of the financed projects in the County’s Capital Improvement Plan and Financial Feasibility Plan.
16. Bond referendum initiatives shall be placed on the ballot in connection with countywide or municipal elections.
17. Tax supported bond referendum initiatives shall be placed on the election ballot only after the development of a comprehensive debt service management plan that provides for the:
 - establishment of cash flow projections which provide an indication of fund requirements and the timing of bond sales

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development of principal and interest repayment schedules associated with bond sales

development of annual operating costs associated with capital projects
allocation of General Fund unrestricted revenues to support the repayment of issued bonds.

18. Projected bond cash flow deficits (the difference between projected bond repayment schedules and available revenues) shall be funded through increased taxes or reduction in General Fund services and programs.
19. A debt service management plan and fiscal impact statement shall be developed in connection with each bond referendum initiative and shall be disseminated to the general public.
20. Bond referendum initiatives that pass which contain debt service management plans providing for increased taxes shall be imposed in the first fiscal year immediately following the passage of the referendum. Fiscal impact statements that contain property tax rate increases shall be limited to \$0.04 per \$100 in any one fiscal year. By way of illustration, a fiscal impact statement contains a \$0.07 per \$100 property tax rate increase. A property tax rate increase of \$0.04 shall be imposed in the first fiscal year immediately following the passage of the referendum with the balance of \$0.03 occurring the second year following the referendum passage.

20a. A comprehensive debt service management plan, repayment plan and fiscal impact statement shall be developed prior to the issuance of non-voted debt.

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21. General Fund resources (taxes) required to service debt service expenditures shall be calculated and communicated to the general public with the annual tax bill or annual report.

Debt – Utility Revenue Supported

22. Utility debt service coverage ratios shall be maintained at a level of 1.25 to 1.5 times coverage or greater (as measured by net revenues, excluding capital contributions, available for debt service divided by total debt service requirements).

23. Utility system debt to equity shall not exceed 70% - 75% (as measured by total long-term debt divided by total net assets).

23a. Combined water and wastewater rates shall not exceed 1.5% of median household income.

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23b. Payout of aggregate principal outstanding shall be no less than 40% repaid within 10 years and 80% repaid within 20 years.

23c. Capital contributions shall be used to fund non-recurring asset additions contained in the capital improvement plan thereby reducing the requirement to issue utility system debt.

- 24. Utility capital projects will be financed for a period not to exceed the expected useful life of the project.
- 25. Utility capital projects shall be consistent and conform with other master plans such as Land Use, Economic Development and Transportation
- 26. Utility capital projects shall satisfy area wide benefits relating to production, treatment, transmission and distribution, as well as being economically viable.
- 27. The County will maintain its enterprise financial condition in order to maintain a minimum bond rating in the “A” category for outstanding Revenue debt from at least one nationally recognized municipal debt rating service.
- 28. Utility debt issuance shall be considered only after inclusion of the financed projects in the County’s Capital Improvement Plan and Financial Feasibility Plan. Deleted: Business
- 29. Debt issuance shall be considered only after the:
 - establishment of cash flow projections which provide an indication of fund requirements and the timing of bond sales
 - development of principal and interest repayment schedules associated with bond sales
 - development of annual operating costs associated with capital projects
 - development of a financial feasibility plan to support the repayment of issued bonds Deleted: business

Investments

- 30. The County will monitor the receipt and disbursement of all funds to ensure the maximum investment of idle cash.
- 31. The County will invest only in instruments which comply with the North Carolina Budget and Fiscal Control Act.

Capital Planning

- 32. The County will develop, and annually update, a comprehensive 5-year capital improvement plan for the General Fund (in collaboration with and to include the Union County Public Schools) which identifies and balances both sources (where the money comes from) and uses (where the money goes).

33. The County will develop, and update semi-annually, a comprehensive 5-year capital improvement plan for the Enterprise Funds which identifies and balances both sources (where the money comes from) and uses (where the money goes).

Fund Balance Targets

34. The maintenance of adequate fund balance is necessary to provide working capital, funds for unanticipated expenditures, funds for capital expenditures in advance of their reimbursement from debt proceeds and tax rate stabilization.
35. General Fund target unreserved fund balances are estimated at 16% (as measured by unrestricted cash and investments minus liabilities divided by expenditures plus recurring interfund transfers).
36. Water and Sewer Operating Fund target fund balances are estimated at 365 days cash on hand (as measured by unrestricted cash and investments minus non-GAAP liabilities divided by operating expenses to include depreciation).

Excess Fund Balance

37. General and Enterprise Fund balances in excess and Enterprise Fund balances in excess of target levels will be transferred to capital reserve funds to provide equity resources to fund the County's capital improvement plan.

Swap Agreements [REVISE ???? VRDB vs. Fixed]

38. Authorized to achieve a reduction and/or limit the financial exposure of debt service payments.
39. Must receive an opinion of bond counsel law firm that agreement is legal and binding.
40. Must receive Local Government Commission approval.
41. Must retain independent certification from financial advisor that swap agreement provides fair market value and that the associated risks are prudent risk appropriate for the County.
42. Counterparty must have two long-term, unsecured credit ratings in at least double A category.
43. Swap agreements may be procured either through negotiation or competitive. If negotiated, County must receive fair market opinion from financial advisor.

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User Fees

44. County encourages the establishment of fees at a level that maximizes revenues.
45. Regulatory fees shall be set at a level that strives to recover full costs (direct and indirect costs, such as depreciation or usage costs associated with capital assets) of providing the service, unless statutory restrictions limit the fee amount.
46. Non-regulatory fees are charged for a wide variety of services with the primary purpose for non-regulatory fees being to: 1) influence the use of the service and 2) increase equity.
47. Non-regulatory goods or services provided to specific, identifiable recipients shall be self-sustaining and therefore, shall be financed through user fees.
48. Non-regulatory user fees shall be set at a level that is competitive in the marketplace and strives to recover full costs (direct and indirect costs, such as depreciation or usage costs associated with capital assets) except when:
 - free or subsidized service provides a significant public benefit;
 - the County has determined that it should influence personal choice to achieve community-wide public benefits;
 - full cost recovery would result in reduced use of the service or limit access to intended users thereby not achieving community-wide public benefits;
 - the cost of collecting the user fees would be excessively high;
 - ensuring the users pay the fees would require extreme measures.

Statistical Analysis
Selected NC Municipal
Water and Sewer Systems

Municipality	Popula- tion	Total Operating Revenues	As a % of Operating Revenues			Days Sales in Receivables	Days Cash on Hand	Cashflow from Operations	Cashflow as % of Operating Revenues	Debt to Equity
			Total Operating Expenses	Operating Margin						
Charlotte	674,752	\$ 231,937,000	76.32	23.68	61.9	583.4	\$ 133,467,000	57.54	1.03	
Raleigh	367,313	108,039,836	99.52	0.48	56.2	241.0	27,252,546	25.22	0.97	
Greensboro	257,173	85,568,878	77.95	22.05	63.1	190.5	33,983,160	39.71	0.66	
Winston-Salem	224,889	62,561,012	93.78	6.22	52.6	417.0	23,399,729	37.40	0.94	
Fayetteville	181,453	57,080,057	80.77	19.23	109.6	85.6	26,950,652	47.22	0.49	
Durham	222,491	55,026,083	100.18	-0.18	63.4	774.2	19,674,789	35.76	0.39	
Cary	132,604	47,465,095	82.27	17.73	69.8	1,899.8	19,704,627	41.51	0.26	
High Point	98,806	37,179,010	72.15	27.85	19.8	697.6	14,589,006	39.24	1.07	
Concord	71,071	32,171,872	84.69	15.31	41.7	420.2	12,953,573	40.26	0.59	
Asheville	77,837	31,534,907	62.12	37.88	37.9	523.4	22,221,637	70.47	0.67	
Wilmington	100,746	30,303,159	86.18	13.82	55.0	770.2	11,225,786	37.04	0.55	
Gastonia	72,848	28,792,856	68.56	31.44	36.8	263.4	13,233,469	45.96	0.30	
Greenville	76,932	26,851,314	88.85	11.15	45.4	258.0	11,218,198	41.78	0.53	
Union	105,000⁽¹⁾	24,556,277	97.97	2.03	59.0	1,491.4	8,764,018	35.69	0.29	
Wilson	49,954	19,738,700	86.82	13.18	39.8	281.1	6,952,607	35.22	0.54	
Rocky Mount	58,902	19,539,892	90.01	9.99	37.1	132.7	5,460,077	27.94	0.16	
New Bern	25,711	18,079,265	82.23	17.77	46.4	8.3	5,249,433	29.04	0.83	
Jacksonville	77,397	16,090,217	83.68	16.32	48.5	89.0	9,930,329	61.72	0.65	
Mean Statewide Municipalities > 50,000			86.7 84.3	13.3 15.7	55 59	457 561		NA 41.6	.56 .79	

Source: Local Government Commission - 2008 Report

⁽¹⁾ Service population; all other numerics reflect municipal populations

1. Out of every \$1 of customer billings, Union uses 98 cents for operating expenses to include depreciation.
2. In spite of Union's high operating expenses/low operating margins, Union is able to generate cash flows from operations at levels close to the group average (as measured by % of operating revenues).
3. Union's higher operating expenses (as a percent of operating revenues) are likely a function of the system generating high levels of contributed capital (both cash and installed systems), depreciating those improvements and not including those improvements in the 'rate' base - customer monthly billings.
4. Union's high days cash on hand (includes both operating and capital) is likely a function of the system generating high levels of cash contributed capital and the slowness in executing its capital program.
5. Union's low debt levels (as measured by debt to equity) are likely a function of the system generating high levels of contributed capital (both cash and installed systems), lower cost historical plant capacity additions and the slowness in executing its capital program.

Statement of Net Assets

Proprietary Funds

June 30, 2008

	<u>Water and Sewer Fund</u>
ASSETS	
Current assets:	
Cash and investments	\$ 47,811,063
Accounts receivable (net)	3,820,046
Inventories	1,152,356
Cash and investments, restricted	2,885,491
Total current assets	<u>55,668,956</u>
Noncurrent assets:	
Cash and investments	14,702,155
Net pension obligation	128,621
Unamortized bond issuance costs	1,155,340
Investment in joint venture	13,064,924
Land and other assets not being depreciated	6,273,725
Buildings, equipment and infrastructure, net of depreciation	206,457,097
Total noncurrent assets	<u>241,781,862</u>
Total assets	<u>297,450,818</u>
LIABILITIES	
Current liabilities:	
Accounts payable and accrued liabilities	1,517,217
Deposits	277,945
Long-term liabilities, due within one year:	
General obligation bonds payable	1,861,895
Revenue bonds payable	1,894,767
State sanitary sewer loan payable	908,697
Total current liabilities	<u>6,460,521</u>
Noncurrent liabilities:	
Compensated absences	425,877
Net OPEB obligation	284,747
Unearned revenue	398,689
Long-term liabilities, due in more than one year:	
General obligation bonds	4,650,704
Revenue bonds	42,376,937
State sanitary sewer loan	14,694,573
Total noncurrent liabilities	<u>62,831,527</u>
Total liabilities	<u>69,292,048</u>
NET ASSETS	
Invested in capital assets, net of related debt	154,549,983
Restricted for debt service	2,885,491
Unrestricted	70,723,296
Total net assets	<u>\$ 228,158,770</u>

Union County, North Carolina

**Statement of Revenues, Expenses and Changes in Fund Net Assets
Proprietary Funds**

For the Year Ended June 30, 2008

	Water and Sewer Fund
OPERATING REVENUES	
Charges for services	\$ 23,648,204
Other operating revenue	908,073
Total operating revenues	24,556,277
OPERATING EXPENSES	
Personnel	5,957,037
Operating expenses	9,177,944
Depreciation	8,758,099
Operating leases	164,153
Total operating expenses	24,057,233
Operating income (loss)	499,044
NONOPERATING REVENUES (EXPENSES)	
Investment earnings	3,311,781
Gain (loss) on sale of capital assets	(160,735)
Interest and fees on long term debt	(1,761,759)
Loss on investment in joint venture	(422,595)
Total nonoperating revenue (expenses)	<u>966,692</u>
Income (loss) before contributions and transfers	1,465,736
TRANSFERS AND CONTRIBUTIONS	
Transfers to other enterprise funds	(160,496)
Capital contributions - cash	9,904,494
Capital contributions - non-cash	10,085,175
Total transfers and contributions	<u>21,294,909</u>
NET ASSETS	
Beginning	<u>206,863,861</u>
Ending	<u><u>\$ 228,158,770</u></u>

Union County, North Carolina

Statement of Cash Flows

Proprietary Funds

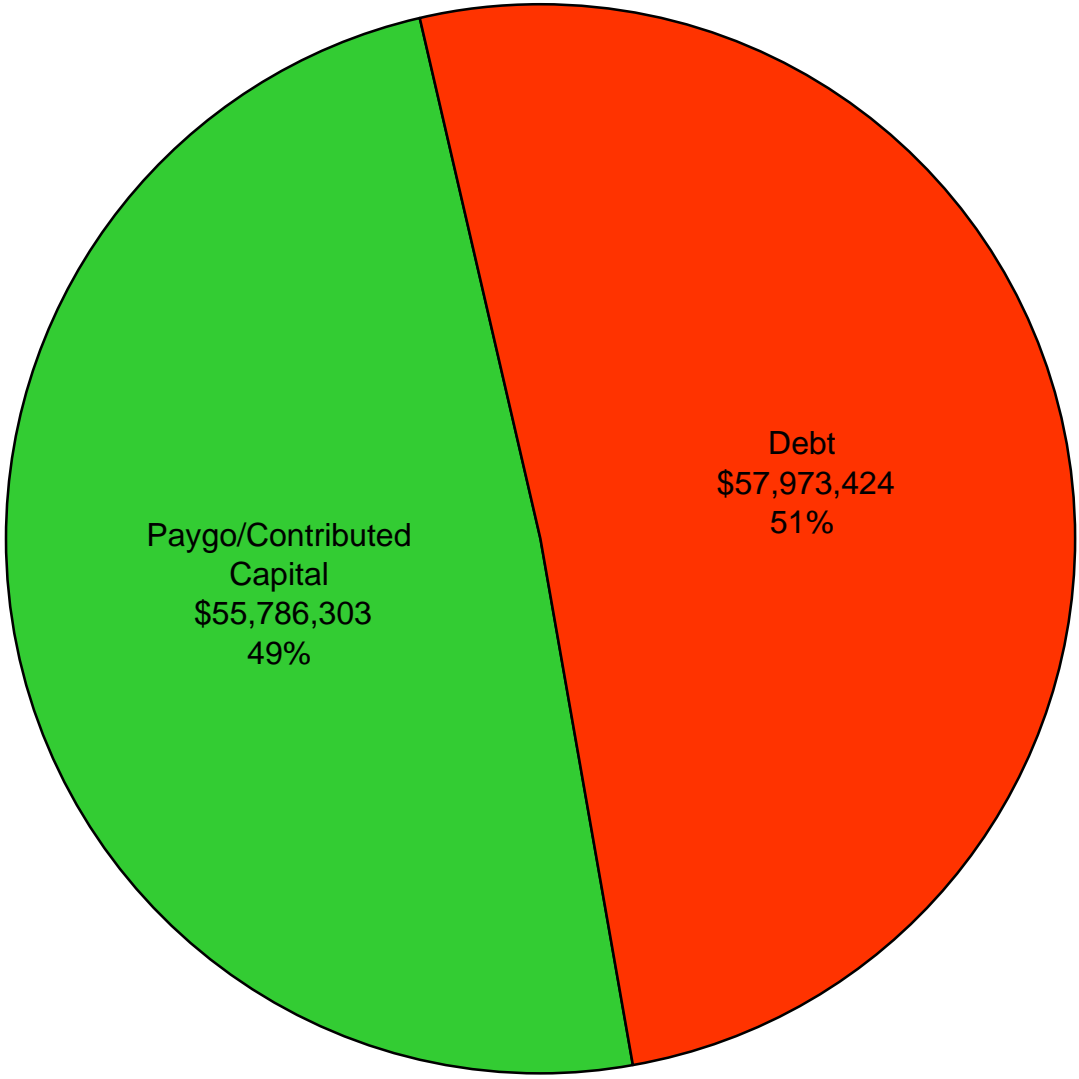
For the Year Ended June 30, 2008

	Water and Sewer Fund
OPERATING ACTIVITIES	
Cash received from customers for services	\$ 24,581,090
Other operating revenue	908,073
Cash paid to employees	(5,576,443)
Cash paid for goods and services	(11,148,702)
Net cash provided (used) by operating activities	8,764,018
NONCAPITAL FINANCING ACTIVITIES	
Transfers to other enterprise funds	(160,496)
CAPITAL AND RELATED FINANCING ACTIVITIES	
Proceeds from sale of capital assets	28,942
Proceeds from capacity fees	9,904,494
Proceeds from capacity fees deferred	398,689
Payments on general obligation bond debt	(2,485,057)
Payments on revenue bond debt	(2,070,000)
Payments on state sanitary loan	(233,697)
Interest paid on bonds and other debt	(2,188,427)
Acquisition and construction of capital assets	(6,090,550)
Net cash used by capital and related financing activities	(2,735,606)
INVESTING ACTIVITIES	
Investment earnings	3,311,782
Net increase (decrease) in cash and investments	9,179,698
CASH AND INVESTMENTS	
Beginning of year	56,219,011
End of year	\$ 65,398,709
Reconciliation of cash and investments to the Statement of Net Assets:	
Cash and investments	\$ 47,811,063
Cash and investments, noncurrent	14,702,155
Cash and investments, restricted assets	2,885,491
Total Statement of Net Assets cash and cash equivalents	\$ 65,398,709

