ORANGE WATER AND SEWER AUTHORITY

A public, non-profit agency providing water, sewer and reclaimed water services to the Carrboro-Chapel Hill community.

MEMORANDUM

TO: **Natural Resources/Technical Systems Committee**
Alan Rimer (Chair)
Terri Buckner
Will Raymond
William Stott
Amy Witsil
Gordon Merklein (*ex officio*)

THROUGH: Ed Kerwin

FROM: Mason Crum

DATE: November 22, 2011

SUBJECT: **November 29, 2011 Natural Resources/Technical Systems (NRTS) Committee Meeting**

The NRTS Committee will meet Tuesday, November 29, 2011, at 3:30 P.M. in the OWASA Boardroom. Main topics will be:

1. Water and Sewer Management, Planning and Boundary Agreement (WSMPBA): The OWASA Board's Chapel Hill appointees met with Chapel Hill Council Members Jim Ward, Gene Pease and Penny Rich on October 24, 2011 to discuss the WSMPBA and to review the draft presentation that OWASA planned to present at Council's October 26, 2011 meeting. During the October 24th discussion, it was decided that the Council should postpone its October 26th WSMPBA agenda item in order to allow further consideration of the issues. Carrboro subsequently took similar action and deferred their scheduled November 1, 2011 agenda item to a later date.

Enclosure 1 is staff's proposed "***Drought Response Operating Protocol***," which was prepared after the October 24th meeting, when Council Members requested information about the conditions under which OWASA would purchase water in the future.

Committee Action Requested:

- Discuss staff's proposed ***Drought Response Operating Protocol***.
- If the Committee agrees, endorse staff's proposal for presentation to the OWASA Board on December 8, 2011.
- Discuss and propose next steps to the OWASA Board so that a final decision regarding the proposed WSMPBA language change can be obtained from Carrboro and Chapel Hill by January 31, 2012.

2. December 8, 2011 Discussion with Mr. Tom Fransen, Deputy Director, NC Division of Water Resources: After reviewing the list of questions from Board members (copy provided to the Board via e-mail on November 18th), Mr. Fransen requested that he be allowed to address the questions and discuss the Round Four allocation process at an upcoming OWASA Board meeting.

Committee Action Requested:
In preparation for the December 8th Board meeting, the Committee will discuss how the discussion with Mr. Fransen should be structured so that we make the best use of Mr. Fransen's and the Board's time.

3. Upper Neuse Clean Water Initiative (UNCWI): An April 13, 2011 letter from the UNCWI partners requested that Durham, Cary, Raleigh, and OWASA charge customers an additional $0.01 per 100 gallons of drinking water to generate a reserve fund for acquiring property and/or conservation easements to protect drinking water supply reservoirs. On July 28, 2011 Mr. Bill Holman, Director of State Policy at Duke University's Nicholas Institute for Environmental Policy, and Mr. Kevin Brice, President of the Triangle Land Conservancy, presented information to the OWASA Board about the UNCWI and requested that OWASA consider participating in a similar program as part its next (FY 2013) budget development and rate setting deliberations. The Board referred this matter to the NRTS Committee for further evaluation.

Background information and staff's recommendation on the technical merits of the program are attached (Enclosure 3).

Committee Action Requested:
Consider the technical merits of the UNCWI request and make a recommendation to the OWASA Board as to whether this item should be presented to the Finance Committee as a funding requirement for FY 2013.

4. Other Business.

5. Next Meeting?

We look forward to seeing you at 3:30 P.M. November 29th.

Mason Crum, P.E.
Director of Engineering and Planning

Enclosures
cc: Board of Directors
Robert Epting

DROUGHT RESPONSE OPERATING PROTOCOL

Purpose

To describe the procedures and criteria that OWASA will use for making water supply and demand management decisions during an extended drought, including provisions for public notice of potential Water Supply Shortage declarations, water purchases, and/or use of OWASA's Jordan Lake water supply storage allocation. The protocol outlined below will provide OWASA's customers and the overall Carrboro-Chapel Hill-UNC community with timely notice of a potential water shortage due to extended drought and the opportunity to reduce water consumption in order to avoid and/or minimize the need for future water use restrictions.

Protocol

1. OWASA shall monitor OWASA's water supply and demand conditions, short-and long-term weather forecasts, regional water supply conditions, and other factors which may affect the risk of a water supply shortage due to drought.

