



ORANGE WATER AND SEWER AUTHORITY

Quality Service Since 1977

September 6, 2005

Chairman Moses Carey, Jr.
Orange County
Post Office Box 8181
Hillsborough, NC 27278

Mayor Kevin Foy
Town of Chapel Hill
405 Martin Luther King Jr. Blvd.
Chapel Hill, NC 27516

Mayor Michael Nelson
Town of Carrboro
301 West Main Street
Carrboro, NC 27510

Dear Chairman Carey, Mayor Foy and Mayor Nelson;

Enclosed is our annual report for 2004-2005. We believe that this summary of recent and upcoming activities reflects OWASA's commitment to a high level of customer service and environmental stewardship, efficient management, affordable rates, and community collaboration to which you and our customers are entitled.

Please feel free to contact me or our staff if you would like an in-person presentation or further details about any of the items in the enclosed report.

Sincerely,

Mark Marcoplos, Chair
OWASA Board of Directors

Enclosure

c: Mr. W. Calvin Horton, Town of Chapel Hill (w/encs.)
Mr. John Link, Orange County (w/encs.)
Mr. Steven Stewart, Town of Carrboro (w/encs.)
OWASA Board of Director (w/encs.)
Ed Kerwin, OWASA Executive Director (w/encs.)



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Annual Report to Local Governments September 6, 2005

Background and Purpose

This report summarizes major OWASA accomplishments from July 2004 through June 2005. We have selected items that we believe are most likely to be of interest to elected officials of Carrboro, Chapel Hill, and Orange County. Additional information is available on request, and OWASA Board members or staff will be glad to provide in-person presentations if desired.

Mason Farm Wastewater Treatment Plant – Construction began in May 2004 on the \$50 million expansion and upgrade of OWASA's wastewater plant. Capacity will be increased from its present level of 12 million gallons per day (mgd) to 14.5 mgd. The project will include the addition of filters to enhance treated water quality, increased back-up power, odor elimination improvements, solids and nutrients removal, and an ultraviolet light disinfection system. These improvements will enable the future reuse of reclaimed water and are designed to meet the nitrogen and phosphorus nutrient removal requirements currently proposed under the NC Environmental Management Commission's Jordan Lake TMDL (Total Daily Maximum Load) and Nutrient Management Strategy.

Odor control improvements are expected to achieve OWASA's offsite odor elimination goal. Important milestones are expected to be met by November 2005, per Special Use Permit (SUP) conditions of the Town of Chapel Hill. OWASA staff will meet in September with neighbors to discuss plans for monitoring odor emissions, and the SUP calls for a November public forum on odor issues.

All work at the wastewater plant remains on schedule for completion in mid-2007.

OWASA/UNC Water Reuse Project – As reported previously, OWASA and the University are jointly developing a wastewater reuse system to supply reclaimed water to certain UNC facilities. By reducing the use of drinking water for non-potable purposes, this system will provide a substantial degree of drought protection for the benefit of all customers, and the amount of nutrients and other pollutants discharged to Morgan Creek will be further reduced. Total drinking water demand is likely to decrease by 10 to 15 percent when the reuse system is fully implemented.

The reuse project will be financially self-supporting; i.e., the University will fund necessary capital improvements, and reclaimed water rates and fees will be established to recover all related production and overhead costs. Specific funding responsibilities, the basis for new rates and fees, as well as certain technical matters will be detailed in a contract that is currently being developed between OWASA and UNC. OWASA has

obtained a \$1.8 million grant from the North Carolina Clean Water Management Trust Fund to pay for engineering and design work, and Congressman David Price obtained an additional \$645,000 grant from the U.S. Environmental Protection Agency.

Negotiations over specific contract provisions between OWASA and UNC are proceeding smoothly and are expected to be completed within the next several months. Planning and design work for the pumping, storage and pipeline facilities is underway with construction planned to begin in 2006. Town of Chapel Hill approval will be needed for certain reclaimed water pumping, storage, and transmission facilities. Of current community interest is the route of a major reuse water transmission line to be installed in conjunction with OWASA's Meeting-of-the-Waters sewer line upgrade in the Manning Drive/ Pinetum vicinity. Selection of a final route, design, and construction of this transmission line may affect the timing of the overall reuse project.

Meeting of the Waters Sewer Replacement – Potential routes for the reuse water transmission line from Mason Farm WWTP to the southern campus areas are under evaluation along with alternatives for the Meeting-of-the-Waters sewer replacement involving the Manning Drive/Pinetum area. OWASA held a neighborhood meeting with stakeholders in June and plans to have a second meeting during September.

Drinking Water Recycling System – In December 2004 OWASA received final approval from NCDENR's Public Water Supply Section to permanently recycle "process water" that had formerly been discarded to a small creek near the Jones Ferry Road Water Treatment Plant. A special \$150,000 consultant study confirmed the safety and reliability of the new system. Re-directing this highly treated water back to the head of the treatment plant has reduced the average use of Cane Creek and University Lake water by approximately eight percent, thereby extending the expected life of these water supplies and reducing our vulnerability to future droughts.