Union County, North Carolina
Capital Improvement Plan - Conceptual
2010-2013

B	C	D	F	G	H	I	J	K	L	M
1			Thru 6.23.2009					1-4 Years		
2			PTD Total	1	2	3	4	CIP	CIP	
3	Project Title	Project Estimate	Inc. Enc.	2009-10	2010-11	2011-12	2012-2013	Sub-Total	Total 4+	
5	WATER PROJECTS									
7	CATAWBA RIVER WTP RESERVOIR EXPANSION (RAW 40MG TO 850MG)	17,039,694	705,944	1,010,000	7,661,875	7,661,875		16,333,750	17,039,694	
8	CATAWBA RIVER WTP EXPANSION (18 TO 27 MGD)	17,736,080	72,120	188,210	771,625	8,487,875	8,216,250	17,663,960	17,736,080	
9	ANSON IMPROVEMENTS (SHORT-TERM APPROX. 2.0 TO 4.0 MGD)	6,130,290	785,440	2,672,425	2,672,425			5,344,850	6,130,290	
10	ANSON INFRASTRUCTURE (DELIVER 6 MGD)	3,200,000			3,200,000			3,200,000	3,200,000	
11	EASTERN UNION COUNTY WATER SUPPLY (22MGD)	100,799,304	99,304	500,000	500,000	350,000	350,000	1,700,000	1,799,304	(99,000,000)
12	WATER MASTER PLAN UPDATES	300,000	-	300,000				300,000	300,000	
13	WEDDINGTON ELEVATED STORAGE TANK (1.5MG)	5,222,197	317,697	1,604,500	1,650,000	1,650,000		4,904,500	5,222,197	
14	SELF HELP PROGRAM		-	500,000	100,000	500,000	500,000	1,600,000	1,600,000	
15	BULK WATER STATIONS	743,936	23,936	40,000	340,000	340,000		720,000	743,936	
16	SMITH FARM RD WATER LINE	99,200	9,200	90,000				90,000	99,200	
17	MISCELLANEOUS WATERLINE REPLACEMENTS		-	500,000	500,000	500,000	500,000	2,000,000	2,000,000	
18	HWY 84 24" WATERLINE RELOCATION	189,162	29,162		160,000			160,000	189,162	
19	HEMBY BRIDGE WATER MAIN REPLACEMENT	421,430	59,430	362,000				362,000	421,430	
20	42" TRANSMISSION MAIN RELOCATION @ SC 5	274,000		54,000	220,000			274,000	274,000	
21	DODGE CITY WATER	229,150	150	229,000				229,000	229,150	
22	MISCELLANEOUS WATERLINE INFILL PROJECTS		-	500,000	500,000	500,000	500,000	2,000,000	2,000,000	
23	MINERAL SPRINGS PUMP STA AND ELEVATED TANK (6 MGD PS/1.0MG TANK)	5,050,000			400,000	650,000	4,000,000	5,050,000	5,050,000	
24	WESTERN UNION SCHOOL ROAD TRANSMISSION MAIN	1,204,000				164,500	1,039,500	1,204,000	1,204,000	
25	BUCKBOARD/NC 75 TRANSMISSION MAIN	1,534,000				247,000	1,287,000	1,534,000	1,534,000	
26	HWY 75 BOOSTER PUMPING STATION UPGRADE (1.5 TO 5 MGD)	1,978,000				394,000	1,584,000	1,978,000	1,978,000	
27	ALTAN TRANSMISSION MAIN	590,000				95,000	495,000	590,000	590,000	
29		162,740,442	2,102,382	8,550,135	18,675,925	21,540,250	18,471,750	67,238,060	69,340,442	
31	SEWER PROJECTS									
33	EAST UNION COUNTY COLLECTION SYSTEM IMPROVEMENTS	15,340,610	510,610	3,780,000	3,300,000	850,000		7,930,000	8,440,610	(6,900,000)
34	REPLACE EXISTING TALLWOOD WWTP	1,850,750	35,750	900,000	915,000			1,815,000	1,850,750	
35	REFURBISH SUBURBAN ESTATES PUMP STATION 1	445,200		445,200				445,200	445,200	
36	12 MILE CREEK WWTP EXPANSION (6 TO 9 MGD)	29,499,300	99,300	700,000	800,000	800,000	800,000	3,100,000	3,199,300	(26,300,000)
37	ADDITIONAL CAPACITY CMU SYSTEM (1 TO 3 MGD)	7,100,000			7,100,000			7,100,000	7,100,000	
38	12 MILE WWTP PUMP STATION & FORCE MAIN TO CMU (DIVERSION)	5,984,944	344,944	1,170,000	4,470,000			5,640,000	5,984,944	
39	CITY OF MONROE WWTP PARTNERING (2.65 TO 7.65 MGD)	27,025,000		250,000	250,000			500,000	500,000	(26,525,000)
40	NORTH UNION COUNTY WASTEWATER TREATMENT CAPACITY 3MGD	48,404,948	657,481	750,000	6,000,000	1,000,000	1,000,000	8,750,000	9,407,481	(38,997,467)
41	EXPAND OPERATIONS CENTER	3,600,000	25,200	68,800	75,000			143,800	169,000	(3,431,000)
42	UPGRADE POPLIN ROAD PUMP STATION	730,000				68,750	28,750	97,500	97,500	(632,500)
43	POPLIN ROAD FORCEMAIN	2,879,200				353,800	109,800	463,600	463,600	(2,415,600)
44	CROOKED CREEK PUMP STATION	2,536,800				175,700	95,700	271,400	271,400	(2,265,400)
45	CROOKED CREEK FORCE MAIN	7,384,000				649,000	250,000	899,000	899,000	(6,485,000)
46	STORMWATER INFRASTRUCTURE MAPPING	250,000		100,000	150,000			250,000	250,000	
47	OLDE SYCAMORE WWTP REHABILITATION	165,000		165,000				165,000	165,000	
48	EAST FORK 12 MILE CREEK PARALLEL TRUNK SEWER	3,448,500			2,071,000	1,377,500		3,448,500	3,448,500	
49	PURCHASE, INSTALL AND START-UP OF MAINTENANCE SOFTWARE	50,000		50,000				50,000	50,000	
50	MISCELLANEOUS FLOW MONITORING, HYDRAULIC MODEL CALIBRATION	220,000		110,000	110,000			220,000	220,000	
51	SEWER MASTER PLAN UPDATE	350,000		175,000	175,000			350,000	350,000	
52	GRAVITY SEWER DEESE COURT PUMP STATION OFF-LINE	217,000			217,000			217,000	217,000	
53	MISCELLANEOUS SEWER REHABILITATION			125,000	125,000	125,000	125,000	500,000	500,000	
54	HUNLEY CREEK WWTP DECOMMISSION	120,000			120,000			120,000	120,000	
55	MARSHVILLE FLOW MONITORING AND PIPE REHABILITATION	270,000			270,000			270,000	270,000	
57		157,871,252	1,673,285	8,789,000	26,148,000	5,399,750	2,409,250	42,746,000	44,419,285	
59		320,611,695	3,775,667	17,339,135	44,823,925	26,940,000	20,881,000	109,984,060	113,759,727	
139	SOURCES OF FUNDING									
140	BEGINNING BALANCE CASH BALANCE		31,126,574	27,350,907	34,538,607	(3,177,318)	(0)	27,350,907	31,126,574	
141										
142	TRANSFERS IN FROM WATER/SEWER OPERATING & GENERAL FUND		-	3,228,820	3,085,000	5,171,679	4,458,893	15,944,392	15,944,392	
143	CAPITAL CONTRIBUTIONS FROM DEVELOPERS/MUNICIPALITIES/AGENCIES		-	1,592,450	4,023,000	-	3,099,887	8,715,337	8,715,337	
144	REVENUE BONDS		-	19,705,565	-	24,945,639	13,322,220	57,973,424	57,973,424	
145			-	24,526,835	7,108,000	30,117,318	20,881,000	82,633,153	82,633,153	
146										
147	ENDING BALANCE CASH BALANCE		27,350,907	34,538,607	(3,177,318)	(0)	(0)	109,984,060	113,759,727	

**Funding Sources for Public Works
Capital Improvements Totaling \$113,760,000**



The following assumptions were made when preparing the CIP cost opinions:

Estimated Cost for Water Mains		
Pipe Diameter (inches)	Cost per Linear Foot	
12	\$	75
16	\$	90
24	\$	135
30	\$	170
36	\$	180
42	\$	220

\$2.20 per gallon for Plant Cost

Pump Station and Tanks based on vendor quotes

Engineering costs are assumed to be 20% of construction costs for projects under \$5MM; engineering costs are assumed to be 18% of construction costs for projects over \$5MM but less than \$20MM; costs are assumed to be 15% of construction costs for projects over \$20MM

Easements cost were estimated at \$10 per linear foot

Land acquisition was estimated at \$50,000 per acre

Land acquisition (Weddington) was estimated at \$400,000 per acre

Department	<i>Public Works</i>	Department Priority	1	WP003
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Project **Catawba River Water Treatment Plant (CRWTP) Reservoir Expansion**

Description This project will construct a second raw water reservoir which will add approximately 1000 million gallons of raw water storage on site. Construction of a new raw water intake and pump station will also be required for this project.

Justification This project will provide enhanced treatment of water with the reservoir acting as a pre-sedimentation basin. In addition this will provide the plant with almost 10 days of storage at ultimate flow. The cost for this project indicates a 50/50 split with Union County and Lancaster Water and Sewer District. Anticipated capital contribution from the City of Monroe is equal to 2/18 of our share of the total project costs

Setting Priorities (check all that apply)

- Mandated by law/courts/regulation (cite reference here)
- Alleviate risks to public or employee health and safety X
- Protection of County's physical investment X
- Enhancement of natural and social environment
- Results in more economical, efficient or effective delivery of services X
- Multiple uses or takes advantage of multi-jurisdictional participation

Year	Project to	1	2	3	4	CIP	5-10	CIP Total
Fiscal Year	Date	2009-10	2010-11	2011-12	2012-13	Sub-Total	2013-2019	(10-Year)

Capital Costs

Planning/Design	705,944	1,010,000	186,875	186,875		2,089,694		
Land						-		
Construction			7,475,000	7,475,000		14,950,000		
Other						-		
Total	705,944	1,010,000	7,661,875	7,661,875	-	17,039,694	-	17,039,694

Source and Basis of Capital Cost Estimate

The cost associated with this project are based on preliminary cost estimated from Black & Veatch.

Staff Review Committee Notes

Union County
Capital Project Request FY2010-2019

Department	<i>Public Works</i>	Department Priority	2	WP004
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Project **Catawba River Water Treatment Plant Expansion (CRWTP)**

Description This project will expand the County's allocation at the facility from 18 MGD to 27 MGD (9 MGD). The project consists of new treatment trains and chemical storage and feed facilities.

Justification Project has been identified as an infrastructure need in the 2005 Water Master Plan Update. The additional treatment capacity will supply the Waxhaw-Marvin, Mineral Springs, Highway 75 and Watkins Road water booster pumping stations. The cost for this project indicates a 50/50 split with Union County and Lancaster Water and Sewer District. Also this capacity expansion is required to supply the City of Monroe 1.9 MGD by 2012.

Setting Priorities (check all that apply)

- Mandated by law/courts/regulation (cite reference here)
- Alleviate risks to public or employee health and safety X
- Protection of County's physical investment X
- Enhancement of natural and social environment
- Results in more economical, efficient or effective delivery of services X
- Multiple uses or takes advantage of multi-jurisdictional participation

Year	Project to	1	2	3	4	CIP	5-10	CIP Total
Fiscal Year	Date	2009-10	2010-11	2011-12	2012-13	Sub-Total	2013-2019	(10-Year)

Capital Costs

Planning/Design	72,120	188,210	771,625	771,625	500,000	2,303,580		
Land						-		
Construction				7,716,250	7,716,250	15,432,500		
Other						-		
Total	72,120	188,210	771,625	8,487,875	8,216,250	17,736,080	-	17,736,080

Source and Basis of Capital Cost Estimate

The cost associated with this project are based on preliminary cost estimated from Hobbs and Upchurch.

Staff Review Committee Notes

Department	<i>Public Works</i>	Department Priority	3	WT051
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Project **Anson Improvements (Short Term 4.0 MGD)**

Description This project consists of approximately 40,000 linear feet (LF) of 24-inch water main and the construction of two new booster pumping stations. A 4.0 MGD pump station near the Anson County line and a 2.0 MGD pump station along Olive Branch Road.

Justification This project will expand the Eastern Service Area to optimize the current 4.0 MGD Anson County Water Contract. In addition expansion of the Eastern Service Area will reduce the Interbasin Transfer from the Catawba River Basin.

Setting Priorities (check all that apply)

- Mandated by law/courts/regulation (cite reference here)
- Alleviate risks to public or employee health and safety X
- Protection of County's physical investment X
- Enhancement of natural and social environment
- Results in more economical, efficient or effective delivery of services X
- Multiple uses or takes advantage of multi-jurisdictional participation

Year Fiscal Year	Project to Date	1 2009-10	2 2010-11	3 2011-12	4 2012-13	CIP Sub-Total	5-10 2013-2019	CIP Total (10-Year)
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Capital Costs

Planning/Design	754,728	150,000	150,000			1,054,728		
Land	30,712					30,712		
Construction		2,522,425	2,522,425			5,044,850		
Other						-		
Total	785,440	2,672,425	2,672,425	-	-	6,130,290	-	6,130,290

Source and Basis of Capital Cost Estimate

Based on actual bida dated July 2, 2009

Staff Review Committee Notes

Department	<i>Public Works</i>	Department Priority
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Project **Anson Agreement for Capital Payment**

Description Anson County has identified infrastructure improvements which will be needed to enable Anson county to deliver 6 MGD to Union County, along NC 74. This project consists of approximately 51,000 linear feet (LF) of 24-inch water main and the upgrade of the existing high service booster pumping station.

Justification As apart of the new Anson County Water Agreement, Union County has agreed to pay 40% of these improvements.

Setting Priorities (check all that apply)

- Mandated by law/courts/regulation (cite reference here)
- Alleviate risks to public or employee health and safety X
- Protection of County's physical investment X
- Enhancement of natural and social environment
- Results in more economical, efficient or effective delivery of services X
- Multiple uses or takes advantage of multi-jurisdictional participation

Year	Project to	1	2	3	4	CIP	5-10	CIP Total
Fiscal Year	Date	2009-10	2010-11	2011-12	2012-13	Sub-Total	2013-2019	(10-Year)

Capital Costs

Planning/Design						-		
Land						-		
Construction			3,200,000			3,200,000		
Other						-		
Total	-	-	3,200,000	-	-	3,200,000	-	3,200,000

Source and Basis of Capital Cost Estimate

Based on estimated total cost of \$8,000,000.00. This is an adjusted estimate to next FY based on an earlier estimate of \$6.2 MM from Anson County

Staff Review Committee Notes

Union County
 Capital Project Request FY2010-2019

Department	<i>Public Works</i>	Department Priority	4	WP005
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Project Eastern Union County Water Supply

Description This project is for the design and Construction of a new northestern WTP to service the Yadkin Basin o Union County. It includes construction of raw water intake from Bluetttt Falls the construction of a raw water pipelin to eastern Union County and a new Water Treatment Plant. Project Cost Estimates will be defined upon completion of a Preliminary Engineering Report, Financial Feasibility Analysis and finalizing

Justification This project has been identified as an infrastructure need based on the Board's Resolution with Anson County for a long-term water supply. The project eliminates the need for future Interbasin Transfer.

Setting Priorities (check all that apply)

- Mandated by law/courts/regulation (cite reference here)
- Alleviate risks to public or employee health and safety X
- Protection of County's physical investment X
- Enhancement of natural and social environment
- Results in more economical, efficient or effective delivery of services X
- Multiple uses or takes advantage of multi-jurisdictional participation

Year Fiscal Year	Project to Date	1 2009-10	2 2010-11	3 2011-12	4 2012-13	CIP Sub-Total	5-10 2013-2019	CIP Total (10-Year)
Capital Costs								
Planning/Design	99,304	500,000	500,000	350,000	350,000	1,799,304	10,000,000	
Land						-		
Construction						-	89,000,000	
Other						-		
Total	99,304	500,000	500,000	350,000	350,000	1,799,304	99,000,000	100,799,304

Source and Basis of Capital Cost Estimate

Based on preliminary cost estimates prepared by HDR Engineering Inc.

Staff Review Committee Notes

Department	<i>Public Works</i>	Department Priority	5
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Project **Water Master Plan Update**

Description Update the Water System Master Plan to reflect the dramatic changes in water needs over recent years and for the future.

Justification System growth and dynamics require regular updates of the Plan.

Setting Priorities (check all that apply)

- Mandated by law/courts/regulation (cite reference here)
- Alleviate risks to public or employee health and safety X
- Protection of County's physical investment X
- Enhancement of natural and social environment
- Results in more economical, efficient or effective delivery of services X
- Multiple uses or takes advantage of multi-jurisdictional participation

Year Fiscal Year	Project to Date	1 2009-10	2 2010-11	3 2011-12	4 2012-13	CIP Sub-Total	5-10 2013-2019	CIP Total (10-Year)
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Capital Costs

Planning/Design		300,000				300,000		
Land						-		
Construction						-		
Other						-		
Total	-	300,000	-	-	-	300,000	-	300,000

Source and Basis of Capital Cost Estimate Cost based on previous Master Plan Updates

Staff Review Committee Notes

Department	<i>Public Works</i>	Department Priority	6	WT044
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Project **Weddington Elevated Storage Tank**

Description This project involves the construction of a 1,500,000 gallon elevated storage tank. A conceptual level site is in the vicinity of Providence Road and NC 84.

Justification This project has been identified as infrastructure needs in the 2005 Water Master Plan Update. This project will enhance the ability of the County's water distribution system to maintain water pressure during peak summer demands and to meet fire flow demands when required.