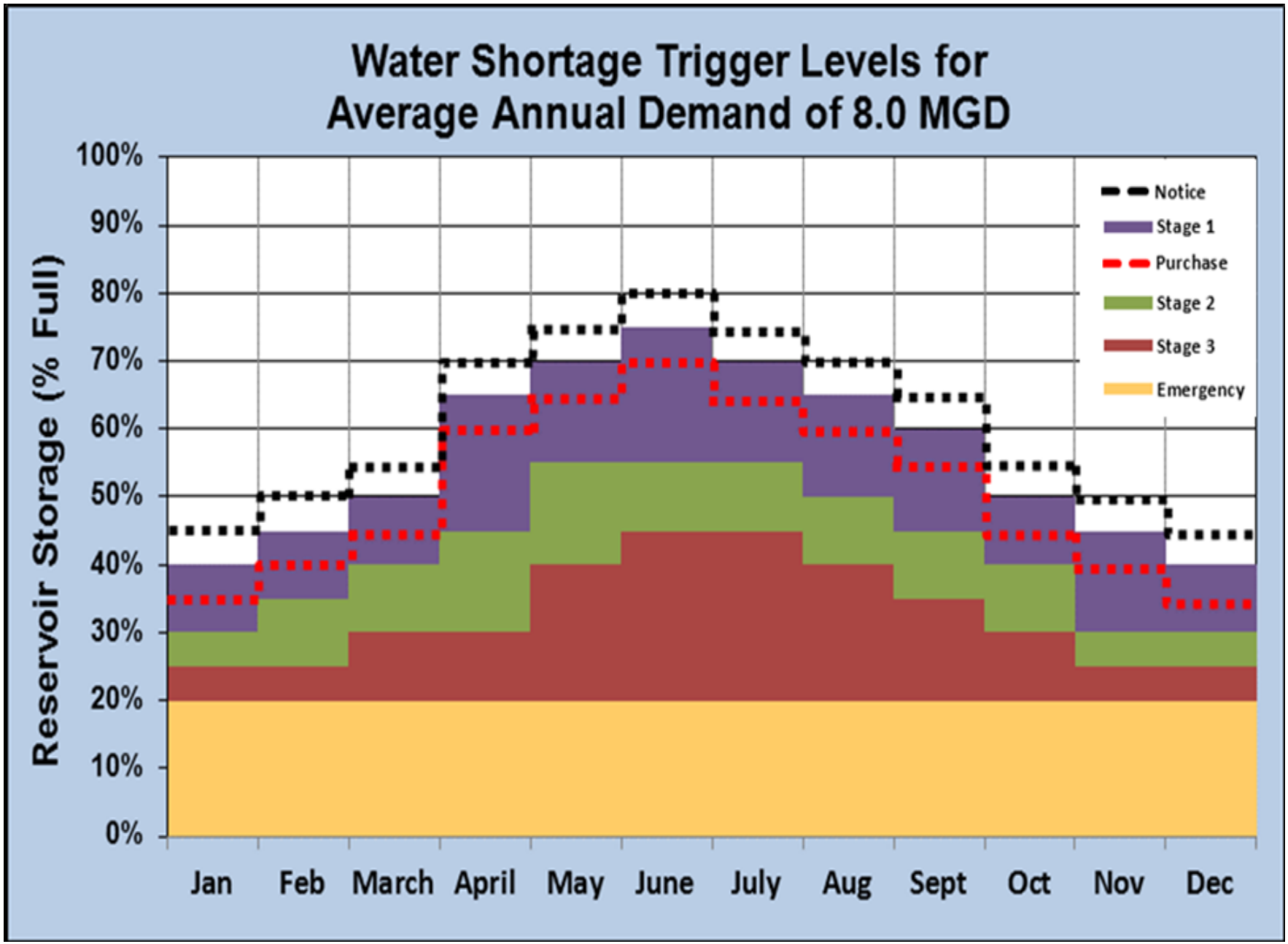
2. When total water storage in OWASA's reservoirs drops to the black dashed line on the attached graph, OWASA will initiate outreach activities to inform customers and other stakeholders that Stage 1 Water Use Restrictions are likely if current drought conditions continue or worsen. OWASA will emphasize the importance of using water wisely and voluntary conservation by all customers, and will review the restrictions and surcharges that would go into effect with Stage 1.