Public Hunting on OWASA Land – After receiving extensive public comments – including supporting resolutions from Carrboro and Orange County – the OWASA Board requested the US Army Corps of Engineers to modify conditions of the 404 Permit under which the Cane Creek Dam and Reservoir construction were authorized. We have asked the Corps to formally recognize OWASA's land acquisition/conservation easement program in the Cane Creek watershed as "exemplary compliance with the primary goal of Wildlife Habitat Replacement required under the original Permit," and to accept this program in lieu of any requirement for hunting on or near the Reservoir. We have also offered to allow the NC Wildlife Resources Commission to implement a limited bow-hunting program for deer on OWASA's 490-acre Mitigation Tract near Buckhorn Road.

Source Water Protection – Since 1997, an important objective of OWASA's long-term strategy for Cane Creek Reservoir water quality has been the permanent protection of 1,260 acres of watershed land. One hundred eighty additional acres were placed under conservation easements during the past year, bringing to 1,004 the total acreage protected through this program. Of particular note was OWASA's partnership with Orange County

in the joint purchase of conservation easements on two properties totaling 170 acres. A \$130,000 grant from the North Carolina Clean Water Management Trust Fund will help pay for acquisition costs.

First Annual Sustainability Report – OWASA completed its first annual report on sustainability goals and practices. The report addressed water and energy conservation, reuse of wastewater biosolids, source water protection, wastewater treatment advancements, and operating practices regarding vehicle maintenance, office paper, and recycling.

Community Outreach Meeting – A community outreach meeting was held in March at the Carrboro Century Center to receive feedback from interested customers and community organizations about OWASA’s services and projects and to discuss future water supply and demand, reuse and conservation needs. Despite extensive publicity, the meeting was attended by fewer than a dozen citizens. Nearly all the attendees voiced appreciation for the opportunity to learn about OWASA and expressed their appreciation for the overall quality of OWASA’s work and planning.

Capital Improvement Projects – OWASA’s capital improvement program includes several projects that will involve local permits and/or may affect local neighborhoods.

Construction of a new water line on **Old Durham Road west of Interstate-40** was completed after June 30, 2005, and local Special Use and Zoning Compliance Permits have been obtained from the Town of Chapel Hill for a new water pump station near I-40 to increase our ability to transfer water to and from the Durham system.

Phase-out of the Cleland Drive Pump Station and replacement of the Cleland Drive water and sewer lines will likely begin this fall and will require about four months to complete. This project will involve excavation along **Cleland Drive between Burning Tree and Rogerson Drive**.

A similar gravity sewer project in Carrboro will allow the **Lloyd Street and Starlite Drive** pump stations to be phased out and will provide sewer service to several unserved properties. These pump stations were constructed by the Town of Carrboro before OWASA was created. Design has been completed and OWASA staff is acquiring needed easements and permits. Construction may begin this fall, with completion in early 2006. Elected official approval is still needed for easements on separate parcels owned by the Towns of Carrboro and Chapel Hill.

A major sewer line replacement and rehabilitation project will begin before the end of this year in portions of Chapel Hill draining toward Bolin Creek. **More than 10 miles of sewer lines and nearly 600 manholes will be repaired or replaced and excavation will be required for approximately 20 point repairs**, where short sections of the main will be removed and replaced. Although much of the underground work will include “trenchless” methods, such as slip-lining and cured-in-place technology, **the project will**

require some excavation in and near public streets. Work will take place over a period of approximately three years. Additional project details will be provided.

Water line replacement work is now underway in the vicinities of **Markham Drive, Velma Road, and Old Oxford Road.** Similar projects will occur during the coming months in the **Colony Woods** neighborhood, **Brookside Apartments, Willow Drive,** and on **Michaux Road.** Further details are available on request.

The phase-out of OWASA's Clayton Road sewer pump station will require approximately 2,000 linear feet of new sewer line, which will be installed between **Clayton Road and Estes Drive** near the **Chapel Hill Library.** Portions of this route will run through **Pritchard Park,** where a sewer easement was reserved several years ago. Zoning Compliance, Engineering, and Resource Conservation District permits will be requested from the Town of Chapel Hill. Construction will likely begin during the first part of 2006.

Booth Road/Abbey Road Water Service Area/Water Pressure – Since its inception, OWASA has provided water service to eight residential properties in the Booth Road/Abbey Road area just **south of Starpoint in Chatham County.** This neighborhood is subject to lower than desired water pressures due to its elevated topography. Options for resolving these problems included the addition of a new pumping facility at a capital cost of more than \$200,000 or transferring the service of these eight customers from OWASA to the Chatham County system. In February 2005 the OWASA Board of Directors agreed to transfer this service area to Chatham County. The actual changeover will occur after additional decisions are made by Chatham County about whether a public water main or private water service lines will be extended along Abbey Road.