Setting Priorities (check all that apply)

- Mandated by law/courts/regulation (cite reference here) X NCAC Public Water Supply Section
- Alleviate risks to public or employee health and safety X 18C.0805 storage requirements
- Protection of County's physical investment X
- Enhancement of natural and social environment
- Results in more economical, efficient or effective delivery of services X
- Multiple uses or takes advantage of multi-jurisdictional participation

Year Fiscal Year	Project to Date	1 2009-10	2 2010-11	3 2011-12	4 2012-13	CIP Sub-Total	5-10 2013-2019	CIP Total (10-Year)
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Capital Costs

Planning/Design	317,697	100,000	100,000	100,000		617,697		
Land	-	1,504,500				1,504,500		
Construction			1,550,000	1,550,000		3,100,000		
Other						-		
Total	317,697	1,604,500	1,650,000	1,650,000	-	5,222,197	-	5,222,197

Source and Basis of Capital Cost Estimate

Tank quotation from tank vendor, Engineering at 20%, and land at \$295,000 per acre.

Staff Review Committee Notes

Department	<i>Public Works</i>	Department Priority	8	WT035
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Project **Bulk Water Stations**

Description This project will consist of bulk water stations constructed at selected points throughout the County. Fill trucks will be required to use these dedicated stations and be required to pay for access to the water.

Justification Homeland Security issues must be considered given that one fire hydrant would provide access for possible contamination of a large volume of water. This project will eliminate the current practice of uncontrolled use of fire hydrants and minimize unrealized revenue for water usage.

Setting Priorities (check all that apply)

- Mandated by law/courts/regulation (cite reference here)
- Alleviate risks to public or employee health and safety X
- Protection of County's physical investment X
- Enhancement of natural and social environment
- Results in more economical, efficient or effective delivery of services X
- Multiple uses or takes advantage of multi-jurisdictional participation

Year	Project to	1	2	3	4	CIP	5-10	CIP Total
Fiscal Year	Date	2009-10	2010-11	2011-12	2012-13	Sub-Total	2013-2019	(10-Year)

Capital Costs

Planning/Design	23,936	40,000	40,000	40,000		143,936		
Land						-		
Construction			300,000	300,000		600,000		
Other						-		
Total	23,936	40,000	340,000	340,000	-	743,936	-	743,936

Source and Basis of Capital Cost Estimate

Bulk Water Station cost quotation from vendors, Engineering at 20% of Construction Cost

Staff Review Committee Notes

Department	<i>Public Works</i>	Department Priority	10	MW001
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Project **Miscellaneous Waterline Relocation and Projects Under \$100k**

Description This annual project will provide Public Works with an avenue to replace old problematic water mains countywide as required. In addition this annual project will cover miscellaneous water projects under \$100k.

Justification This annual project will provide Public Works with an avenue to replace old problematic water mains countywide as required. In addition this annual project will cover miscellaneous water projects under \$100k. An example of this type project would be waterline replacement or relocation due to NCDOT project.

Setting Priorities (check all that apply)

- Mandated by law/courts/regulation (cite reference here)
- Alleviate risks to public or employee health and safety X
- Protection of County's physical investment X
- Enhancement of natural and social environment
- Results in more economical, efficient or effective delivery of services X
- Multiple uses or takes advantage of multi-jurisdictional participation

Year Fiscal Year	Project to Date	1 2009-10	2 2010-11	3 2011-12	4 2012-13	CIP Sub-Total	5-10 2013-2019	CIP Total (10-Year)
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Capital Costs

Planning/Design		75,000	75,000	75,000	75,000	300,000		
Land		50,000	50,000	50,000	50,000	200,000		
Construction		375,000	375,000	375,000	375,000	1,500,000		
Other						-		
Total	-	500,000	500,000	500,000	500,000	2,000,000	-	2,000,000

Source and Basis of Capital Cost Estimate

Based on approximately 5,000 LF of waterline replacement per year at roughly \$75.00 per LF and 20% for Engineering. Easement cost at \$10/LF.

Staff Review Committee Notes

Department	<i>Public Works</i>	Department Priority	12	MW012
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Project Hemby Bridge Water Main Replacement

Description The project consist of approximately 3,600 LF of waterlines to replace sections of existing small diameter galvanized iron pipe.

Justification The project will elimtate 20 year old plus pipe which is outdated and failing. This will provide fire protection to existing customers and increase hydraulic capacity to the overall distribution system.

Setting Priorities (check all that apply)

- Mandated by law/courts/regulation (cite reference here)
- Alleviate risks to public or employee health and safety X
- Protection of County's physical investment X
- Enhancement of natural and social environment
- Results in more economical, efficient or effective delivery of services X
- Multiple uses or takes advantage of multi-jurisdictional participation

Year Fiscal Year	Project to Date	1 2009-10	2 2010-11	3 2011-12	4 2012-13	CIP Sub-Total	5-10 2013-2019	CIP Total (10-Year)
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Capital Costs

Planning/Design	59,430	10,400				69,830		
Land		3,400				3,400		
Construction		348,200				348,200		
Other						-		
Total	59,430	362,000	-	-	-	421,430	-	421,430

Source and Basis of Capital Cost Estimate

Based on preliminary cost estimates prepared by staff.

Staff Review Committee Notes

Department	<i>Public Works</i>	Department Priority	15	WT048
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Project **Miscellaneous Waterline Replacements**

Description The exact location and length of a water line infill project(s) will be determined each year by Public Works staff.

Justification A water distribution system needs to consist of a completed grid system to ensure the adequate delivery of water during fire flow events and to meet peak summer water demands. Projects to upgrade and replace old or undersized water lines

Setting Priorities (check all that apply)

- Mandated by law/courts/regulation (cite reference here)
- Alleviate risks to public or employee health and safety X
- Protection of County's physical investment X
- Enhancement of natural and social environment
- Results in more economical, efficient or effective delivery of services X
- Multiple uses or takes advantage of multi-jurisdictional participation

Year Fiscal Year	Project to Date	1 2009-10	2 2010-11	3 2011-12	4 2012-13	CIP Sub-Total	5-10 2013-2019	CIP Total (10-Year)
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Capital Costs

Planning/Design		75,000	75,000	75,000	75,000	300,000		
Land		50,000	50,000	50,000	50,000	200,000		
Construction		375,000	375,000	375,000	375,000	1,500,000		
Other						-		
Total	-	500,000	500,000	500,000	500,000	2,000,000	-	2,000,000

Source and Basis of Capital Cost Estimate

Based on approximately 5,000 LF of waterline replacement per year at roughly \$75.00 per LF and 20% for Engineering. Easement cost at \$10/LF.

Staff Review Committee Notes

Department	<i>Public Works</i>	Department Priority	16	Project code
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Project **Mineral Springs Pump Station and Elevated Tank**

Description This project involves a 1.0 million gallon elevated storage tank and a 6 MGD water booster pumping station. A preliminary site has been selected near the intersection of Western Union School Road and Robinson Road.

Justification This project along with Western Union School Rd Transmission Main and Buckboard/NC 75 Transmission Main have been identified as infrastructure needs in the 2005 Water Master Plan Update. These projects will provide water to Waxhaw and the new service area between NC 84 and NC 75 primarily along Billy Howey Road and Potters Road.

Setting Priorities (check all that apply)

- Mandated by law/courts/regulation (cite reference here)
- Alleviate risks to public or employee health and safety X
- Protection of County's physical investment X
- Enhancement of natural and social environment
- Results in more economical, efficient or effective delivery of services X
- Multiple uses or takes advantage of multi-jurisdictional participation

Year	Project to	1	2	3	4	CIP	5-10	CIP Total
Fiscal Year	Date	2009-10	2010-11	2011-12	2012-13	Sub-Total	2013-2019	(10-Year)

Capital Costs

Planning/Design			400,000	400,000	-	800,000		
Land			-	250,000	-	250,000		
Construction			-	-	4,000,000	4,000,000		
Other						-		
Total	-	-	400,000	650,000	4,000,000	5,050,000	-	5,050,000

Source and Basis of Capital Cost Estimate

Tank and Pumping Station quotation from vendors, Engineering at 20%, and land at \$50,000 per acre.

Staff Review Committee Notes

Department	<i>Public Works</i>	Department Priority	17	Project code
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Project **Western Union School Road Transmission Main**

Description This project involves 7,000 LF of 24-IN water transmission main to convey water from the new Mineral Springs Elevated Storage Tank to the Town of Waxhaw. The water transmission main is parallel to Western Union School Road between the intersection of Robinson Road and NC 75.

Justification This project along with Mineral Springs Pumping Station / Tank and Buckboard/NC 75 Transmission Main have been identified as infrastructure needs in the 2005 Water Master Plan Update. These projects will provide water to Waxhaw and the new service area between NC 84 and NC 75 primarily along Billy Howey Road and Potters Road.

Setting Priorities (check all that apply)

- Mandated by law/courts/regulation (cite reference here)
- Alleviate risks to public or employee health and safety X
- Protection of County's physical investment X
- Enhancement of natural and social environment
- Results in more economical, efficient or effective delivery of services X
- Multiple uses or takes advantage of multi-jurisdictional participation

Year	Project to	1	2	3	4	CIP	5-10	CIP Total
Fiscal Year	Date	2009-10	2010-11	2011-12	2012-13	Sub-Total	2013-2019	(10-Year)

Capital Costs

Planning/Design				94,500	94,500	189,000		
Land				70,000	-	70,000		
Construction				-	945,000	945,000		
Other						-		
Total	-	-	-	164,500	1,039,500	1,204,000	-	1,204,000

Source and Basis of Capital Cost Estimate

Based on 24-inch @ \$135/LF, Engineering @ 20% of Construction and Easements @ \$10/LF

Staff Review Committee Notes

Department	<i>Public Works</i>	Department Priority	18	Project code
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Project **Buckboard/NC 75 Transmission Main**

Description This project involves 13,000 LF of 16-IN water transmission main to convey water from the new Mineral Springs Elevated Storage Tank to Potters Road. The water transmission main is parallel to Buckboard Lane and NC 75.

Justification This project along with Mineral Springs Pumping Station / Tank and the Western Union School Road Transmission Main have been identified as infrastructure needs in the 2005 Water Master Plan Update. These projects will provide water to Waxhaw and the new service area between NC 84 and NC 75 primarily along Billy Howey Road and Potters Road.

Setting Priorities (check all that apply)

- Mandated by law/courts/regulation (cite reference here)
- Alleviate risks to public or employee health and safety X
- Protection of County's physical investment X
- Enhancement of natural and social environment
- Results in more economical, efficient or effective delivery of services X
- Multiple uses or takes advantage of multi-jurisdictional participation

Year	Project to	1	2	3	4	CIP	5-10	CIP Total
Fiscal Year	Date	2009-10	2010-11	2011-12	2012-13	Sub-Total	2013-2019	(10-Year)

Capital Costs

Planning/Design				117,000	117,000	234,000		
Land				130,000	-	130,000		
Construction				-	1,170,000	1,170,000		
Other						-		
Total	-	-	-	247,000	1,287,000	1,534,000	-	1,534,000

Source and Basis of Capital Cost Estimate

Based on 16-inch @ \$90/LF, Engineering @ 20% of Construction and Easements @ \$10/LF

Staff Review Committee Notes

Department	<i>Public Works</i>	Department Priority	19	Project code
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Project **Hwy 75 Booster Pumping Station Upgrade**

Description The project includes the upgrade of the Hwy 75 booster pumping station to have a firm pumping capacity of 5 MGD . In addition the project will require approximately 8,000 linear feet (LF) of 24-inch water main which will tie-in to the existing distribution system.

Justification This project was identified as an infrastructure need in both the 2000 and 2005 Master Plans. Rapid growth along the Little Twelve Mile Creek Interceptor has pushed this project forward.

Setting Priorities (check all that apply)

- Mandated by law/courts/regulation (cite reference here)
- Alleviate risks to public or employee health and safety X
- Protection of County's physical investment X
- Enhancement of natural and social environment
- Results in more economical, efficient or effective delivery of services X
- Multiple uses or takes advantage of multi-jurisdictional participation

Year Fiscal Year	Project to Date	1 2009-10	2 2010-11	3 2011-12	4 2012-13	CIP Sub-Total	5-10 2013-2019	CIP Total (10-Year)
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Capital Costs

Planning/Design				144,000	144,000	288,000		
Land				250,000	-	250,000		
Construction				-	1,440,000	1,440,000		
Other						-		
Total	-	-	-	394,000	1,584,000	1,978,000	-	1,978,000

Source and Basis of Capital Cost Estimate

Pump Station cost quotation from vendors, 24-inch @ \$135/LF, Engineering at 20%, and land at \$50,000 per acre.

Staff Review Committee Notes

Department	<i>Public Works</i>	Department Priority	20	Project code
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Project **Altan Transmission Main**

Description This project involves 5,000 LF of 16-inch transmission main parallel to Doster Road and Rocky River Road.

Justification This project and the Hwy 75 Booster Pumping Station Upgrade have been identified as infrastructure needs in the 2005 Water Master Plan Update. The implementation of these projects will enhance the ability of the upgraded NC 75 Water Booster Pumping Station to maintain water levels in the Austin Road Elevated Storage Tank (i.e., maintain water pressure during peak summer demands).

Setting Priorities (check all that apply)

- Mandated by law/courts/regulation (cite reference here)
- Alleviate risks to public or employee health and safety X
- Protection of County's physical investment X
- Enhancement of natural and social environment
- Results in more economical, efficient or effective delivery of services X
- Multiple uses or takes advantage of multi-jurisdictional participation

Year	Project to	1	2	3	4	CIP	5-10	CIP Total
Fiscal Year	Date	2009-10	2010-11	2011-12	2012-13	Sub-Total	2013-2019	(10-Year)

Capital Costs

Planning/Design				45,000	45,000	90,000		
Land				50,000	-	50,000		
Construction				-	450,000	450,000		
Other						-		
Total	-	-	-	95,000	495,000	590,000	-	590,000

Source and Basis of Capital Cost Estimate

Based on 16-inch @ \$90/LF, Engineering @ 20% of Construction and Easements @ \$10/LF

Staff Review Committee Notes

The following assumptions were made when preparing the CIP cost opinions:

Estimated Cost for Gravity Sewer		
Pipe Diameter (inches)	Cost per Linear Foot	
8	\$	160
10	\$	170
12	\$	190
15	\$	205
18	\$	225
21	\$	290
24	\$	355
30	\$	405
36	\$	495
42	\$	530
48	\$	575

Estimated Cost for Sewer Forcemains		
Pipe Diameter (inches)	Cost per Linear Foot	
12	\$	80
14	\$	90
16	\$	115
18	\$	130
20	\$	150
24	\$	190
30	\$	220

\$9.50 per gallon for the construction of a new WWTP

\$8.50 per gallon for the expansion of an existing WWTP

Easements cost were estimated at \$10 per linear foot

Land acquisition was estimated at \$40,000 per acre

Engineering costs are assumed to be 20% of construction costs for projects under \$5MM; engineering costs are assumed to be 18% of construction costs for projects over \$5MM but less than \$20MM; costs are assumed to be 15% of construction costs for projects over \$20MM

Department	<i>Public Works</i>	Department Priority	1	SE002
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Project East Union County Collection System Improvements

Description Upgrade of pump stations and forcemains necessary to utilize the capacity in the City of Monroe WWTP of 2.65 MGD average daily flow.. Original design was for 1.84 MGD ADF of capacity to maximize existing capacity from Monroe, Current estimate is for a 24 in FM (in lieu of 16") and pump station to achieve a firm capacity of 7.1 MGD and an average daily flow of 2.84 MGD. Our Goal is to be able to expand this system to handle up to a total of 5 MGD flow ADF from the Eastside of the County by 2025-2030.Existing project should meet Eastside needs thorough 2020-2025

Firm Capacity is defined as 2.5 time ADF with oldest unit out of service

Justification To accomodate future commercial, industrial and residential wastewater flows.

Setting Priorities (check all that apply)

- Mandated by law/courts/regulation (cite reference here) X Sanitary sewer overflows not allowed
- Alleviate risks to public or employee health and safety X under Permit WQCS00054
- Protection of County's physical investment
- Enhancement of natural and social environment X
- Results in more economical, efficient or effective delivery of services X
- Multiple uses or takes advantage of multi-jurisdictional participation X Handles flow form Marshville & Wingate

Year	Project to	1	2	3	4	CIP	5-10	CIP Total
Fiscal Year	Date	2009-10	2010-11	2011-12	2012-13	Sub-Total	2013-2019	(10-Year)
Capital Costs								
Planning/Design	510,610	400,000	300,000	50,000	-	1,260,610	900,000	
Land	-	380,000	-	-	-	380,000		
Construction	-	3,000,000	3,000,000	800,000	-	6,800,000	6,000,000	
Other						-		
Total	510,610	3,780,000	3,300,000	850,000	-	8,440,610	6,900,000	15,340,610

Funding Source

Installment Financing	-	-	-	-	-	-	-
Revenue Bonds	-	-	-	-	-	-	-
County Revenue	-	-	-	-	-	-	-
Non-County Revenue	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-

Operating Budget Impact

Operating Costs	-	-	-	-	-	-
Debt Service Costs	-	-	-	-	-	-
Less Revenues	-	-	-	-	-	-
Total	-	-	-	-	-	-

Source and Basis of Capital Cost Estimate

Cost based on CDM analysis 2.84 mgd average day flow - 38,000 ft r-o-w @\$10/ft - 18% engineering

Department	<i>Public Works</i>	Department Priority	2	SP015
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Project **Replace Existing Tallwood WWTP**

Description Replace the existing Tallwood WWTP, which serves the tallwood subdivision and Clear Creek Scout Camp.

Justification At 20-years old, the Tallwood WWTP is the oldest package treatment plant in the UCPW system. It is quickly approaching the end of its useful life. The structural integrity of the facility is failing.

Setting Priorities (check all that apply)

- Mandated by law/courts/regulation (cite reference here)
- Alleviate risks to public or employee health and safety X
- Protection of County's physical investment X
- Enhancement of natural and social environment X
- Results in more economical, efficient or effective delivery of services
- Multiple uses or takes advantage of multi-jurisdictional participation

Year	Project to	1	2	3	4	CIP	5-10	CIP Total
Fiscal Year	Date	2009-10	2010-11	2011-12	2012-13	Sub-Total	2013-2019	(10-Year)

Capital Costs

Planning/Design	35,750	150,000	115,000			300,750		
Land	-	-	-			-		
Construction	-	750,000	750,000			1,500,000		
Other	-	-	50,000			50,000		
Total	35,750	900,000	915,000	-	-	1,850,750	-	1,850,750

Funding Source

Installment Financing	-	-	-	-	-	-	-	-
Revenue Bonds	-	-	-	-	-	-	-	-
County Revenue	-	-	-	-	-	-	-	-
Non-County Revenue	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-

Operating Budget Impact

Operating Costs	-	-	-	-	-	-	-	-
Debt Service Costs	-	-	-	-	-	-	-	-
Less Revenues	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-

Source and Basis of Capital Cost Estimate

Based on August 2008 Draft Preliminary Engineering Report by CDM plus \$50K for demolition of existing facility - 20% engineering.