3. When total water in storage declines to the purple block on the attached graph, OWASA will declare Stage 1 Water Use Restrictions and inform its customer community that it may be necessary to begin purchasing water from Durham and/or Cary if drought and demand conditions continue. *(Note: under the mutual aid agreements currently in place, and with only a Level II Jordan Lake allocation, OWASA may obtain water from Durham or Cary only if it is available from Durham's or Cary's own supplies. To assure that it can obtain supplemental water when OWASA determines that it needs it, OWASA's existing Jordan Lake allocation must be converted to Level I, and the agreements with Durham and Cary must be modified.)*

4. When total water in storage declines to the red dashed line inside the purple block on the attached graph, OWASA may begin purchasing water with the objective of avoiding more severe (Stage 2, Stage 3, or Emergency) restrictions. Purchases (and restrictions) will continue until storage returns to levels above the red dashed line inside the purple block. Restrictions (but not purchases) will continue until storage returns to the "rescission" levels specified in OWASA's State-approved *Water Supply Shortage Response Plan*.

5. OWASA will provide regular updates to its customer community and to local governments throughout the drought. The Board and staff will be available to attend any meeting of the local governments to provide information about supply and demand conditions, and to provide any information or answer any questions elected officials may have.

Attachment


Water Shortage Trigger Levels for
Average Annual Demand of 8.0 MGD
Reservoir Storage (% Full)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Jan
Feb
March
April
May
June
July
Aug
Sept
Oct
Nov
Dec
Notice
Stage 1
Purchase
Stage 2
Stage 3
Emergency

Upper Neuse Clean Water Initiative Proposal
November 22, 2011

Purpose

This memo provides information and staff's recommendation regarding OWASA's potential participation in an Upper Cape Fear River Basin watershed protection funding initiative that is modeled after the Upper Neuse Clean Water Initiative (UNCWI).

Background

An April 13, 2011 letter from the UNCWI partners (Attachment 1) requested that Durham, Cary, Raleigh, and OWASA charge customers an additional $0.01 per 100 gallons of drinking water to generate a reserve fund for acquiring property and/or conservation easements to protect drinking water supply reservoirs.

On July 19, 2011 Mr. Bill Holman sent a letter (Attachment 2) to the OWASA Board in preparation for his upcoming presentation to the Board, proposing that OWASA and others provide funding for a similar initiative in the Upper Cape Fear River Basin (the Cane Creek, University Lake, Quarry and Jordan Lake reservoir watersheds are located in this basin).

On July 28, 2011 Mr. Bill Holman, Director of State Policy at Duke University's Nicholas Institute for Environmental Policy, and Mr. Kevin Brice, President of the Triangle Land Conservancy, made a presentation to the OWASA Board discussing the UNCWI and requesting that OWASA consider participating in a new funding initiative for protection of the Upper Cape Fear River Basin as part of its upcoming FY 2013 budget development and rate setting deliberations. At the conclusion of the presentation, the Board referred the matter to the Natural Resources and Technical Systems (NRTS) Committee for further evaluation.

Discussion

The UNCWI effort was established in 2005 in response to technical recommendations that acquiring/protecting additional stream buffers in the Upper Neuse River Basin would help safeguard water quality in Falls Lake, which is the City of Raleigh's primary drinking water source. Falls Lake is subject to similar nutrient-related issues as Jordan Lake. Both reservoirs, as well as OWASA's University Lake and Cane Creek Reservoir, are listed as "impaired" due to chlorophyll *a* concentrations that have exceeded water quality standards. (As noted previously, none of the OWASA lakes' intended uses for public water supply or recreation have actually been compromised or impaired. University Lake and Cane Creek Reservoir continue to meet all public health-related water quality standards.)

Other requested participant's plans

The City of Raleigh is an active participant and the primary source of local funding for the UNCWI, contributing $1.5 – 1.8 million/year. Their adopted ordinance, which allows the funds to be used for water quality improvement activities other than land acquisition and makes it clear that the expenditure of funds must result in a direct benefit to the City of Raleigh, is provided as Attachment 3.

