

APPENDIX J
User Charge Analysis

Appendix J

User Charge Analysis Western Wake Regional Wastewater Management Facilities Project

The preliminary estimate for the Western Wake County Regional Wastewater Management Program is \$242.6 million. The allocation of costs for each local government is presented in Table J-1.

Table J-1 Estimated Capital Cost Allocations Western Wake Regional Wastewater Management Facilities Project		
Local Government	Capital Cost Allocation	Cost Distribution (%)
Apex	\$64,245,000	26.48%
Cary	\$145,099,000	59.80%
Holly Springs	\$12,329,000	8.64%
Morrisville	\$20,974,000	5.08%
Total	\$242,647,000	100 %

Clean Water State Revolving Fund Program

The Project Partners have consulted with representatives from the Construction Grants and Loans Section (CG&L Section) of the North Carolina Division of Water Quality. The representatives from the CG&L Section have indicated that low-interest loan funding is available for the Project through the Clean Water State Revolving Fund (SRF) Program. However, in order to receive funds from the SRF Program, the Project Partners are required to prepare a 201 Facilities Plan. To secure a low-interest loan, the Project Partners have agreed to prepare a 201 Facilities Plan.

In accordance with the 201 Facilities Plan guidelines, the Project Partners must conduct a financial and rate impact analysis to forecast the expected wastewater user charge impact of the Project on a residential customer using 5,000 gallons per month. The user charge analysis must be conducted to identify the rate adjustments that each local government will implement, as necessary, to generate sufficient user charge revenues to fund the Project and repay the SRF loan.

Water and Sewer Utility Enterprise Funds

Each local government will continue to operate an independent water and sewer utility enterprise fund. Each water and sewer utility enterprise fund will continue to be managed consistent with each local government's annual budget ordinance adopted in accordance with the provisions of the North Carolina Local Government Budget and Fiscal Control Act. It is understood that the annual water and sewer utility enterprise

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fund is subject to public review and comment, prior to adoption by each local government's elected body.

Each local government shall annually adopt a balanced budget for its respective water and sewer utility enterprise fund which demonstrates that forecasted operating revenues are equal to, or exceed, forecasted operating expenditures for the water and sewer utility enterprise fund. In addition, each local government will continue to maintain an independent schedule of rates, fees and charges, and the schedule will be designed to fully recover the total direct and indirect costs associated with providing water and sewer services for each local government's service area. Finally, each local government will have the autonomy to adjust their individual schedule of rates, fees and charges as necessary to support the revenue requirements of their water and sewer enterprise funds.

It is recognized that water and sewer revenue forecasts can be developed using various forecasting techniques, and nearly all techniques are based on the premise that historic trends can serve as a basis for predicting future results. In general, water and sewer revenues, for any fiscal year, will be a function of the growth and development experienced within the service area, weather conditions during the year, and rates of inflation (i.e., fuel, electrical power, natural gas, chemicals, etc.). Each local government will continue to prepare water and sewer revenue forecasts in an objective and realistic manner by analyzing current trends in growth and development, water and sewer consumption patterns, and accounting for impacts associated with extreme weather conditions and changes in inflation. However, it is understood that during any fiscal year temporary revenue shortfalls and surpluses, as well as operating cost increases and decreases, can and will occur.

User Charge Analysis

For the Phase I facilities (estimated total capital cost = \$242,647,000), it is anticipated that each local government will use some combination of the following funding sources for land acquisition, permitting, design and construction:

- 1) Pay-As-You-Go (cash on-hand in capital reserve funds)
- 2) SRF Low-Interest Loan
- 3) Revenue or General Obligation Bonds

Table J-2, Table J-3 and Table J-4 present the forecasted user charge impact associated with each local government's allocated costs for the Western Wake Regional Wastewater Management Facilities Project. The user-charge analysis is based on 100 percent debt financing for the entire \$242,647,000. Operations and Maintenance costs are included in Table J-3. SRF loan repayments are based on simple interest.

Table J-2
Proposed Project Financing
Western Wake Regional Wastewater Management Facilities Project

<i>Description</i>	<i>Total Project</i>	<i>SRF Financing</i>	<i>Bond Financing</i>	<i>Total Project Debt Service</i>
PROJECT COST	\$242,647,000	\$60,000,000	\$182,647,000	
Loan Closing Costs-SRF (a)		\$1,200,000		
Finance Costs-GO Bonds (b)			\$4,566,200	
Par Amount of Loan		\$61,200,000	\$187,213,200	
Total Annual Debt Service (c)		\$5,508,000	\$13,283,237	\$18,791,237
(a) 2% SRF Loan Service Fee (b) 2.5% GO Bond Issuance Cost (c) SRF debt service based on 4% interest for 20 years, based on level principal so annual SRF debt service will decline each year, GO debt Service based on 5% interest for 25 years				

Table J-3
 Annual Cost to Each Town
 Western Wake Regional Wastewater Management Facilities Project

<i>Description</i>	<i>Units</i>	<i>Total</i>	<i>Apex</i>	<i>Cary</i>	<i>Morrisville</i>	<i>Holly Springs</i>
Debt Service		\$ 18,791,237				
Allocation to Towns			\$ 5,062,359	\$ 11,154,478	\$ 1,572,827	\$ 1,001,573
O&M First Year			\$1,310,635	\$2,782,898	\$461,351	\$68,242
Total Revenue Requirement			\$ 6,372,994	\$ 13,937,376	\$ 2,034,177	\$ 1,069,815
Est. Demand for 2011	1,000's		1,285,325	5,430,218	938,257	
Residential Flow in thousand gallons			1,041,113	3,312,433	591,102	-
Percentage Residential			81%	61%	63%	89%
Portion of Program Costs Residential			\$ 5,162,125	\$ 8,501,799	\$ 1,281,532	\$ 952,136
Debt Service Per 1,000 GI			\$ 4.96	\$ 2.57	\$ 2.17	

Table J-4
 Estimated Impact of Program on Residential Customer
 Western Wake Regional Wastewater Management Facilities Project

<i>Description</i>	<i>Apex</i>	<i>Cary</i>	<i>Morrisville</i>	<i>Holly Springs</i>
Incremental Increase Per Thousand Gallons from 2005 to 2011 (a)	\$ 4.96	\$ 2.57	\$ 2.17	\$ -
Est. Current Monthly Charge for 5,000 Gal Residential Customer	\$ 27.76	\$ 21.27	\$ 30.30	\$ 27.00
Estimated Monthly Charge for 5,000 Gal Customer FY 2011	\$ 52.55	\$ 34.10	\$ 41.14	\$ 32.00
Total Monthly Increase Amount for Program	\$ 24.79	\$ 12.83	\$ 10.84	\$ 5.00
Median household income based on Census 2000 data	\$ 71,052	\$ 75,122	\$ 56,548	\$ 69,550
Annual Sewer Bill	\$ 630.62	\$ 409.24	\$ 493.68	\$ 384.00
Annual Sewer Bill as Percentage of MHI	0.9%	0.5%	0.9%	0.6%

(a) First full year of Operation
 (b) EPA Affordability Guidance 1.5%