Staff Review Committee Notes

Department	<i>Public Works</i>	Department Priority	3
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Project Refurbish Suburban Estates PS 1 and Upsize Force Main

Description Repalce pumps and controls in order to bring the pump station up to current standards. Increase the force main size in order to handle current peak flows.

Justification The Suburban PS 1 control panel becomes submerged during heavy rain events. The panel needs to be relocated above flood elevation and updated to include SCADA. The existing pumps are at capacity and need to be upsized to avoid future wastewater spills. Preliminary engineering suggests that the force main is also at capacity and must be upgraded to provide a funtional system.

Setting Priorities (check all that apply)

- Mandated by law/courts/regulation (cite reference here)
- Alleviate risks to public or employee health and safety X
- Protection of County's physical investment x
- Enhancement of natural and social environment X
- Results in more economical, efficient or effecitve delivery of services X
- Multiple uses or takes advantage of multi-jurisdictional participation

Year	Project to	1	2	3	4	CIP	5-10	CIP Total
Fiscal Year	Date	2009-10	2010-11	2011-12	2012-13	Sub-Total	2013-2019	(10-Year)

Capital Costs

Planning/Design		70,000				70,000		
Land		25,200				25,200		
Construction		350,000				350,000		
Other						-		
Total	-	445,200	-	-	-	445,200	-	445,200

Funding Source

Installment Financing	-	-	-	-	-	-	-	-
Revenue Bonds	-	-	-	-	-	-	-	-
County Revenue	-	-	-	-	-	-	-	-
Non-County Revenue	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-

Operating Budget Impact

Operating Costs	-	-	-	-	-	-	-	-
Debt Service Costs	-	-	-	-	-	-	-	-
Less Revenues	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-

Source and Basis of Capital Cost Estimate

Pump ststions cost based on a similar refurbishment of the Meadows Mobile Home PS - 175,000 plus replace of 3360 feet of 6-inch force amin @ \$50 per foot. Need temporary construction easement only at \$7.50 per foot. 20% engineering.

Staff Review Committee Notes

Department	<i>Public Works</i>	Department Priority	5
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Project Additional Capacity in CMU System

Description Current contract with CMU allows for up to 3 MGD of capacity. We currently have paid for and use 1 MGD. Increasing to 3 would require us to pay CMU the capital cost for this additional capacity. Options include purchase of any available additional capacity, partnering in an expansion, or being a retail customer. This capacity (up to 3 MGD is needed within the 5 year CIP) CMU's Pump Station capacity needs to be evaluated if we go above 3 MGD.

Justification To accommodate present and future demand for sewer service in the 12 Mile and 6 Mile Creek basins.

Setting Priorities (check all that apply)

- Mandated by law/courts/regulation (cite reference here)
- Alleviate risks to public or employee health and safety X
- Protection of County's physical investment X
- Enhancement of natural and social environment X
- Results in more economical, efficient or effective delivery of services X
- Multiple uses or takes advantage of multi-jurisdictional participation X

Year	Project to	1	2	3	4	CIP	5-10	CIP Total
Fiscal Year	Date	2009-10	2010-11	2011-12	2012-13	Sub-Total	2013-2019	(10-Year)

Capital Costs

Planning/Design						-		
Land						-		
Construction		-	7,100,000			7,100,000		
Other						-		
Total		-	7,100,000	-	-	7,100,000	-	7,100,000

would probably pay debt svc to CMU over 20 yrs???

Funding Source

Installment Financing	-	-	-	-	-	-	-	-
Revenue Bonds	-	-	-	-	-	-	-	-
County Revenue	-	-	-	-	-	-	-	-
Non-County Revenue	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-

Operating Budget Impact

Operating Costs	-	-	-	-	-	-	-	-
Debt Service Costs	-	-	-	-	-	-	-	-
Less Revenues	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-

Source and Basis of Capital Cost Estimate

Purchase price estimated at 1.76 million/mgd for the original expansion and 1.8 million/mgd for additional improvements. $(\$1.76 \times 2) + (\$1.80 \times 2) = \$7.1$

Staff Review Committee Notes

Union County
 Capital Project Request FY2010-2019

Department	<i>Public Works</i>	Department Priority	Input priority	Project code
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Project **City of Monroe WWTP Partnering**

Description Partner with City of Monroe foan an additional 2.35 mgd of capacity in the City WWTP. Total County capacity would be 5.0 mgd to serve Eastern Union County

Justification To accomodate future commercial, industrial and residential wastewater flows.

Setting Priorities (check all that apply)

- Mandated by law/courts/regulation (cite reference here) X
- Alleviate risks to public or employee health and safety X
- Protection of County's physical investment X
- Enhancement of natural and social environment X
- Results in more economical, efficient or effective delivery of services X
- Multiple uses or takes advantage of multi-jurisdictional participation X

Year	Project to	1	2	3	4	CIP	5-10	CIP Total
Fiscal Year	Date	2009-10	2010-11	2011-12	2012-13	Sub-Total	2013-2019	(10-Year)

Capital Costs

Planning/Design		250,000	250,000			500,000		3,025,000
Land						-		
Construction						-	23,500,000	
Other						-		
Total	-	250,000	250,000	-	-	500,000	26,525,000	27,025,000

Source and Basis of Capital Cost Estimate

Per City of Monroe engineering report. 10 MGD expansion cost of \$100MM Our percentage of Cost is 2.35/10

Staff Review Committee Notes

Department	<i>Public Works</i>	Department Priority	8	PW006
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Project **Expand Operations Center**

Description Add 15000 square feet of office, training, break room and locker room space to the existing building at 4600 Goldmine Rd.

Justification The Water and Sewer crews, Inspectors and Metering staff are in separate buildings. The Sewer Crew is currently housed in temporary trailers. Inventory is scattered among several buildings and fields. Lack of training, break, and locker room facilities to accommodate Public Works field staff.

Setting Priorities (check all that apply)

- Mandated by law/courts/regulation (cite reference here)
- Alleviate risks to public or employee health and safety
- Protection of County's physical investment X
- Enhancement of natural and social environment
- Results in more economical, efficient or effective delivery of services X
- Multiple uses or takes advantage of multi-jurisdictional participation

Year	Project to	1	2	3	4	CIP	5-10	CIP Total
Fiscal Year	Date	2009-10	2010-11	2011-12	2012-13	Sub-Total	2013-2019	(10-Year)

Capital Costs

Planning/Design	25,200	68,800	75,000			169,000		
Land						-		
Construction				-	-	-		
Other						-		
Total	25,200	68,800	75,000	-	-	169,000	3,431,000	3,600,000

Funding Source

Installment Financing	-	-	-	-	-	-	-	-
Revenue Bonds	-	-	-	-	-	-	-	-
County Revenue	-	-	-	-	-	-	-	-
Non-County Revenue	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-

Operating Budget Impact

Operating Costs	-	-	-	-	-	-	-	-
Debt Service Costs	-	-	-	-	-	-	-	-
Less Revenues	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-

Source and Basis of Capital Cost Estimate

15000 square feet at \$200 per square foot plus 20% engineering. Square footage and cost are estimates from Pease and Associates and are based on a current needs evaluation and recent similar project construction costs.

Staff Review Committee Notes

Department	<i>Public Works</i>	Department Priority	9A
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Project Upgrade Poplin Road Pump Station

Description Upgrade existing pump station to 3.6 million gallons per day (MGD) to pump flows from the North Fork Crooked Creek interceptor to the new Crooked Creek pump station, which will pump all flow from the Crooked Creek basin to the North Union County Wastewater Treatment Plant.

Justification Pump station will be a part of the North Union County WWTF transmission system. This pump station needs to be upgraded to 3.6 MGD in order to handle 2015 projected flows. Wastewater services are needed in the northern portion of the County to allow industrial, commercial, and residential growth as well as to meet current demands.

Setting Priorities (check all that apply)

- Mandated by law/courts/regulation (cite reference here)
- Alleviate risks to public or employee health and safety X
- Protection of County's physical investment X
- Enhancement of natural and social environment X
- Results in more economical, efficient or effective delivery of services X
- Multiple uses or takes advantage of multi-jurisdictional participation

Year Fiscal Year	Project to Date	1 2009-10	2 2010-11	3 2011-12	4 2012-13	CIP Sub-Total	5-10 2013-2019	CIP Total (10-Year)
Capital Costs								
Planning/Design	-	-		28,750	28,750	57,500	57,500	
Land	-	-		40,000		40,000		
Construction	-	-	-	-		-	575,000	
Other	-	-	-	-	-	-	-	
Total	-	-	-	68,750	28,750	97,500	632,500	730,000

Funding Source

Installment Financing	-	-	-	-	-	-	-	-
Revenue Bonds	-	-	-	-	-	-	-	-
County Revenue	-	-	-	-	-	-	-	-
Non-County Revenue	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-

Operating Budget Impact

Operating Costs	-	-	-	-	-	-	-	-
Debt Service Costs	-	-	-	-	-	-	-	-
Less Revenues	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-

Source and Basis of Capital Cost Estimate

Estimated cost to upgrade pump station per Draft Master Plan (adjusted 15% for inflation)
 20% Engineering - 1 acre land @ 40K per acre

Staff Review Committee Notes

Department	<i>Public Works</i>	Department Priority	9B
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Project **Poplin Road Forcemain**

Description 24,400 feet of 14-inch forcemain to convey wastewater flows from the Poplin Road pump station to the new Crooked Creek pump station. Alternatively if more capacity is purchased from Monroe this would be cost for a new force main in that direction

Justification **This force main will be a part of the North Union County WWTF transmission system. Wastewater services are needed in the northern portion of the County to allow industrial, commercial, and residential growth as well as to meet current demands.**

Setting Priorities (check all that apply)

- Mandated by law/courts/regulation (cite reference here)
- Alleviate risks to public or employee health and safety X
- Protection of County's physical investment X
- Enhancement of natural and social environment X
- Results in more economical, efficient or effective delivery of services X
- Multiple uses or takes advantage of multi-jurisdictional participation

Year	Project to	1	2	3	4	CIP	5-10	CIP Total
Fiscal Year	Date	2009-10	2010-11	2011-12	2012-13	Sub-Total	2013-2019	(10-Year)

Capital Costs

Planning/Design	-	-	109,800	109,800	219,600	219,600	
Land	-	-	244,000	-	244,000		
Construction	-	-	-	-	-		2,196,000
Other	-	-	-	-	-		-
Total	-	-	353,800	109,800	463,600	2,415,600	2,879,200

Funding Source

Installment Financing	-	-	-	-	-	-
Revenue Bonds	-	-	-	-	-	-
County Revenue	-	-	-	-	-	-
Non-County Revenue	-	-	-	-	-	-
Total	-	-	-	-	-	-

Operating Budget Impact

Operating Costs	-	-	-	-	-	-
Debt Service Costs	-	-	-	-	-	-
Less Revenues	-	-	-	-	-	-
Total	-	-	-	-	-	-

Source and Basis of Capital Cost Estimate

24,400 ft 14-inch x \$90/ft
 \$10/ft easement cost
 Engineering 20%

Staff Review Committee Notes

Department	<i>Public Works</i>	Department Priority	9
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Project **Stormwater Infrastructure Mapping**

Description Add stormwater facilities and attributes to the geodatabase currently under design for water & sewer.

Justification Needed for tracking and inventory of infrastructure including maintenance and inspections. Will provide a tool to aid in the design of future stormwater facilities.

Setting Priorities (check all that apply)

- Mandated by law/courts/regulation (cite reference here)
- Alleviate risks to public or employee health and safety X
- Protection of County's physical investment
- Enhancement of natural and social environment X
- Results in more economical, efficient or effective delivery of services X
- Multiple uses or takes advantage of multi-jurisdictional participation

Year	Project to	1	2	3	4	CIP	5-10	CIP Total
Fiscal Year	Date	2009-10	2010-11	2011-12	2012-13	Sub-Total	2013-2019	(10-Year)

Capital Costs

Planning/Design		100,000	150,000			250,000		
Land						-		
Construction						-		
Other						-		
Total	-	100,000	150,000	-	-	250,000	-	250,000

Funding Source

Installment Financing	-	-	-	-	-	-	-
Revenue Bonds	-	-	-	-	-	-	-
County Revenue	-	-	-	-	-	-	-
Non-County Revenue	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-

Operating Budget Impact

Operating Costs	-	-	-	-	-	-
Debt Service Costs	-	-	-	-	-	-
Less Revenues	-	-	-	-	-	-
Total	-	-	-	-	-	-

Source and Basis of Capital Cost Estimate

\$250K based on an estimated number of existing structures

Staff Review Committee Notes

Department	<i>Public Works</i>	Department Priority	10
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Project **Olde Sycamore WWTP Rehabilitation**

Description Olde Sycamore WWTP maintenance. Prep metal tankage for industrial paint. Apply industrial coating per industry standards. Repair or replace influent barscreen and associated piping. Refurbish diffused aeration system.

Justification Olde Sycamore WWTP is an above ground metal structure that was placed in service around 1997. The wastewater and associated gases attack facility components. This maintenance is necessary to ensure continued WWTP operation. There are currently no plans to take the facility off-line.

Setting Priorities (check all that apply)

- Mandated by law/courts/regulation (cite reference here)
- Alleviate risks to public or employee health and safety X
- Protection of County's physical investment X
- Enhancement of natural and social environment X
- Results in more economical, efficient or effective delivery of services
- Multiple uses or takes advantage of multi-jurisdictional participation

Year	Project to	1	2	3	4	CIP	5-10	CIP Total
Fiscal Year	Date	2009-10	2010-11	2011-12	2012-13	Sub-Total	2013-2019	(10-Year)

Capital Costs

Planning/Design		15,000				15,000		
Land						-		
Construction		150,000				150,000		
Other						-		
Total	-	165,000	-	-	-	165,000	-	165,000

Funding Source

Installment Financi	0	-	-	-	-	-		
Revenue Bonds	0	-	-	-	-	-		
County Revenue	0	-	-	-	-	-		
Non-County Reven	0	-	-	-	-	-		
Total	0	-	-	-	-	-		

Operating Budget Impact

Operating Costs	0	-	-	-	-	-		
Debt Service Costs	0	-	-	-	-	-		
Less Revenues	0	-	-	-	-	-		
Total	0	-	-	-	-	-		

Source and Basis of Capital Cost Estimate

Cost is based on preliminary quotes obtained by UCPW staff.

Staff Review Committee Notes

Department	<i>Public Works</i>	Department Priority	11	SW022
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Project **East Fork Twelve Mile Creek Parallel Trunk Sewer**

Description Approximately 9,500 LF of 21-inch gravity sewer to parallel the existing 15-inch East Fork Twelve Mile Creek outfall.

Justification Existing 15-inch sewer is nearing its capacity. Additional capacity is needed to accommodate industrial, commercial and residential growth. Flow projections indicate this will be needed by 2010.

Setting Priorities (check all that apply)

- Mandated by law/courts/regulation (cite reference here)
- Alleviate risks to public or employee health and safety X
- Protection of County's physical investment X
- Enhancement of natural and social environment X
- Results in more economical, efficient or effective delivery of services X
- Multiple uses or takes advantage of multi-jurisdictional participation

Year	Project to	1	2	3	4	CIP	5-10	CIP Total
Fiscal Year	Date	2009-10	2010-11	2011-12	2012-13	Sub-Total	2013-2019	(10-Year)

Capital Costs

Planning/Design			551,000			551,000		
Land			142,500			142,500		
Construction			1,377,500	1,377,500		2,755,000		
Other						-		
Total	-	-	2,071,000	1,377,500	-	3,448,500	-	3,448,500

Funding Source

Installment Financing	-	-	-	-	-	-	-	-
Revenue Bonds	-	-	-	-	-	-	-	-
County Revenue	-	-	-	-	-	-	-	-
Non-County Revenue	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-

Operating Budget Impact

Operating Costs	-	-	-	-	-	-	-	-
Debt Service Costs	-	-	-	-	-	-	-	-
Less Revenues	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-

Source and Basis of Capital Cost Estimate

9,500 ft of 21-inch sewer @ \$290/ft
 \$15/ft easement cost
 20% Engineering

Staff Review Committee Notes

Department	<i>Public Works</i>	Department Priority	12
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Project Purchase, Install and Start-up of Maintenance Software

Description Purchase, installation and start-up of system software for improved inventory and asset management and integrate a work order system through add-on billing software. Software packages include asset and maintenance management and work orders.

Justification Due to the size and growth rate of the sewer system, a strong tool is needed to track problematic areas, line maintenance (required by State), line inspections (required by State), customer complaints and other system related data. Solutions recommended by IMG.

Setting Priorities (check all that apply)

- Mandated by law/courts/regulation (cite reference here)
- Alleviate risks to public or employee health and safety X
- Protection of County's physical investment
- Enhancement of natural and social environment X
- Results in more economical, efficient or effective delivery of services X
- Multiple uses or takes advantage of multi-jurisdictional participation

Year	Project to	1	2	3	4	CIP	5-10	CIP Total
Fiscal Year	Date	2009-10	2010-11	2011-12	2012-13	Sub-Total	2013-2019	(10-Year)

Capital Costs

Planning/Design		25,000				25,000		
Land						-		
Construction						-		
Other		25,000				25,000		
Total	-	50,000	-	-	-	50,000	-	50,000

Funding Source

Installment Financing	-	-	-	-	-	-	-
Revenue Bonds	-	-	-	-	-	-	-
County Revenue	-	-	-	-	-	-	-
Non-County Revenue	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-

Operating Budget Impact

Operating Costs	-	-	-	-	-	-	-
Debt Service Costs	-	-	-	-	-	-	-
Less Revenues	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-

Source and Basis of Capital Cost Estimate

Estimate \$25K for software packages, \$25K for selection assistance, installation, integration and start-up.