Durham's program adds 1 penny per tier to the water consumption rate for inside City customers and 2 pennies per tier for outside customers. Durham staff estimates this will generate approximately $110,000 per year in addition to the amount they budget annually for passive land acquisition (typically $200,000 - $500,000). The City Council approved the rate increase contingent on City staff working closely with the land conservancy groups to identify appropriate parcels that would protect Durham's water supply sources (Lake Michie, Little River and Jordan Lake) and the funds generated are only to be used for the direct benefit of the citizens of the City of Durham.

Cary's land conservation efforts have targeted other open space priorities (e.g., parks, greenways, etc.) and is not participating in the UNCWI.

Past OWASA actions

University Lake: Land acquisition was among the options evaluated in the University Lake watershed management plan commissioned in the late 1980s *(University Lake Watershed Study,* CDM, 1989*)*. Water quality modeling indicated that permanently protecting 2,900 acres (approximately 15%) of the watershed would have only slight water quality benefits and not justify the multi-million dollar cost, but that "selected land acquisition in critical areas of the watershed may be appropriate." This recommendation was later confirmed in a follow-up analysis *(A Planning and Land Acquisition Model for University Lake Watershed – Scoping Analysis, Revised Draft,* Tetra Tech, May 12, 2002*)*, which found that land acquisition would probably not be effective, but "a possible exception may apply to undeveloped land very near the lake," and that conservation easements along stream buffers "would be particularly valuable near the downstream ends of tributaries as they approach University Lake."

Based on these technical recommendations, OWASA elected not to pursue a targeted program of land or easement acquisition in the University Lake watershed. However, in 2006, OWASA purchased (with the help of a $1.2 million NC Clean Water Management Trust Fund grant) the 73-acre Ray Heirs property along Morgan Creek immediately upstream of University Lake. This property was placed under a perpetual restrictive conservation easement that protects all riparian areas and severely restricts future development. We subsequently subdivided the property into two tracts, which were recently re-sold – with all easement conditions intact – on the open market.

Cane Creek Reservoir: Between the time of the Cane Creek Reservoir's impoundment in 1989 and completion of a technical study in 1996 *(Cane Creek Reservoir Watershed Study,* The Cadmus Group, August 1996*)*, OWASA purchased more than 500 acres of watershed land as it became available. The primary recommendations of the 1996 study included large lot (5 acres or greater) residential re-zoning and the permanent protection of 1,265 additional acres of watershed land either through fee simple purchase or conservation easements. OWASA adopted that as a goal and allocated funding through the Capital Improvements Program. We subsequently protected 960 acres of additional Cane Creek watershed land, mostly through fee simple acquisition. Since 1997, Orange County's Land Legacy Program also acquired protective conservation easements on 363 acres in the Cane Creek watershed.

Together, OWASA and Orange County have permanently protected a total of 1,323 acres since the watershed land acquisition goal was set by OWASA, thus exceeding that goal by nearly five percent. OWASA and Orange County staff continue to work closely in coordinating the needs of our respective programs as the County protects additional land in the watershed and elsewhere.

Summary: From 1991 through 2006, OWASA invested $8.4 million to protect 1,520 acres of Cane Creek and University Lake watershed land through a combination of direct purchases and conservation easements. These expenditures were offset by $3.0 million in grant funding from the NC Clean Water Management Trust Fund and $0.9 million in proceeds from the recent sale of the Ray Heirs property. Attachment 4 summarizes the investments made previously in the context of OWASA's overall watershed area.

During the 16-year period (1991-2006) of active land acquisition, OWASA sold approximately 43.1 billion gallons of drinking water. With all expenditures, grant receipts, and sales proceeds adjusted to 2011 dollars, OWASA customers paid an average of 1.5 cents per 100 gallons of water sold during this 16-year period for watershed land and easement purchases.

Because the land acquisition recommendations of OWASA's previous technical studies have been achieved, no further investments are budgeted for future years other than the remaining $1.0 million in debt service related to the original purchase of the Ray Heirs property and $158,000 for the eventual purchase of the remaining one-third interest in the Dean Heirs property.

Potential impacts on customer rates

Assuming a potable water sales rate of 6.5 mgd, as projected for FY 2012, the UNCWI Partnership's proposal that we adopt a one cent per 100 gallon surcharge would generate about $237,000 per year for watershed protection in the Jordan Lake watershed. Applying the same surcharge to reclaimed water sales would generate an additional $24,000 for an annual total of $260,000.