Reimbursement to Developers Who Install Water or Sewer Infrastructure with Excess Capacity – The Chapel Hill Town Council and Orange County Board of Commissioners have requested that OWASA consider instituting a policy to allow parties who install water and sewer lines to recover some of their installation costs from other parties who later connect to those facilities. This question arose during discussion of the Town's Operations Center project on Millhouse Road and the County's Twin Creeks school and park project off of Old Highway 86. OWASA representatives have met with Chapel Hill, Carrboro and Orange County officials to discuss reimbursement options, which the OWASA Board expects to discuss this Fall.

Water Conservation Goal and Objectives – The Board of Directors adopted a *Goal and Objectives for OWASA's Long-Term Water Conservation and Demand Management Program* in April 2005. An important element of the goal is "eliminating the need for costly new water supply sources and facilities." In addition to specific demand targets, this document establishes guidelines for cost-effectiveness, customer satisfaction, and fiscal impacts that will be weighed when considering new conservation and demand management programs. The OWASA Board will revisit the *Goal and Objectives*

periodically and revise them as necessary in light of future conditions and information that becomes available. Copies of the resolution and goals/objectives paper were provided to the Towns and County.

Carolina North – As reported previously, OWASA expects to meet the projected water and wastewater needs of Carolina North within the present scope of our long-range water/sewer and capital improvements plans. No new information was obtained during the past year about anticipated demands for Carolina North. OWASA staff will continue to assist University staff and consultants in their further plans. We expect to continue providing information about new “satellite” wastewater treatment technology that promises substantial reclamation/reuse opportunities and potable water demand reductions at Carolina North.

All development at Carolina North will be subject to OWASA’s water and sewer availability fees, which are based on cost-of-service rate setting principles. This will assure that the University pays its fair share of the costs for water and sewer capacity.

Brookfield Drive Sewer Proposal and University Lake Water/Sewer Extension Policies – OWASA, Carrboro, and Orange County staff met in October 2004 to discuss options and constraints for providing limited sewer service to portions of the Brookfield neighborhood in the University Lake watershed if it is determined that such service is necessary for public health reasons. Earlier information about the technical and financial options for resolving ongoing problems with septic systems was reviewed. Staff discussed relevant Carrboro, Orange County, Joint Planning Area, and OWASA policies, as well as the “adverse public health” provisions of the *Water and Sewer Management, Planning and Boundary Agreement*, to which Carrboro, Chapel Hill, Orange County, Hillsborough, and OWASA are parties. The Orange County Health Department subsequently collected field information about septic system performance in the Brookfield Drive vicinity, but identified only a limited number of problem sites. No finding of “adverse public health conditions” has been issued.

Annual Update of OWASA’s *Comprehensive Water and Sewer Master Plan* – OWASA staff updated its *2001 Master Plan* with recent data, strategic trends, and commentary in October 2004. Printed copies and supporting graphics of the full update report are available on request from OWASA, or can be viewed online at <http://www.owasa.org/pages/MasterPlanRev04.pdf>.

Strategic Financial Review and Rate Study – As contract negotiations are completed with the University for the reclaimed water system, OWASA will conduct a comprehensive review of its financial capacity and long-term strategies during the coming year. This will be done in conjunction with a review and modification, if necessary, of all customer rates and fees. The last such rate study was completed in 1997.

KEY OWASA FACTS
JULY 1, 2004 – JUNE 30, 2005 (FY 05)

<i>Water Supply and Treatment</i>		FY 04	FY 05
Average Daily Raw Water Pumped from Reservoirs (Million Gallons Per Day = MGD)		8.6	8.5
Peak Day Water Pumped from Reservoirs (MGD)		13.1	11.4
Total Rainfall (Inches): <i>Jones Ferry Road Water Treatment Plant</i> 30 Year Average = 46.9 inches		41.5	45.6
Exceedances of Primary Drinking Water Standards		0	0
<i>Wastewater Collection and Treatment</i>		FY 04	FY 05
Average Daily Wastewater Treated (MGD)		7.7	8.2
Reportable Sewer Overflows		5	10
Exceedances of Treated Wastewater Quality Standards		1	1
<i>Financial</i>		FY 04	FY 05
Total Revenues (\$Million):	<i>Budget</i>	\$26.1	\$26.4
	<i>Actual</i>	\$24.1	\$24.7
Operations & Maintenance Expenditures (\$Million):	<i>Budget</i>	\$15.7	\$15.6
	<i>Actual</i>	\$13.5	\$14.3
Capital Improvements Expenditures (\$Million):	<i>Budget</i>	\$23.3	\$34.2
	<i>Actual</i>	\$17.1	\$28.6
Debt Service Coverage Ratio (1.2 required)		1.8	1.4
Water Meter Connections		19,229	19,433
Average monthly bill for 6,000 gallon/month for residential customer, water and sewer		\$53.14	\$56.45

Note: OWASA has established a Performance Measurement Report which currently tracks 172 performance indicators covering all aspects of OWASA's operations and business functions.