Staff Review Committee Notes

Department	<i>Public Works</i>	Department Priority	14
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Project **Sewer Master Plan Update**

Description Update Sewer Master Plan - expand reuse system section as well as residuals section.

Justification Update of plan is needed to ensure adequate planning is in place to provide service for current and future demands. Due to the dynamics of the system an update every three (3) years is recommended.

Setting Priorities (check all that apply)

- Mandated by law/courts/regulation (cite reference here)
- Alleviate risks to public or employee health and safety X
- Protection of County's physical investment X
- Enhancement of natural and social environment X
- Results in more economical, efficient or effective delivery of services X
- Multiple uses or takes advantage of multi-jurisdictional participation X

Year	Project to	1	2	3	4	CIP	5-10	CIP Total
Fiscal Year	Date	2009-10	2010-11	2011-12	2012-13	Sub-Total	2013-2019	(10-Year)

Capital Costs

Planning/Design		175,000	175,000			350,000		
Land						-		
Construction						-		
Other						-		
Total	-	175,000	175,000	-	-	350,000	-	350,000

Funding Source

Installment Financing	-	-	-	-	-	-	-
Revenue Bonds	-	-	-	-	-	-	-
County Revenue	-	-	-	-	-	-	-
Non-County Revenue	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-

Operating Budget Impact

Operating Costs	-	-	-	-	-	-	-
Debt Service Costs	-	-	-	-	-	-	-
Less Revenues	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-

Source and Basis of Capital Cost Estimate

Cost based on previous plan updates.

Staff Review Committee Notes

Department	<i>Public Works</i>	Department Priority	15
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Project Gravity Sewer Deese Court Pump Station Off-Line

Description 1000 LF of 8-inch sewer and appurtenances required to remove the Pump Station and provide service via gravity.

Justification Due to the age and condition of the station complete rehab is required (similar to the recently complete Meadows Mobile Home Park and the proposed Suburban Estates). Cost estimates obtained indicate that since gravity is in close proximity taking the station off-line will be the most cost effective option both short and long term.

Setting Priorities (check all that apply)

- Mandated by law/courts/regulation (cite reference here)
- Alleviate risks to public or employee health and safety X
- Protection of County's physical investment
- Enhancement of natural and social environment
- Results in more economical, efficient or effective delivery of services X
- Multiple uses or takes advantage of multi-jurisdictional participation

Year	Project to	1	2	3	4	CIP	5-10	CIP Total
Fiscal Year	Date	2009-10	2010-11	2011-12	2012-13	Sub-Total	2013-2019	(10-Year)

Capital Costs

Planning/Design			32,000			32,000		
Land			15,000			15,000		
Construction			160,000			160,000		
Other			10,000			10,000		
Total	-	-	217,000	-	-	217,000	-	217,000

Funding Source

Installment Financing	-	-	-	-	-	-	-	-
Revenue Bonds	-	-	-	-	-	-	-	-
County Revenue	-	-	-	-	-	-	-	-
Non-County Revenue	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-

Operating Budget Impact

Operating Costs	-	-	-	-	-	-	-	-
Debt Service Costs	-	-	-	-	-	-	-	-
Less Revenues	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-

Source and Basis of Capital Cost Estimate

1000 Lf 8-inch \$160 per foot, \$10K PS decommissioning, \$15 per foot easement, 20% engineering.

Staff Review Committee Notes

Department	<i>Public Works</i>	Department Priority	16
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Project **Miscellaneous Sewer Rehabilitation**

Description Miscellaneous infrastructure repairs/improvements/upgrades needed to maintain or enhance acceptable levels of service and maintain regulatory compliance. Inflow and infiltration evaluation and reduction efforts as well small projects under \$100,000 will be assigned a MS Project Code.

Justification Rehabilitation efforts help extend the life of the system and help reduce sanitary sewer overflows. Small projects that are identified from time to time to improve hydraulics, remove a pump station from service etc would fall in this line item.

Setting Priorities (check all that apply)

- Mandated by law/courts/regulation (cite reference here)
- Alleviate risks to public or employee health and safety X
- Protection of County's physical investment X
- Enhancement of natural and social environment
- Results in more economical, efficient or effective delivery of services X
- Multiple uses or takes advantage of multi-jurisdictional participation

Year	Project to	1	2	3	4	CIP	5-10	CIP Total
Fiscal Year	Date	2009-10	2010-11	2011-12	2012-13	Sub-Total	2013-2019	(10-Year)

Capital Costs

Planning/Design		25,000	25,000	25,000	25,000	100,000		
Land						-		
Construction		100,000	100,000	100,000	100,000	400,000		
Other						-		
Total	-	125,000	125,000	125,000	125,000	500,000	-	500,000

Funding Source

Installment Financing	-	-	-	-	-	-	-
Revenue Bonds	-	-	-	-	-	-	-
County Revenue	-	-	-	-	-	-	-
Non-County Revenue	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-

Operating Budget Impact

Operating Costs	-	-	-	-	-	-
Debt Service Costs	-	-	-	-	-	-
Less Revenues	-	-	-	-	-	-
Total	-	-	-	-	-	-

Source and Basis of Capital Cost Estimate

This is a miscellaneous category to be used for small, previously unidentified projects.

Staff Review Committee Notes

Union County
 Capital Project Request FY2010-2019

Department	<i>Public Works</i>	Department Priority	Input priority	Project code
Project	Hunley Creek WWTP Decommission			
Description	Demolish closed Hunley Creek WWTP			

Justification Open tanks may pose risk to human helath.

Setting Priorities (check all that apply)

- Mandated by law/courts/regulation (cite reference here) X
- Alleviate risks to public or employee health and safety X
- Protection of County's physical investment X
- Enhancement of natural and social environment X
- Results in more economical, efficient or effective delivery of services X
- Multiple uses or takes advantage of multi-jurisdictional participation X

Year	Project to	1	2	3	4	CIP	5-10	CIP Total
Fiscal Year	Date	2009-10	2010-11	2011-12	2012-13	Sub-Total	2013-2019	(10-Year)
Capital Costs								
Planning/Design			20,000			20,000		
Land						-		
Construction			100,000			100,000		
Other						-		
Total	-	-	120,000	-	-	120,000	-	120,000

Source and Basis of Capital Cost Estimate

Cost based on an estimated 1000 tons of debris (concrete and reinforcing steel) at \$100 per ton plus a 20% allowance for engineering that may be associated with specification development including equipment salvage, backfill of excavated areas and manholes, coordination of overhead utility relocation. Sedimentation and Erosion Control permitting may be required.

Staff Review Committee Notes

Department	<i>Public Works</i>	Department Priority	14
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Project Marshville Flow Monitoring Station & Pipe Rehabilitation

Description Construct flow monitoring station and rehabilitate approximately 1200 feet of 10" outfall and associated manholes from the metering station to County outfall.

Justification Needed to accurately measure Marshville's wastewater flow. The current metering station is owned by Marshville and does not adequately measure flow. Rehabilitation of downstream pipe is necessary to prevent unmeasured extraneous flow from entering the system.

Setting Priorities (check all that apply)

- Mandated by law/courts/regulation (cite reference here)
- Alleviate risks to public or employee health and safety
- Protection of County's physical investment X
- Enhancement of natural and social environment
- Results in more economical, efficient or effective delivery of services
- Multiple uses or takes advantage of multi-jurisdictional participation X

Year	1	2	3	4	5	CIP	6-10	CIP Total
Fiscal Year	2008-09	2009-10	2010-11	2011-12	2012-13	Sub-Total	2014-18	(10-Year)

Capital Costs

Planning/Design	-	-	45,000	-	-	45,000	-	-
Land	-	-	-	-	-	-	-	-
Construction	-	-	225,000	-	-	225,000	-	-
Other	-	-	-	-	-	-	-	-
Total	-	-	270,000	-	-	270,000	-	270,000

Funding Source

GO Bonds	-	-	-	-	-	-	-	-
2/3 Bonds	-	-	-	-	-	-	-	-
Installment Financing	-	-	-	-	-	-	-	-
2003 COPs	-	-	-	-	-	-	-	-
Revenue Bonds	-	-	-	-	-	-	-	-
County Revenue	-	-	-	-	-	-	-	-
Non-County Revenue	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-

Operating Budget Impact

Operating Costs	-	-	-	-	-	-	-	-
Debt Service Costs	-	-	-	-	-	-	-	-
Less Revenues	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-

Source and Basis of Capital Cost Estimate

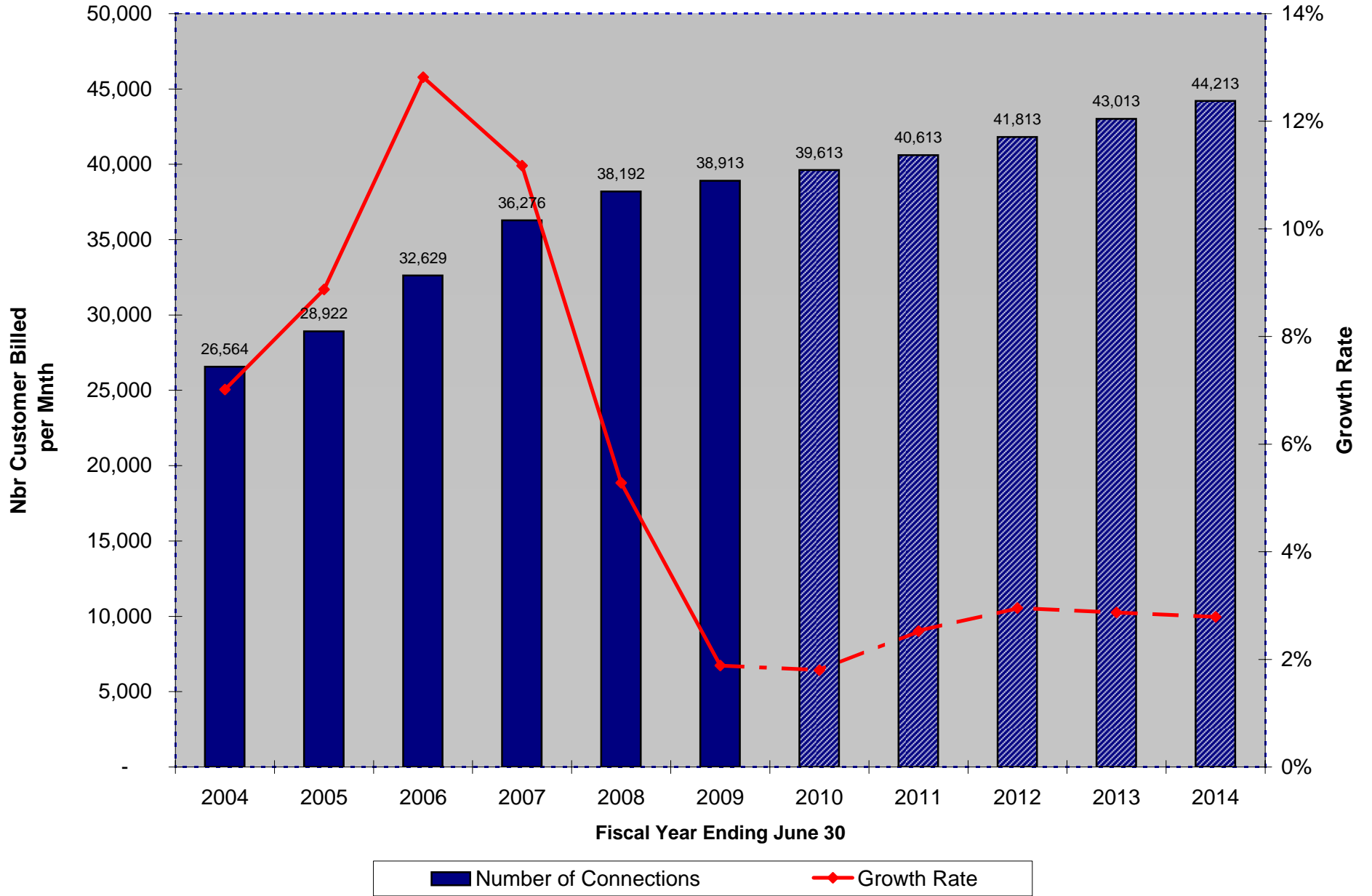
Per May 2005 Hydrostructures cost estimate (plus adjustment for inflation). Metering station = \$ 54,375 and \$84,500 for rehab. 20% engineering

Staff Review Committee Notes

Union County, North Carolina
Major Operating and Financial Performance Assumptions
2006-2009 Audited
2010-2014 Projections

	2006	2007	2008	2009	2010	2011	2012	2013	2014
Water customers	32,629	36,276	38,192	38,913	39,613	40,613	41,813	43,013	44,213
% inc/(dec)	12.8%	11.2%	5.3%	1.9%	1.8%	2.5%	3.0%	2.9%	2.8%
# inc/(dec)	3,707	3,647	1,916	721	700	1,000	1,200	1,200	1,200
Sewer customers	22,732	26,113	27,040	27,432	28,132	29,132	30,332	31,532	32,732
% inc/(dec)	18.1%	14.9%	3.5%	1.4%	2.6%	3.6%	4.1%	4.0%	3.8%
Water production	3,906,997,740	4,320,558,200	4,118,806,600	3,675,705,700	3,947,694,050	4,219,682,400	4,344,362,155	4,469,041,910	4,593,721,664
Water sales (gallons)	25.0%	10.6%	-4.7%	-10.8%	7.4%	6.9%	3.0%	2.9%	2.8%
Water sales (\$)	39.3%	16.6%	-12.3%	-8.9%	7.4%	6.9%	3.0%	2.9%	2.8%
Sewer sales (\$)	16.8%	14.0%	1.6%	-0.2%	2.6%	3.6%	4.1%	4.0%	3.8%
Water capacity fees (ERU)	\$500	\$500	\$500	\$500	\$500	\$1,500	\$1,500	\$1,500	\$1,500
Sewer capacity fees (ERU)	\$2,650	\$2,650	\$2,650	\$2,650	\$2,650	\$2,650	\$2,650	\$2,650	\$2,650
Revenue Rate Adjustments						2.0%	2.0%	2.0%	2.0%
Full-time Equivalency	89.08	95.68	102.97	98.15	94.21	96.57	98.98	101.45	103.99
Labor costs - direct						1.00%	2.25%	2.50%	2.75%
Health/Dental						10.0%	10.0%	5.0%	5.0%
LGERS Rate				4.89%	4.89%	6.64%	8.39%	10.14%	10.14%
OPEB ARC by 2014									
Energy					Budget	7.00%	7.00%	7.00%	7.00%
Communication					Budget	5.00%	5.00%	5.00%	5.00%
General price inflator					Budget	2.25%	2.50%	2.75%	3.00%
Debt Issuance (25 years, 4X rule, level debt service)							4.65%	4.76%	4.83%