If the surcharge was approved, a single-family residential customer using 5,000 gallons per month would pay an additional $0.50 per month ($6.00 per year) to fund this new initiative. Based on usage during the past 12 months, the estimated additional water charges to some of our largest customers would be: UNC Chapel Hill: $63,000 per year, Chapel Hill – Carrboro Schools: $3,400 per year; and the Town of Chapel Hill: $1,350 per year.

It is notable that these costs would be in addition to expenditures that OWASA customers have already made, and will continue to make, for improvements to the Mason Farm Wastewater Treatment Plant that were necessary to comply with the Jordan Lake Nutrient Rules.

General Counsel Opinion

General Counsel has considered the UNCWI request, and is of the opinion that OWASA has the authority to impose or expend rates or fees "for purposes directly related to the provision of water or sewer services, including the protection of assets necessary to those purposes." Accordingly, expenditures related to the protection of watersheds from which OWASA draws water could be authorized. Counsel further advises that "the Board would want to be convinced that OWASA funds were spent only on initiatives providing direct benefits to proximate sources upon which OWASA relies."

Staff position

Staff believes that no financial contributions should be made until such time that additional technical analyses are produced that indicate investing in an Upper Cape Fear Clean Water Initiative will likely produce tangible, positive results for OWASA's water supplies and our current and future customers. This recommendation is made in light of other ongoing studies and potential investment decisions we will be considering (for example, alternatives for using methane gas at the wastewater plant) where funding allocations of ~$250,000/year might be of more direct and immediate benefit to our customers. Staff recognizes that OWASA's "stewardship role" applies to the responsible management of the financial resources provided by our customers as well as to the natural resources that help ensure the long-term quality of our drinking water.

Committee Action Requested and Next Steps

Consider staff's position and make a recommendation to the full Board as to whether participation in the UNCWI or a similar program for the Upper Cape Fear River Basin should be considered as a funding requirement in the FY 2013 budget.

Attachments

Attachment 1

RECEIVED

APR 14 2011

April 13, 2011

Mayor Charles Meeker
Office of the Mayor
222 W. Hargett St., Ste. 209
Raleigh, NC 27601

Chairman Gordon Merklein
Orange Water & Sewer Authority
400 Jones Ferry Road
Carrboro, NC 27510

Mayor Bill Bell
Office of the Mayor
101 City Hall Plaza
Durham, NC 27701

Mayor Harold Weinbrecht
Office of the Mayor
Cary Town Hall
316 N. Academy St.
Cary, NC 27513

Dear Mayors Bell, Meeker and Weinbrecht, and Chairman Merklein,

Ensuring safe drinking water is one of the most important services that you provide to protect public health and to sustain the economy of the Research Triangle region. Due to population growth and development, water quality and quantity in Falls Lake, Jordan Lake, and other important reservoirs are threatened. We respectfully urge you to implement a new regional dedicated funding system that will bolster existing efforts to prevent polluted runoff and sediment from contaminating these vulnerable drinking water sources.

The most cost-effective way to ensure clean drinking water is to protect natural buffers along the tributaries that lead to the reservoirs. Over time, this preventive approach costs far less than cleaning up polluted water. At the March 2011 meeting of the Environmental Council of the States, Nancy Stoner, EPA Acting Assistant Administrator for Water, noted that preventing water pollution is 27 times more cost effective than cleaning it up.

We commend all of you for your governments' longstanding efforts to preserve open space and protect water quality and quantity for your constituents. One example is the Upper Neuse Clean Water Initiative, a successful partnership between state and local governments, and non-profit land trusts that has protected over 57 miles of streams in the last five years. The public entities have funded efforts facilitated by the land trusts to work with willing landowners to place conservation easements on, or purchase outright, properties that have been identified as having significant effect on water quality downstream. For every $1 that Raleigh has invested, UNCWI has leveraged $11 in other public and private funds.

One thing has become clear as the partners have implemented this initiative: there is a critical need to increase funding, and to ensure that this funding will be available into the future. One obvious solution is to create a dedicated funding source to protect both watersheds.
We respectfully request that you include in your next budget a one penny per 100 gallon fee on water use. This would produce almost $5 million per year for land conservation projects to protect water quality and quantity in the Upper Neuse and Upper Cape Fear watersheds. Importantly, this fee would increase the average monthly household water bill by only about forty cents.

Some may question a fee increase – albeit a small one – in the middle of tough economic times, but a dedicated funding source for land conservation that protects these reservoirs now will mean less money spent over time for water treatment. Creating local reserves for watershed protection will provide the additional benefit of helping water utilities meet the higher debt coverage ratios recommended by bond rating agencies.

Each local government would control how its money is spent, working in partnership with land trusts to prioritize conservation properties to receive funding. One key benefit to this regional approach is that it would offer all four governments new opportunities to leverage their own resources against other funding sources. We commend the collaboration of the Jordan Lake Partnership and believe that investments in watershed protection would strengthen the Partnership's case that its members are good stewards of the water resources in Jordan Lake.

We would appreciate an opportunity to present this proposal to your councils or board as you develop your budget for fiscal year 2011-2012, and to communicate its benefits more broadly to the general public.

Thank you for your consideration, and please let us know if you have any questions or need more information.

Yours truly,

Upper Neuse Clean Water Initiative Partners:

David Proper
Trust for Public Land

William Flournoy
Triangle Greenways Council

Reid Wilson
Conservation Trust for North Carolina

Derek Halberg
Tar River Land Conservancy

Robin Jacobs
Eno River Association

Diana Tetens
Ellerbe Creek Watershed Assoc.

Kevin Brice
Triangle Land Conservancy

Cc: OWASA Vice Chair Alan Rimer

Attachment 2

Box 90335
Durham, NC 27708

July 19, 2011

Mr. Gordon Merklein, Chairman
Orange Water & Sewer Authority
400 Jones Ferry Road
Carrboro, North Carolina 27510

Re: Regional Watershed Protection Strategy and Funding

Dear Gordon:

Thank you for providing the opportunity for me to make a presentation on the benefits of a regional strategy for watershed protection on behalf of a coalition of land trusts at the July 28, 2011 meeting of the Board of Directors of the Orange Water and Sewer Authority in Chapel Hill. Kevin Brice, President of the Triangle Land Conservancy, will join me.

I am writing to provide some information: 1) on the benefits of regional watershed protection and 2) to support your staff's recommendation to refer a request for OWASA to levy a watershed protection fee to the Board's Natural Resources and Technical Systems Committee and Finance Committee for consideration.

Joining other water utilities in funding watershed protection continues OWASA's regional leadership, provides a cost effective means to protect water quality and quantity, contributes to the financial health of the utility, leverages other public and private funds, and helps manage risks to assured supplies of clean water.

Background

The quality and quantity of water resources in the Upper Cape Fear and Upper Neuse River Basins is critical to public health, economic prosperity, and environmental quality in the Research Triangle. The region faces major challenges in reducing nutrient pollution and in maintaining capacity in Jordan Lake, Falls Lake, and other drinking water reservoirs. Local governments and water utilities must plan together to meet future demands and to anticipate land use and climate change.

On April 13, 2011 the Upper Neuse Clean Water Initiative Partners, including Conservation Trust for NC, Ellerbe Creek Watershed Association, Eno River

Association, Tar River Land Conservancy, Triangle Greenways Council, Triangle Land Conservancy, and Trust for Public Land wrote you and the Mayors of Cary, Durham and Raleigh and requested that each water utility levy a one cent/one hundred gallons fee to help protect water quality and quantity in the Upper Neuse and Upper Cape Fear River Basins.

In June the Raleigh City Council increased wastewater rates, approved a one cent/one hundred gallon watershed protection fee, and created a reserve for the funds to continue the Upper Neuse Clean Water Initiative. Also in June the Durham City Council increased water and wastewater rates, and approved a one cent/one hundred cubic feet (748 gallons) watershed protection fee to supplement its ongoing efforts to protect its Lake Michie and Little River reservoirs. The Cary Town Council increased water and wastewater rates and did not levy a watershed protection fee this fiscal year but indicated an interest in considering it in the future.

OWASA staff estimate that a one cent/one hundred gallon fee would raise about $230,000 per year from OWASA customers for watershed protection.

OWASA's and Orange County's Leadership in Watershed Protection

With support from OWASA and the public, Orange County, Carrboro and Chapel Hill have enacted and maintained some of the most protective water supply watershed protection ordinances in North Carolina – before they were required by the State Water Supply Watershed Protection Act of 1989.