Water Connections



Total Water Production Monthly Purchases

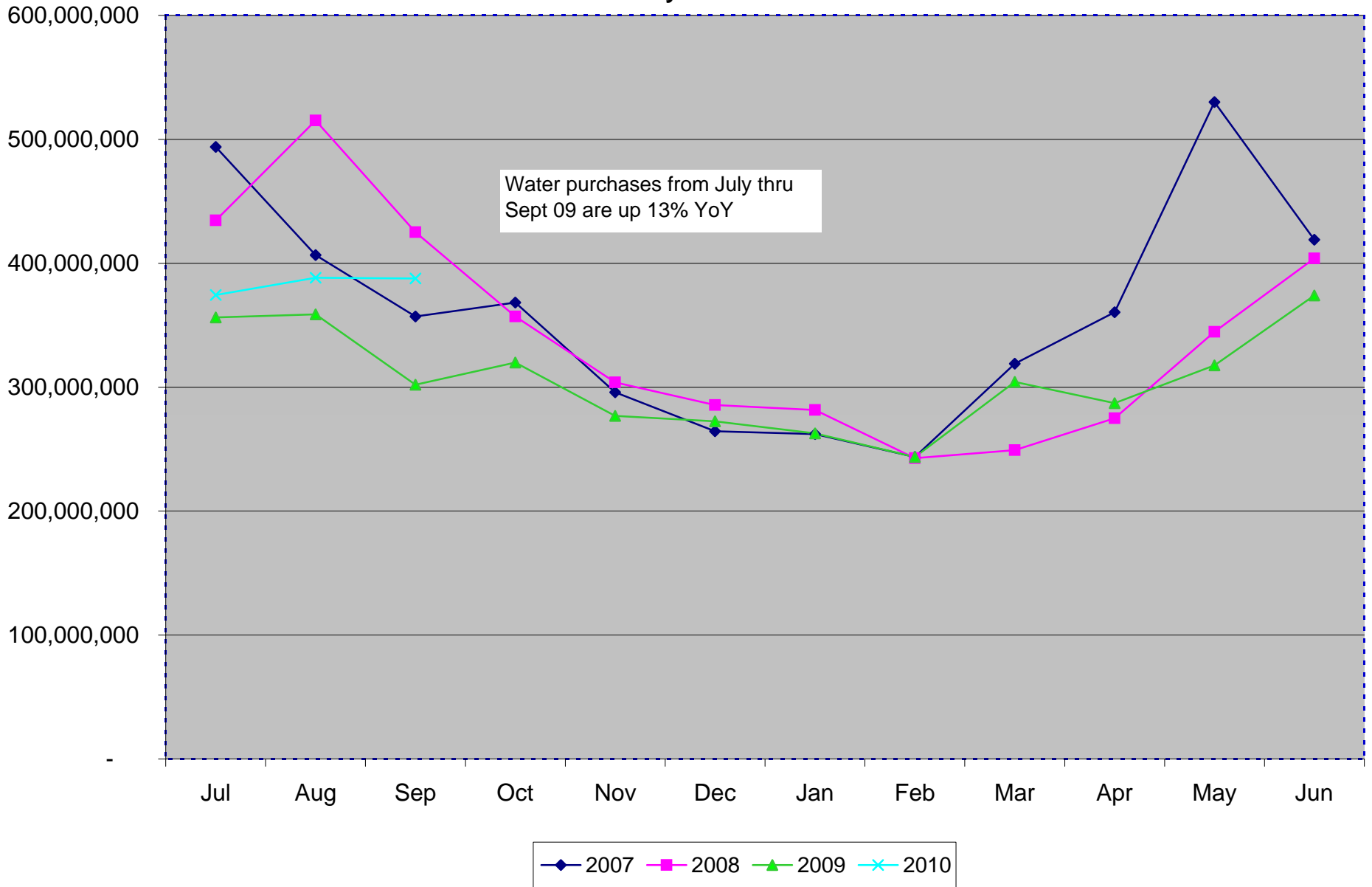
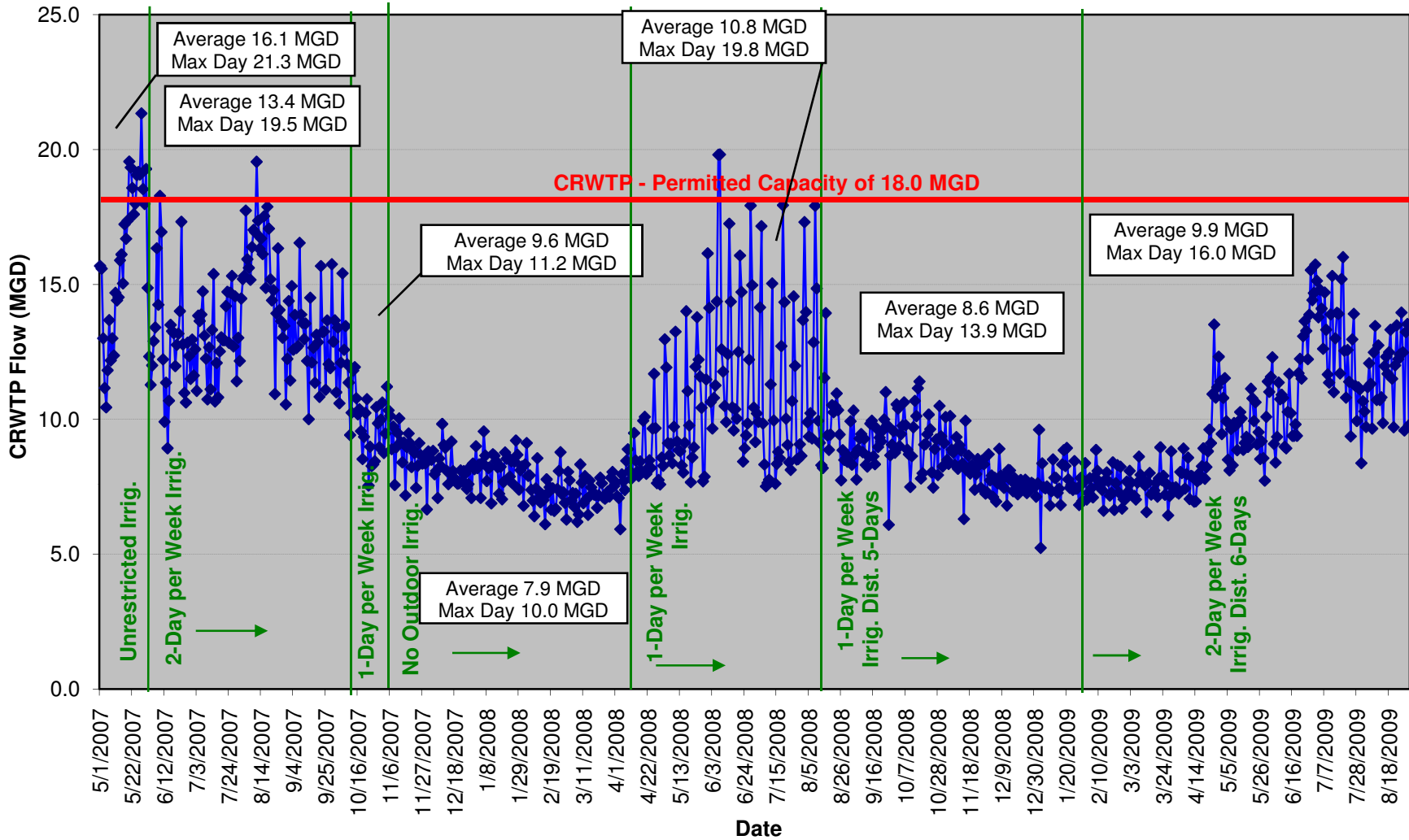
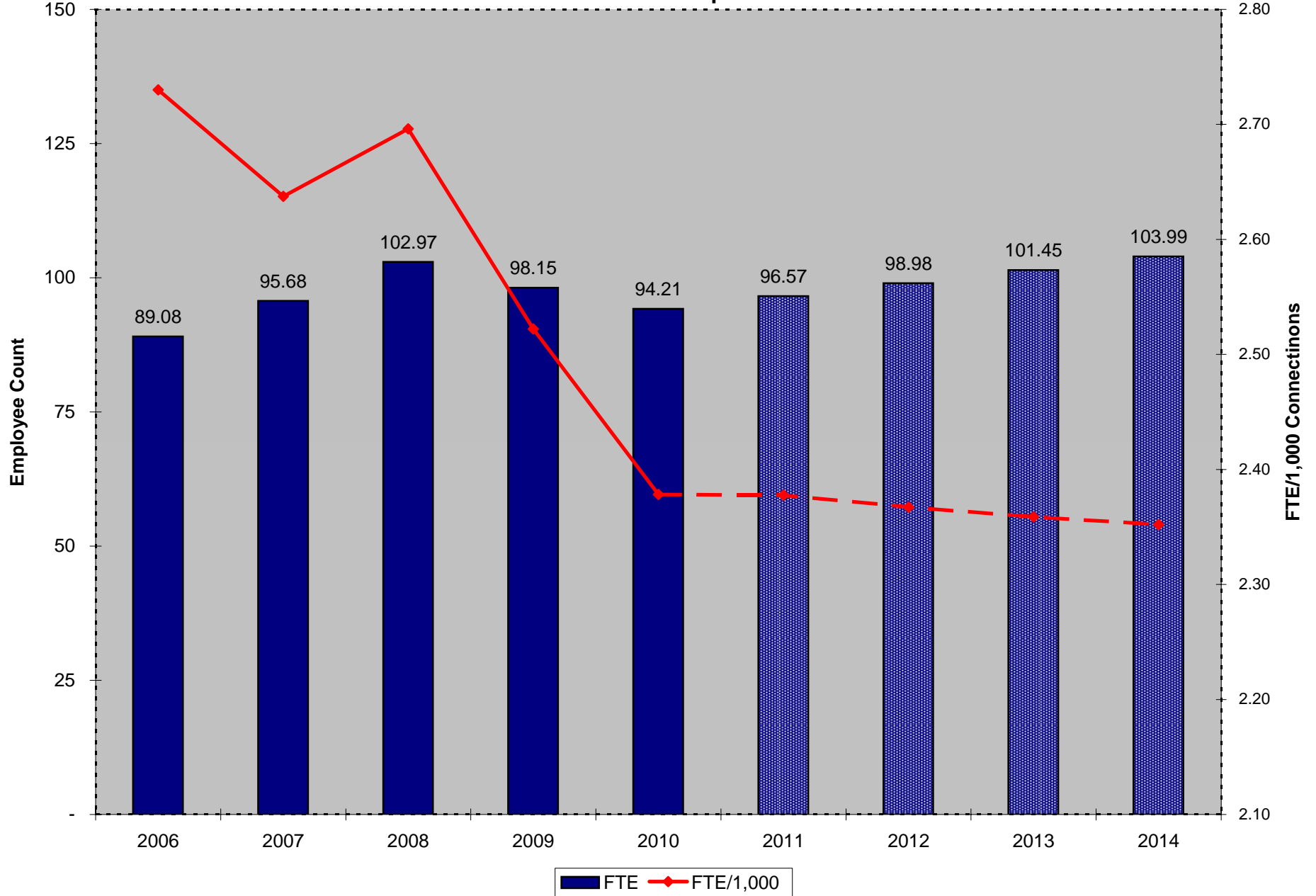


Figure 2 - Union County Water System - Daily Water Demand from the Catawba River WTP (05/07 - 08/09)



Customer Growth Compared to FTE



Union County, North Carolina
Forecast Statement

	Audited Water/Sewer Actual June 30 2006	Audited Water/Sewer Actual June 30 2007	Audited Water/Sewer Actual June 30 2008	Unaudited Water/Sewer Actual June 30 2009	Projection Water/Sewer Projection June 30 2010	Projection Water/Sewer Projection June 30 2011	Projection Water/Sewer Projection June 30 2012	Projection Water/Sewer Projection June 30 2013	Projection Water/Sewer Projection June 30 2014	
Operating Revenues										
1	Charges for services	21,906,005	25,310,517	23,648,205	22,592,769	23,706,518	25,453,328	26,824,736	28,232,440	29,676,648
2	Other operating revenues	682,609	741,310	908,072	767,660	676,920	692,151	709,454	728,964	750,833
3	Total operating revenues	22,588,615	26,051,827	24,556,277	23,360,430	24,383,438	26,145,479	27,534,190	28,961,404	30,427,482
Operating Expenses										
4	Personnel	(4,483,452)	(5,015,506)	(5,656,838)	(5,546,117)	(5,479,864)	(5,892,690)	(6,412,140)	(6,919,154)	(7,389,007)
5	Operating	(6,893,457)	(8,358,819)	(9,224,079)	(9,143,804)	(9,687,325)	(10,307,471)	(10,753,644)	(11,239,982)	(11,770,016)
6	Total operating expenses	(11,376,909)	(13,374,325)	(14,880,917)	(14,689,921)	(15,167,189)	(16,200,161)	(17,165,783)	(18,159,136)	(19,159,023)
7	Operating income	11,211,706	12,677,502	9,675,360	8,670,508	9,216,249	9,945,318	10,368,407	10,802,268	11,268,459
Nonoperating Revenues (Expenses)										
8	Water & sewer capacity and taps	11,992,653	13,274,753	9,720,318	3,628,725	2,001,250	3,085,000	3,650,000	3,650,000	3,650,000
9	Investment earnings	1,524,657	2,548,917	3,311,781	1,980,759	1,407,000	1,131,896	1,282,721	1,401,541	1,495,934
10	Sale of fixed assets	68,048	62,592	28,942	3,194	50,000	50,000	50,000	50,000	50,000
11	Interest and Fees	(170,732)	(62,281)	(57,670)	(43,062)	(258,285)	(311,275)	(305,946)	(299,059)	(292,540)
12	Total nonoperating revenue (expenses)	13,414,626	15,823,981	13,003,372	5,569,617	3,199,965	3,955,621	4,676,775	4,802,482	4,903,394
13	Net Revenues Available for Debt Service & Capital	24,626,332	28,501,483	22,678,732	14,240,126	12,416,214	13,900,939	15,045,182	15,604,749	16,171,852
Senior Debt Service										
14	Revenue Bonds	(3,416,212)	(3,745,682)	(3,720,739)	(3,838,514)	(3,763,234)	(3,718,206)	(3,665,627)	(3,621,265)	(3,570,836)
15	Series 2009	-	-	-	-	(1,031,344)	(1,217,383)	(1,224,429)	(1,225,520)	(1,230,847)
16	CIP Revenue Bonds	-	-	-	-	-	-	(510,890)	(1,862,191)	(3,381,098)
17	Total Senior Debt Service	(3,416,212)	(3,745,682)	(3,720,739)	(3,838,514)	(4,794,578)	(4,935,589)	(5,400,946)	(6,708,976)	(8,182,781)
Subordinated Debt Service										
18	State Revolving Loan	(329,886)	(321,870)	(313,855)	(1,349,979)	(1,370,584)	(1,345,582)	(1,320,578)	(1,295,575)	(1,270,572)
19	GO Debt Service	(3,374,458)	(3,058,278)	(2,914,194)	(2,190,126)	(2,070,102)	(1,490,144)	(606,167)	(577,905)	(152,356)
20	Total Subordinated Debt Service	(3,704,344)	(3,380,148)	(3,228,049)	(3,540,105)	(3,440,686)	(2,835,726)	(1,926,745)	(1,873,480)	(1,422,928)
21	Total Debt Service	(7,120,556)	(7,125,830)	(6,948,788)	(7,378,619)	(8,235,264)	(7,771,315)	(7,327,691)	(8,582,456)	(9,605,709)
22	Net Revenues Available After Debt Service	17,505,776	21,375,652	15,729,945	6,861,507	4,180,950	6,129,624	7,717,491	7,022,294	6,566,144
Net Revenues Available After Debt Service (exc. Capacity Fees)										
23		5,513,123	8,100,899	6,009,626	3,232,781	2,179,700	3,044,624	4,067,491	3,372,294	2,916,144
24	Capital Outlays	(693,203)	(673,039)	(617,810)	(564,132)	(262,000)	(637,046)	(637,046)	(637,046)	(637,046)
25	Remaining Available Funds	16,812,573	20,702,614	15,112,135	6,297,375	3,918,950	5,492,578	7,080,445	6,385,248	5,929,098
Total Beginning Cash & Investments (incs. req. working cap.)										
26		25,393,110	24,705,683	24,448,297	24,899,297	25,540,535	25,945,868	28,062,242	29,672,523	31,292,184
27	Remaining Available Funds	16,812,573	20,702,614	15,112,135	6,297,375	3,918,950	5,492,578	7,080,445	6,385,248	5,929,098
28	Transfers to CIP projects	(17,500,000)	(20,900,000)	(14,500,638)	(5,480,621)	(3,228,820)	(3,085,000)	(5,171,679)	(4,458,893)	(3,796,980)
29	Transfers to Other Funds	-	(60,000)	(160,496)	(175,516)	(284,797)	(291,205)	(298,485)	(306,693)	(315,894)
30	Total Ending Cash & Investments (incs. req. working cap.)	24,705,683	24,448,297	24,899,297	25,540,535	25,945,868	28,062,242	29,672,523	31,292,184	33,108,408
31	Cash & Investments above req. working cap.	6,978,114	3,811,066	1,260,282	1,219,835	397,900	0	(158,390)	(499,581)	(516,578)
32	Beginning Balance						25,945,868	28,062,242	29,672,523	31,292,184
33	Ending Balance						28,062,242	29,672,523	31,292,184	33,108,408
34	Average Balance						27,004,055	28,867,382	30,482,353	32,200,296
35	Interest Earned	3.0%					810,122	866,021	914,471	966,009
							565,948	641,361	700,770	747,967
36	Total Operating Expenses (line 6)	11,376,909	12,922,525	14,880,917	14,689,921	15,167,189	16,200,161	17,165,783	18,159,136	19,159,023
37	Depreciation	6,350,660	7,714,705	8,758,099	9,630,779	10,380,779	11,862,080	12,665,129	13,632,629	14,465,962
38	Working Capital Required	17,727,569	20,637,230	23,639,016	24,320,700	25,547,968	28,062,241	29,830,913	31,791,765	33,624,986
		17,727,569	20,637,230	23,639,016	24,320,700	25,547,968	28,062,241	29,830,913	31,791,765	33,624,986
39	Net Revenues Available for Debt Service & Capital	24,626,332	28,501,483	22,678,732	14,240,126	12,416,214	13,900,939	15,045,182	15,604,749	16,171,852
40	Deduct: Water & sewer capacity and taps	(11,992,653)	(13,274,753)	(9,720,318)	(3,628,725)	(2,001,250)	(3,085,000)	(3,650,000)	(3,650,000)	(3,650,000)
		12,633,679	15,226,729	12,958,414	10,611,400	10,414,964	10,815,939	11,395,182	11,954,749	12,521,852
41	Total Debt Service	7,120,556	7,125,830	6,948,788	7,378,619	8,235,264	7,771,315	7,327,691	8,582,456	9,605,709
42	Coverage Test [(13-8)/21]	1.77	2.14	1.86	1.44	1.26	1.39	1.56	1.39	1.30

Union County, NC
 Combined Utility System
 Financial Indicators and Benchmarks

<u>Metric</u>	<u>Significance</u>	<u>Standard</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>
Combined Utility Average Monthly Bill (\$ @ 6,700 gallons)	Indicates the monthly cost of service to residential customers	Marketplace Median	\$51.73	\$51.73	\$51.73	\$51.73	\$52.76	\$53.81	\$54.89	\$55.99
Combined Utility Average Annual Bill % of Median Household Income	Indicates the annual burden for cost of service to ratepayers	1.50%<	1.02%	0.99%	0.99%	0.98%	0.97%	0.97%	0.96%	0.95%
Annual debt service coverage (x)	Indicates the financial margin to meet current ADS with current revenues available for debt service	1.25 - 1.50x	2.14	1.86	1.44	1.26	1.39	1.56	1.39	1.30
Days Cash on Hand	Indicates financial flexibility	365	1,256.73	1,491.41	1,419.29	1,530.10	668.98	630.93	628.98	630.75
10-Year Principal Payout	Indicates longevity of system debt	40%	55%	55%	55%	50%	52%	52%	43%	41%
20-Year Principal Payout	Indicates longevity of system debt	80%	87%	91%	93%	93%	94%	87%	87%	86%
Debt to Equity	Indicates debt leverage	70-75%<	34%	29%	27%	33%	30%	38%	40%	45%

Consumption period - March 31, 2009 - April 28, 2009

** Irrigation two days a week/Car Washing on Irrigation Days plus Saturday/Sunday
 ** Stage II - Sod & Irrigation Variances approved
 ** Rainfall at Twelve Mile (StormWater Spreadsheet) - 2.9

Residential /Irrigation	37,609	95.3%	165,008,900	77.1%
All others	1,863	4.7%	49,112,300	22.9%
	39,472	100.0%	214,121,200	100.0%

Categories	Count	% of Total	Gallons Billed	% of Total	Rates
0 - 10k gal/mo	36,176	96.2%	144,325,300	87.5%	\$2.10/\$2.45/\$3.45
10k - 15k gal/mo	1,094	2.9%	12,820,400	7.8%	\$8.18
15k - 20k gal/mo	199	0.5%	3,391,400	2.1%	\$14.18
Over 20k gal/mo	140	0.4%	4,471,800	2.7%	\$14.18
	37,609	100.0%	165,008,900	100.0%	

Consumption period - April 29, 2009 - May 27, 2009

** Irrigation two days a week/Car Washing on Irrigation Days plus Saturday/Sunday
 ** Stage II - Sod & Irrigation Variance allowed
 ** Rainfall at Twelve Mile (StormWater Spreadsheet) - 3.4

Residential /Irrigation	37,698	95.3%	204,311,400	78.6%
All others	1,868	4.7%	55,480,746	21.4%
	39,566	100.0%	259,792,146	100.0%

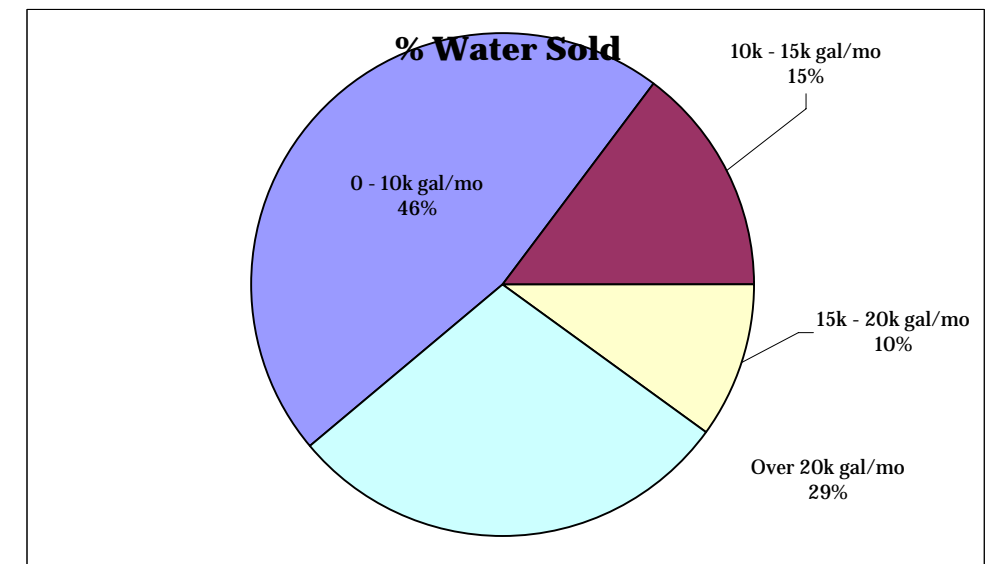
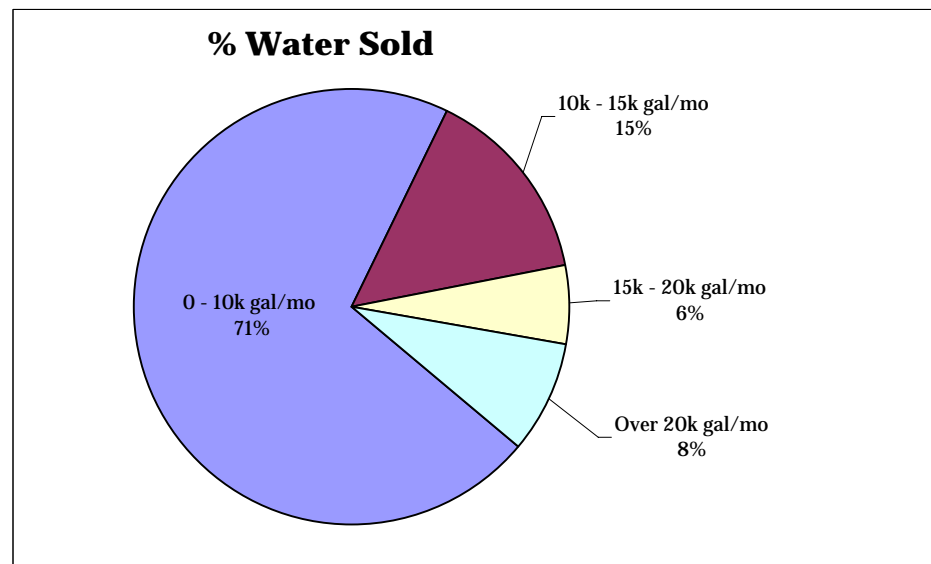
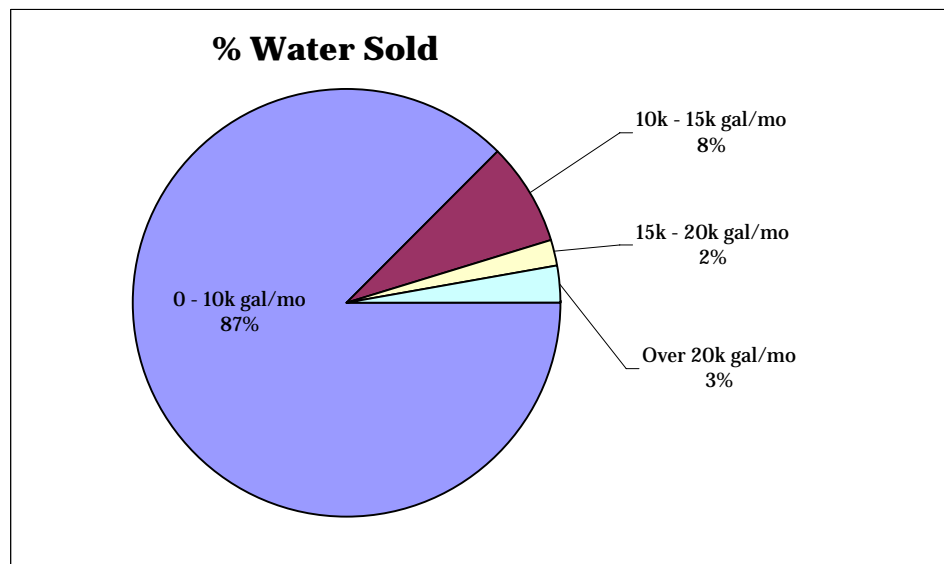
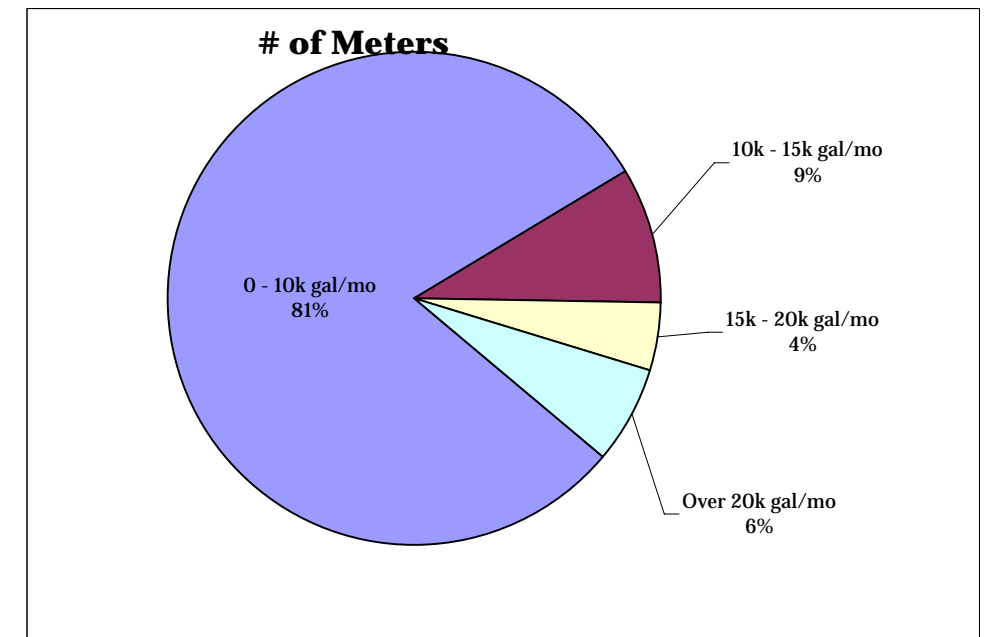
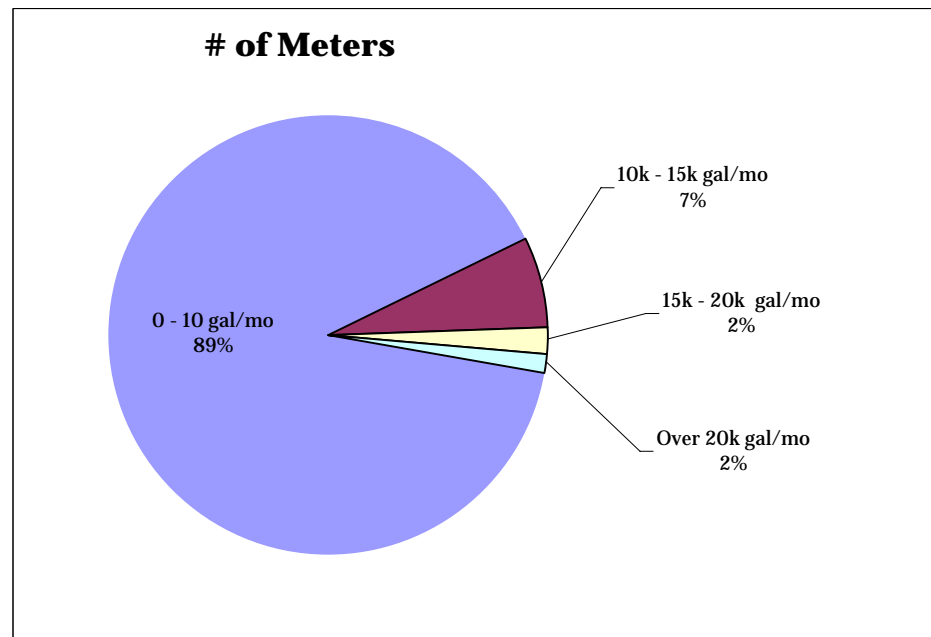
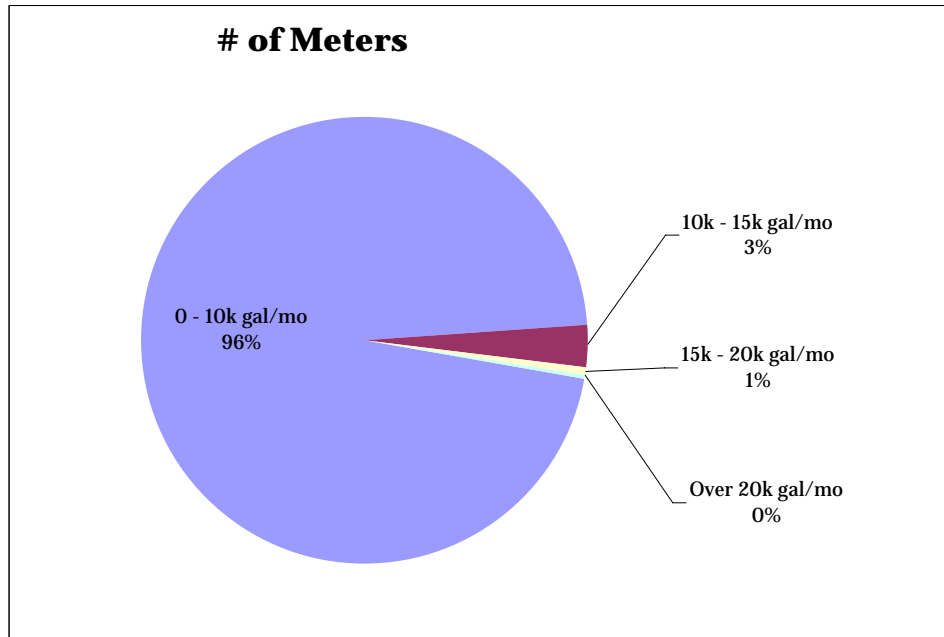
Categories	Count	% of Total	Gallons Billed	% of Total	Rates
0 - 10k gal/mo	33,943	90.0%	145,137,700	71.0%	\$2.10/\$2.45/\$3.45
10k - 15k gal/mo	2,501	6.6%	29,978,000	14.7%	\$8.18
15k - 20k gal/mo	703	1.9%	12,034,200	5.9%	\$14.18
Over 20k gal/mo	551	1.5%	17,161,500	8.4%	\$14.18
	37,698	100.0%	204,311,400	100.0%	

Consumption period - July 28, 2009 - August 24, 2009

** Irrigation two days a week/Car Washing on Irrigation Days plus Saturday/Sunday
 ** Modified Stage I - Customers can fill pools and use water for dust control
 ** Sod & Irrigation Variance allowed
 ** Rainfall at Twelve Mile (StormWater Spreadsheet) - 1.9

Residential /Irrigation	37,885	95.3%	287,856,700	86.2%
All others	1,866	4.7%	46,066,300	13.8%
	39,751	100.0%	333,923,000	100.0%

Categories	Count	% of Total	Gallons Billed	% of Total	Rates
0 - 10k gal/mo	30,373	80.2%	133,586,500	46.4%	\$2.10/\$2.45/\$3.45
10k - 15k gal/mo	3,439	9.1%	42,055,000	14.6%	\$5.45
15k - 20k gal/mo	1,688	4.5%	29,244,800	10.2%	\$9.45
Over 20k gal/mo	2,385	6.3%	82,970,400	28.8%	\$9.45
	37,885	100.0%	287,856,700	100.0%	



Water and Wastewater Rates and Rate Structures in North Carolina

Chris Nida, North Carolina League of Municipalities
Shadi Eskaf, Environmental Finance Center

March 2009

Click on any of the following questions:

Tools for Comparisons

- What is this study?
- How many and which utilities and types of rates are analyzed in this report?
- Where can I find tools and tables I can use to help me evaluate our rates?

Current Rate Structure Designs

- What are the utilities' base charges?
- How much consumption is included in these base charges?
- What are the most common rate structure types in North Carolina?
- How do rate structures differ between commercial and residential customers?
- How do rate structures differ between indoor and irrigation/outdoor rates?
- For block rate structures, how much consumption is included in the first block?
- How much do utilities charge per 1,000 gallons near the average consumption level?
- What does the State recommend for residential rate structures?

Current Rates

- How much is charged for residential consumption?
- How much is charged for commercial consumption?
- How much is charged for residential irrigation water?
- How do rates differ based on utility size, utility type or river basin?
- How do rates differ for customers inside or outside municipal boundaries?

How Rates Changed Last Year

- How often do utilities change their rates?
- How did residential rate structures change in the past year?
- By how much did utilities raise their residential rates last year?
- Did the price for high levels of consumption increase last year?

Affordability

- What does the average North Carolinian pay for water and/or wastewater service?
- How affordable are utility rates in North Carolina?

Promoting Conservation

- What have utilities done to promote conservation through non-price strategies?
- What can utilities do with rates to encourage conservation?

Financial Sustainability

- Do prices reflect the true cost of water services in North Carolina?
- Are high rates always bad?

Affordability of Residential Rates

What the Average North Carolinian Pays for 6,000 Gallons

The above figures and tables are useful in determining the range of rates that utilities across the state are currently charging. As mentioned above, the median price for 6,000 GPM across all the utilities is \$27.75 for water and \$32.99 for wastewater, using “inside” residential rates. This indicates that half of the 521 water rate structures in this sample charge more than \$27.75 for water for 6,000 GPM, and half of 412 wastewater rate structures charge more than \$32.99 for wastewater. However, as shown in Table 4, larger utilities may be charging lower rates because they are able to spread their costs across a large customer base. The utilities in this study serve over 7.1 million North Carolinians. If we assume that everyone in this sample pays “inside” rates only, the average North Carolinian in this sample would be paying a weighted average⁸ of \$26.07 for water, \$32.03 for wastewater or \$55.30 for combined water and wastewater for 6,000 GPM. These numbers represent a good estimate of average bills across the population of the state. The actual average bill for a North Carolinian for 6,000 gallons is likely to be higher however, since a substantial portion of the citizens are paying “outside” rates that are greater than “inside” rates as shown in Figure 24. Furthermore, some citizens may be paying a portion of their water bill through irrigation rates, making it impossible to accurately estimate what the average North Carolinian actually pays for 6,000 gallons.

Annual Bills as a Percent of Household Income

Is the weighted average bill of \$55.30 per month for combined water and wastewater for 6,000 gallons too high for most North Carolinians? Compared to monthly electric bills, gas bills, grocery bills, and even discretionary bills such as cable TV bills or high-speed internet bills, water and wastewater bills oftentimes make up a smaller portion of a household budget. Nevertheless, because citizens may not have an alternative to the water service they are currently receiving, and water service is necessary for public health, the issue of affordability of water and wastewater rates remains vital.