CDM prepared the University Lake Watershed Study for OWASA in 1989. Tetra Tech revised it in 2002. Cadmus Group prepared the Cane Creek Reservoir Watershed Study for OWASA in 1996. OWASA complemented local land use regulation and used these studies to prioritize its land conservation investments.

According to *OWASA Land and Easement Purchases for Water Supply Protection (July 2011*) prepared by your staff, OWASA invested $8,400,000 to protect 1520 acres of land in the Cane Creek and University Lake watersheds from 1991 through 2006. OWASA staff estimate that OWASA customers have paid an average of 1.5 cents/one hundred gallons for watershed protection during this period.

OWASA effectively leveraged its funds with donated value from private landowners and funds from the Clean Water Management Trust Fund (CWMTF) and Orange County's Land Legacy Program.

Benefits to OWASA of a Watershed Protection Fee

OWASA has been a leader in regional water resource management. It has shared its experience with tiered rates with other utilities. It participates in the Triangle's regional

coordination of water efficiency and conservation measures and the Jordan Lake Partnership. OWASA can continue its leadership role by participating in a regional strategy to protect water quality and quantity.

Both Cane Creek and University Lake are rated "moderately susceptible" to contamination by the NC Public Water Supply's Source Water Protection Program.[1] Protecting and restoring riparian buffers, floodplains, and wetlands is a cost effective means to protect and restore water quality and reduce risks to OWASA's reservoirs. Funding watershed protection is consistent with OWASA's past efforts and with its policy "to provide high quality drinking water through a combination of source protection and water treatment technology."

Funding watershed protection is also consistent with key elements of OWASA's Financial Management Policy adopted in March 2009, including cost-of-service principles and sustainability. Watershed fees could be included in OWASA's Capital Improvement Reserve Fund while helping maintain OWASA's admirable debt coverage ratio of 2.0.

Discussion and debate about watershed protection also informs the public about the value of water and the value of OWASA's reservoir assets. Item B.1 in OWASA's Strategic Plan, updated in March 2011, calls for the development of a comprehensive asset management plan. An Asset Management Team has been formed to draft an asset management plan. Almost all water utilities undervalue their reservoirs. University Lake and Cane Creek are far more valuable today than when they were constructed.

OWASA watershed funding will help leverage other private funding for watershed protection. The State's Jordan Lake Nutrient Management Strategy and rules require nutrient reductions and offsets that could be targeted into the Cane Creek and University Lake watersheds. After water utilities have committed to regional watershed funding, land trusts and other advocates will approach businesses and industries that depend upon assured supplies of clean water for their operations to contribute. For every $1 that Raleigh has invested in UNCWI it has leveraged $11 in other private and public funds.

Many landowners in Orange and Alamance Counties are conservation minded. Setting aside funds for watershed protection enables OWASA and its partners to work with these landowners and other funders over many years.

<u>Managing New Risks</u>

[1] http://swap.deh.enr.state.nc.us/swap/

Funding watershed protection will also help OWASA and other utilities manage new risks. The 2011 General Assembly of NC enacted SL 2011-394, Amend Environmental Laws, and SL 2011-255, Well Rights/Private Property. The NC Senate passed SB 492, Agricultural Water Rights Have Priority. The NC House of Representatives may consider SB 492 in 2012.

Section 10 of SL 2011-394 exempts "small" dams (from 25 feet in height with an impoundment capacity of 50 acre-feet) and farm ponds from the Dam Safety Act. The Dam Safety Act requires minimum releases. Orange County estimates that there are 1916 farm ponds in the county, including 148 farm ponds in the Cane Creek watershed. SL 2011-394 and SL 2011-255 may reduce stream flows into reservoirs.

The 2011 General Assembly appropriated $1,000,000 to establish a new cost share program for construction of farm ponds. The legislature also transferred the Divisions of Soil and Water Conservation and Forest Resources from the Department of Environment and Natural Resources to the Department of Agriculture. Proponents of these transfers supported more emphasis on agricultural and forest production and less emphasis on conservation.

21st Century Water Utilities

Finally successful 21st Century Water Utilities will not just provide gallons of water. They will likely offer many public health, safety, and environmental services, including watershed protection, to their customers.