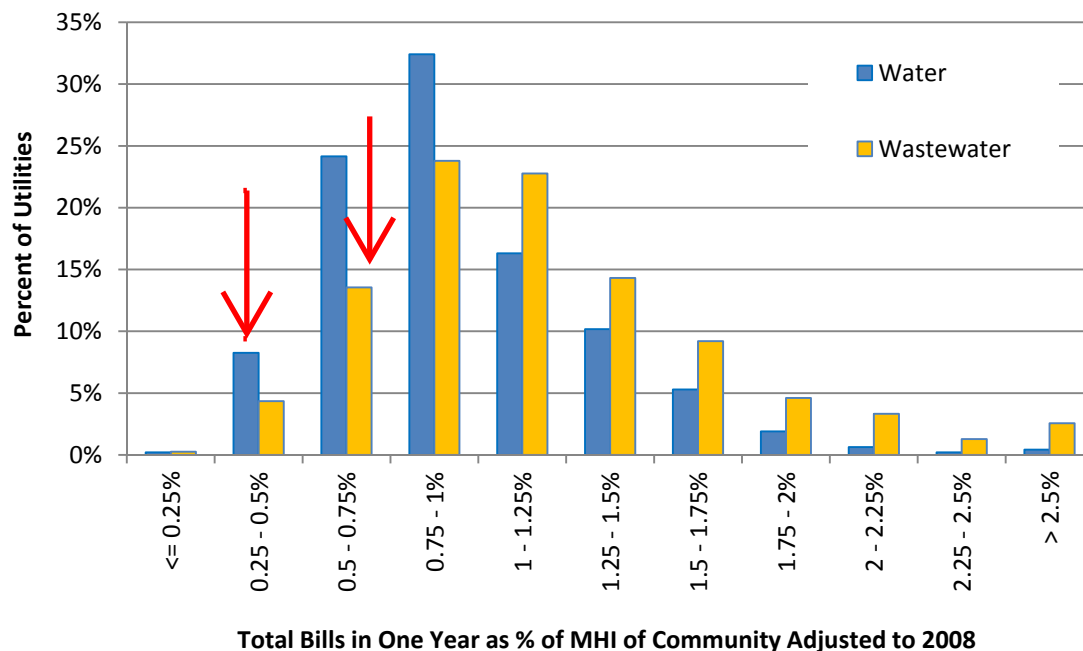
Affordability is very difficult to assess, and there is no one true, accurate measure for affordability. The most commonly used and most cited measure in the water industry is “percent MHI” – that is, calculating what a year’s worth of water and wastewater bills for an average level of consumption (e.g.: 6,000 GPM) is compared to the median household income (MHI) in the community served by the utility. This indicator is easy to calculate by simply using the calculated bill amount and the U.S. Census Bureau’s median household income data, available at <http://www.census.gov>. Since the nationwide Census is only administered every 10 years, an adjustment factor may be applied to adjust the household income data from year to year⁹.

Compared to the 2008-adjusted median household incomes of the communities served by 472 water and 391 wastewater utilities, annual bills for 6,000 GPM range from 0.5% MHI to over 2.5% MHI for each service, as shown in Figure 26. The majority of water rates fall between 0.5% and 1.25% MHI, with a median of 0.88% MHI across all utilities. Wastewater rates are higher, with the majority of wastewater rates falling between 0.75% and 1.5% MHI, and a median of 1.1% MHI across the utilities. For combined water and wastewater bills at 6,000 GPM, half of the utilities charge more than 1.98% MHI.

⁸ The “weighted average bill” is the average bill being paid by customers, taking into account the different utility’s rates and service populations, assuming that all of the customers are paying their utility’s bill for 6,000 GPM.

⁹ The U.S. Department of Housing and Urban Development (HUD) publishes income adjustment factors yearly at <http://www.huduser.org/datasets/il.html>.

Figure 26: Annual Bills for 6,000 GPM as a Percent of the Serviced Community's 2008-Adjusted Median Household Income (n=472 water, n=391 wastewater)

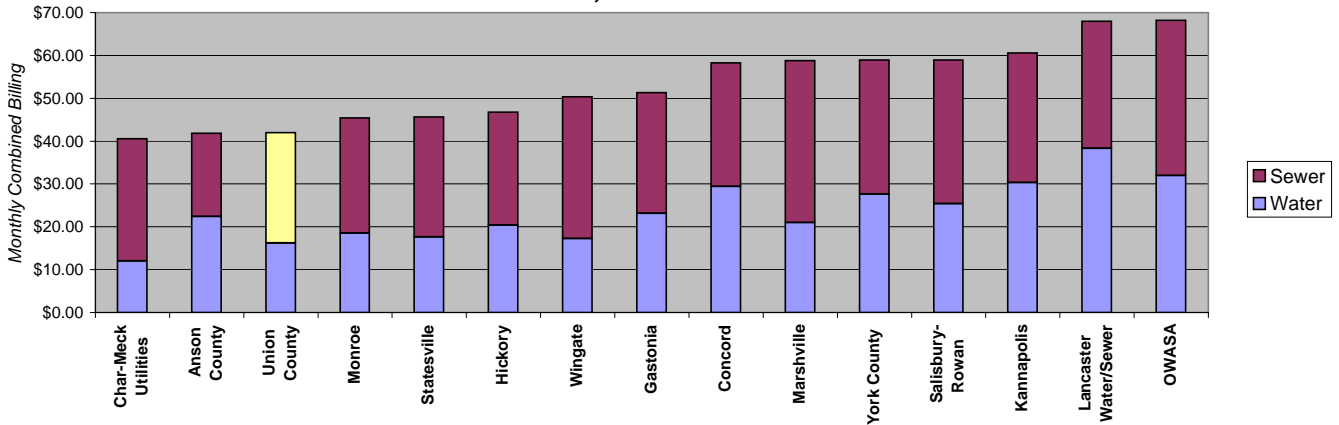


There is no single target for affordability, even in terms of percent MHI. Early reports within the Environmental Protection Agency, as well as by some agencies in the State of North Carolina, suggest that rates that exceed a point somewhere between 0.75% and 1.25% MHI, for either water or wastewater service, may be difficult to afford.

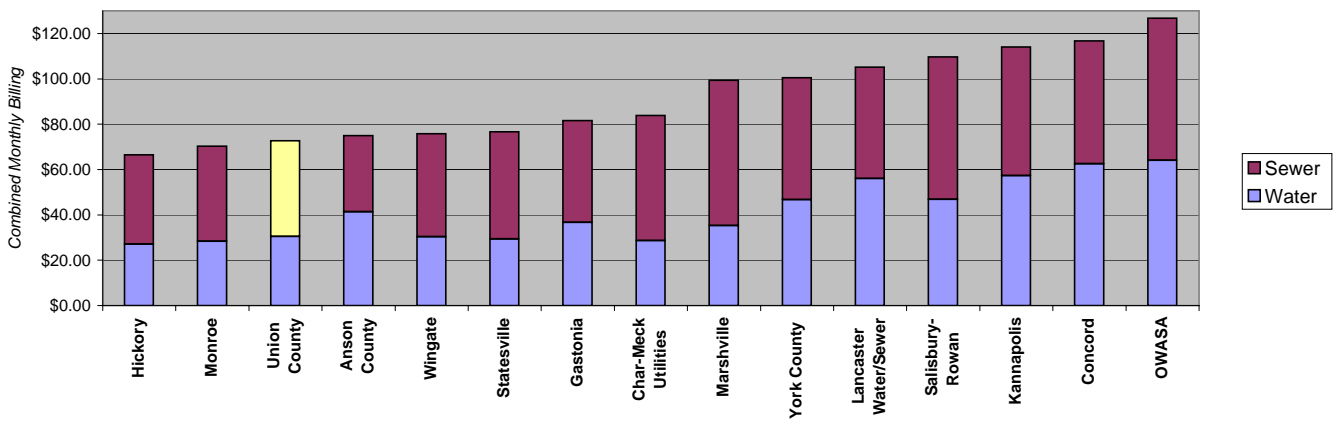
Do Prices Reflect the True Cost of Water Services in North Carolina?

Comparing rates across the State or among specific utilities is further complicated by the variation in the extent to which utilities charge the full cost of providing service. Rates that provide enough revenue to balance an annual budget do not necessarily provide enough revenue to cover long term capital and maintenance needs and many utilities charge much less than the full cost of service provision. Figure 27 shows rates from FY 2007-08 in terms of combined water and wastewater charges for customers using 6,000 GPM plotted against the ratio of operating revenue over operating expenses (including depreciation) from the same fiscal year. This measure, often referred to as an operating ratio, helps identify if an entity is operating at a financial loss, financial gain, or is breaking even. Financial data were provided by the Local Government Commission in the Department of the State Treasurer. The figure shows that many utilities are not covering their operating expenses, making it difficult or impossible to rehabilitate aging infrastructure, save for operating emergencies, finance system improvements and expansion, and engage in proactive asset management. It is interesting to note that the utilities that did not recover their operating expenses (operating at a financial loss) are not always charging low rates – even some utilities with high rates can be operating at a financial loss. Nevertheless, there are several utilities that charged low rates in FY 2007-08 (to the left of the graph), which resulted in operating at a financial loss (below the horizontal line on the graph) in that fiscal year.

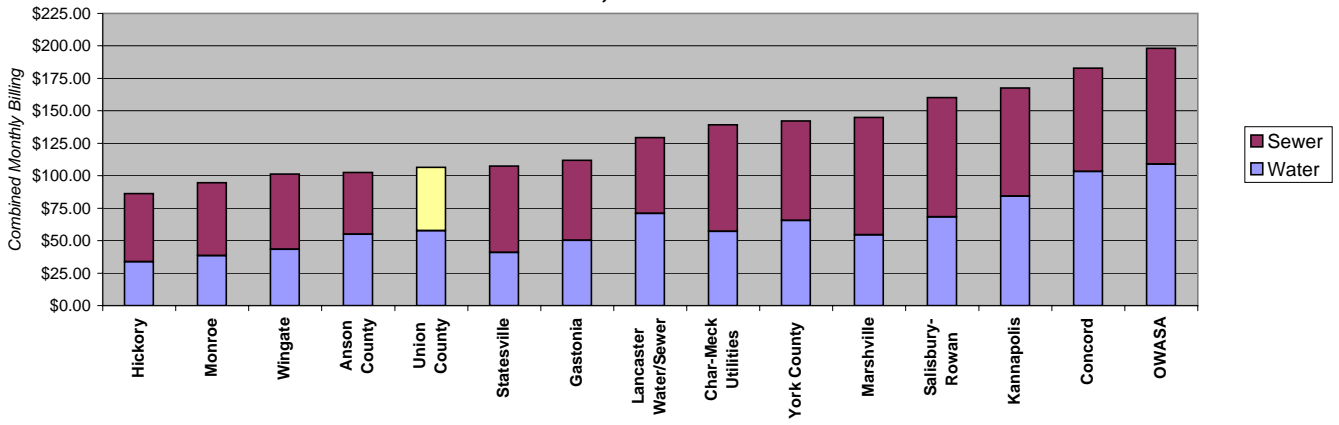
**Utility Rate Comparison
Combined Water & Sewer Charges for
5,000 Gal/Mo**



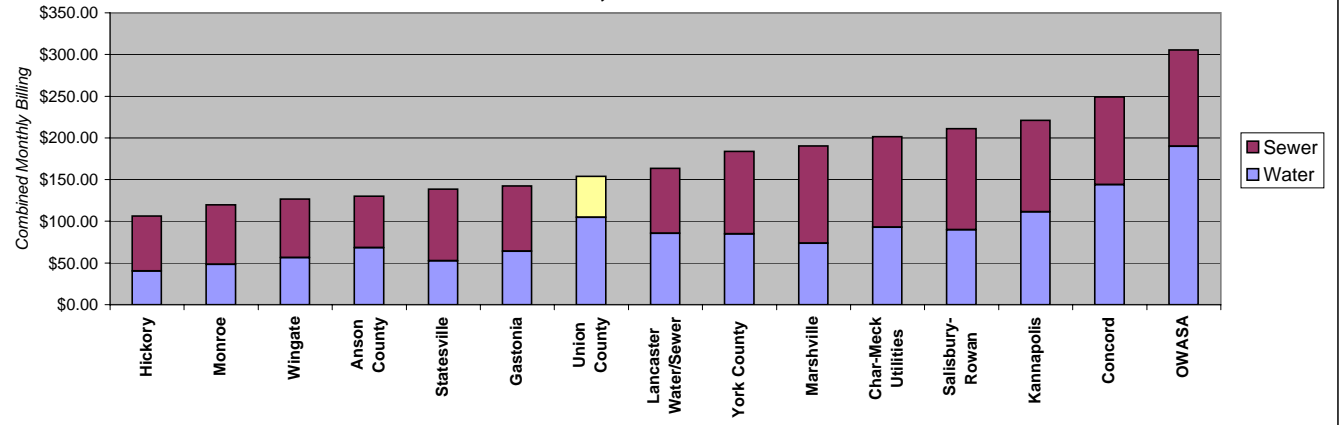
**Utility Rate Comparison
Combined Water & Sewer Billing for
10,000 Gal/Mo**



**Utility Rate Comparison
Combined Water and Sewer Billing for
15,000 Gal/Mo**



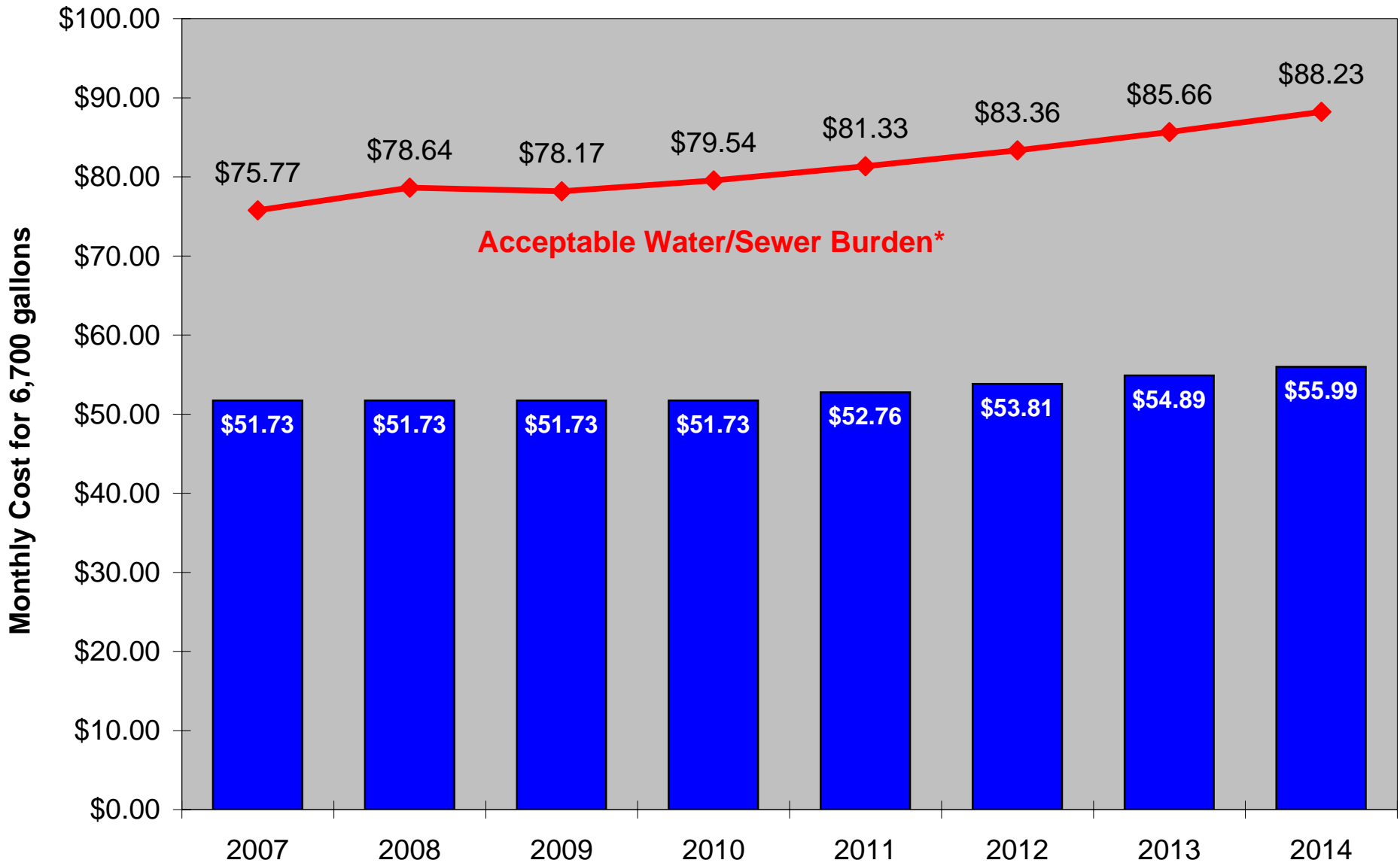
**Utility Rate Comparison
Combined Water and Sewer Billing for
20,000 Gal/Mo**



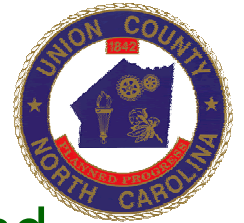
Rate Increases

<u>Effective Date</u>	Residential - 3/4" (6,700 Gal)		Commercial - 1 1/2" (50,000 Gal)		Industrial - 3" (500,000 Gal)	
	<u>Water</u>	<u>Sewer</u>	<u>Water</u>	<u>Sewer</u>	<u>Water</u>	<u>Sewer</u>
July 1, 1997	0.00%	0.00%	0.48%	0.00%	2.87%	0.00%
July 1, 1998	0.00%	0.00%	0.48%	0.00%	2.79%	0.00%
July 1, 1999	-0.67%	0.00%	0.14%	0.00%	2.68%	0.00%
January 1, 2000	-1.61%	0.00%	-0.27%	0.00%	2.93%	0.00%
July 1, 2000	-2.46%	0.00%	0.07%	0.00%	6.84%	0.00%
June 1, 2003	-4.90%	0.00%	0.00%	0.00%	0.00%	0.00%
April 1, 2005	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
October 15, 2008	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
July 1, 2009	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
July 1, 2010	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
July 1, 2011	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
July 1, 2012	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
July 1, 2013	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%

Rate Affordability



*Acceptable Water/Sewer Burden is equal to 1.5% of the County's median household income. This threshold is set by the North Carolina General Assembly through the NC Clean Water Revolving Loan and Grant Act of 1987 in establishing high-unit cost for utilities.



Next Steps

- Authorize staff to proceed with conceptual plans and environmental permitting for the selected Eastern WTP alternative
- Authorize staff to proceed with permitting and conceptual design for a possible 12 Mile Creek WWTP Expansion
- Proceed with Water and Wastewater Master Plan update
- Continue negotiations with Anson County for extension and expansion of Water Capacity agreement
- Continue negotiations with the City of Monroe for additional Wastewater Capacity
- Develop Fiscal Plan for implementation of Master Plan recommendations