Next Steps

The Upper Neuse Clean Water Initiative is a successful public-private partnership including water utilities, local governments, and local land trusts to help protect water quality and quantity in Falls Lake and other drinking water reservoirs in the basin. A similar initiative could protect water quality and quantity in Jordan Lake, Cane Creek, University Lake, and other drinking water sources in the Upper Cape Fear. OWASA's studies of its watersheds provide experience for science-based watershed protection in the Upper Cape Fear.

OWASA could work with the Jordan Lake Partnership, local land trusts, local governments, Triangle J Council of Governments, and other partners to identify opportunities for cost effective watershed protection projects in the Upper Cape Fear.

Disclosure

I am Director of State Policy at Duke University's Nicholas Institute for Environmental Policy Solutions. I research water allocation policy, watershed protection, and other issues at Duke. I am not writing on behalf of the Nicholas Institute. In the interest of

disclosure I serve on the Boards of the non-profit Conservation Trust for North Carolina and the Triangle Land Conservancy. Both organizations participate in UNCWI and would like to work with OWASA, Durham, Cary, and others on a similar initiative in the Upper Cape Fear River Basin.

Thank you for your consideration. Please contact me if you need more information. We look forward to working with you and your staff in the coming months.

Sincerely,

Bill Holman

Attachment 3

ORDINANCE NO. 2011 – 944

AN ORDINANCE ESTABLISHING A WATER UTILITY RATE SURCHARGE FOR THE PROTECTION OF DRINKING WATER RESOURCES OF THE CITY OF RALEIGH

WHEREAS, it is determined that the protection and enhancement of water resources for the purpose of water supply is a fundamental function and duty of the City of Raleigh and its Public Utilities Department; and

WHEREAS, the Raleigh City Council has determined to establish a water surcharge to support this function and duty; and

WHEREAS, monies collected from this surcharge will only be available to protect and enhance drinking water resources including but not limited to land acquisitions, improvements to drinking water treatment facilities, and water quality improvement activities; and

WHEREAS, all projects fully or partially funded from these monies shall provide measurable improvement or protective benefits for the City's drinking water resources; and

WHEREAS, monies collected from this surcharge shall be deposited in a reserve fund which will only fund water quality protection and improvement projects upon approval from the Raleigh City Council,

THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF RALEIGH:

Section 1. That the following is an additional volumetric rate to be charged for water utility service billed on or after November 1, 2011, regardless of the date of delivery of service, for the City of Raleigh and Town of Garner service delivery areas (Reference Section 2-3001, Raleigh City Code):

> A surcharge of $0.0748 per CCF of potable water consumed shall be assessed to all City of Raleigh and Town of Garner water customers which pay inside city limit or outside city limit rates.

Section 2 . All laws and clauses of laws in conflict herewith are hereby repealed to the extent of said conflict.

Section 3. If this ordinance or application thereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions or applications of the ordinance which can be given separate effect and to this end the provisions of this ordinance are declared to be severable.

Section 4. This ordinance shall become effective November 1, 2011.

ADOPTED: September 20, 2011
EFFECTIVE: November 1, 2011

DISTRIBUTION: Public Utilities – Carman, Jackson, Waldroup, Massengill, Buchan, Lassiter, Wheeler
Finance – Perry James
Budget and Management Services – Munro
Transcription Services – Taylor

Attachment 4

Protected Land and Conservation Easements in the Cane Creek and University Lake Watersheds -- November 2011

Cane Creek Watershed	**(Acres)**
TLC Land & Easements	0
OWASA Land *	2,165
OWASA Easements	655
Orange County Land	5
Orange County Easements	359
Other Easements	0
Total Cane Creek:	**3,184**
Total Watershed Area *	**19,742**
% of Watershed:	**16.1%**
OWASA % of Watershed:	**14.3%**

University Lake Watershed	
TLC Land & Easements	764
OWASA Land	250
OWASA Easements	117
Orange County Land	30
Orange County Easements	125
UNC Land *	501
Other Easements	160
Total ULake:	**1,947**
Total Watershed Area *	**18,930**
% of ULake Watershed:	**10.3%**
OWASA % of ULake Watershed:	**1.9%**

* *Does not include surface area of University Lake or Cane Creek Reservoir*