



ORANGE WATER AND SEWER AUTHORITY

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

March 1, 2012

Mayor Mark Chilton
Town of Carrboro
301 West Main Street
Carrboro, NC 27510

SUBJECT: INFORMATION FOR THE MARCH 13, 2012 ALDERMEN MEETING

Dear Mayor Chilton:

We appreciate the opportunity to update and receive feedback from you and the Board of Aldermen on our recently developed draft Drought Response Operating Protocol (Attachment #1), which establishes specific guidelines for OWASA's planned use of its Jordan Lake water supply allocation during extended droughts.

This draft protocol was developed in response to suggestions that OWASA develop specific criteria about when and under what circumstances its Jordan Lake water supply allocation would be used, in part to offer assurance that the Jordan Lake allocation would be used only as a supplemental source to relieve and perhaps avoid the effects of extended drought and not as a long-term source of everyday supply.

The draft protocol also assures that the community will be advised early and often as to impending drought conditions, and that conservation will continue to be encouraged as a first response, and as a continuing necessity, before water is obtained from OWASA's Jordan Lake allocation.

The purpose of our March 13th presentation is to seek the Board of Aldermen's feedback on the draft protocol.

Key features include:

- Specific and well-defined procedures and criteria that OWASA will use in determining when to use water from its Jordan Lake allocation during an extended drought.
- Establishment of a "Water Shortage Advisory" stage that will initiate outreach activities to inform customers that mandatory water use restrictions and water purchases may be necessary if supply and demand conditions do not improve in the near future. This will provide customers with an early opportunity to intensify their water saving practices.

Mayor Chilton

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- A clear policy statement that water purchases will be approved by the OWASA Board only after the Board has first declared a Stage 1 Water Supply Shortage per OWASA's State-approved Water Shortage Response Plan.

Soon after the OWASA Board receives feedback from members of the Carrboro Board of Aldermen and the Chapel Hill Town Council, we plan to discuss and formally adopt the Drought Response Operating Protocol.

The OWASA Board will then complete its discussions and decide what further action may be necessary regarding OWASA's October 21, 2011 request (Attachment #2) that Carrboro and Chapel Hill clarify the Water and Sewer Management, Planning and Boundary Agreement regarding access and use of OWASA's Jordan Lake water supply allocation.

We look forward to answering your questions and receiving your feedback on March 13th. If you need additional information in the interim, please let me know.

Very truly yours,

A handwritten signature in black ink, appearing to be 'G. Merklein', followed by a horizontal line extending to the right.

Gordon Merklein, Chair
OWASA Board of Directors

Attachments

c: Mr. Matt Efird, Interim Carrboro Town Manager
OWASA Board of Directors
Ed Kerwin, OWASA Executive Director

**DROUGHT RESPONSE OPERATING PROTOCOL
DRAFT – JANUARY 26, 2012**

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 more severe water use restrictions or emergency actions.

The proposed drought responses are based on the risk of depleting OWASA's existing Cane Creek/University Lake/Quarry Reservoir system to the Emergency Storage level. Those risks do *not* assume that Jordan Lake is part of OWASA's existing or "regular" water supply portfolio; but, that Jordan Lake is only a supplemental or auxiliary source for use during extended drought or emergency conditions.

Protocol

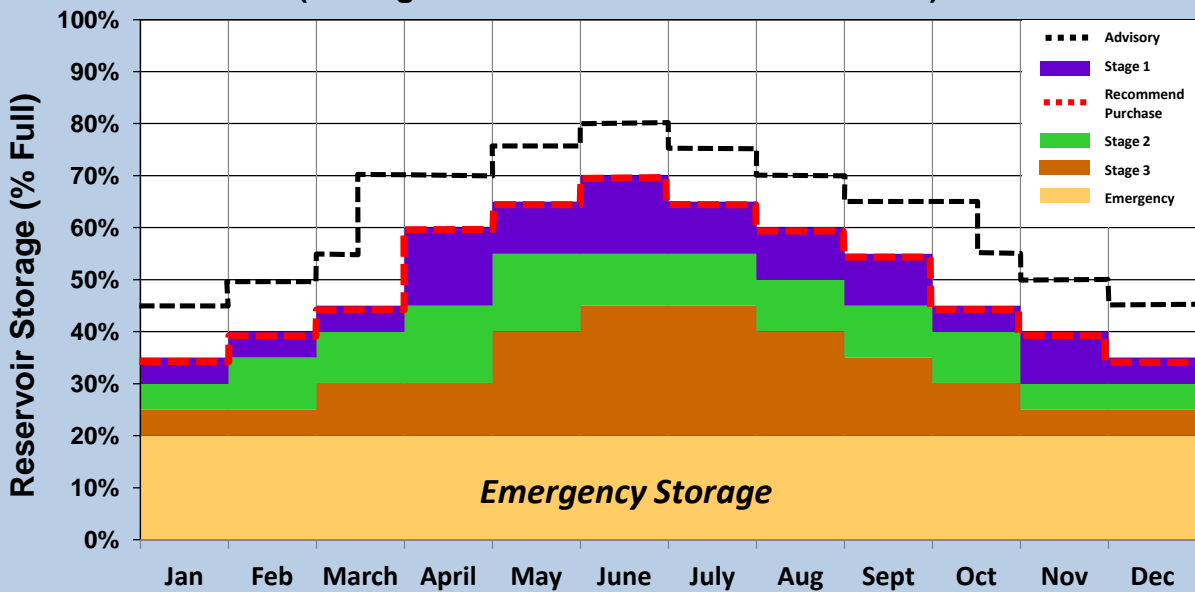
1. OWASA shall monitor OWASA's water supply and demand conditions, short-and long-term weather forecasts, regional water supply conditions, and other factors which may affect the risk of a water supply shortage due to drought.
2. The attached graph, which is a modified version of the 8 mgd "trigger table"* in OWASA's State-approved *Water Shortage Response Plan*, shall guide OWASA's drought response decisions. Any drought-related Water Supply Shortage declaration at storage levels above those indicated on the trigger table, and/or any decision to purchase water from a neighboring jurisdiction (and/or to use OWASA's Jordan Lake allocation) during a drought, shall be made only upon approval by the OWASA Board of Directors.
3. OWASA shall declare a Water Shortage Advisory when the total water stored in the reservoirs drops to within 10% of the mandatory Stage 1 trigger. (This Advisory stage is represented by the black dashed line on the attached graph). The Water Shortage Advisory will initiate outreach activities to inform customers and other stakeholders that Stage 1 Water Use Restrictions will likely go into effect, and that it may be necessary to begin purchasing water from Durham and/or Cary if current drought conditions continue or worsen. As in the past, OWASA will increase its standard conservation messaging before declaring the Water Shortage Advisory in order to give the community as much opportunity as possible to intensify their water saving practices.
4. When total water storage in OWASA's reservoirs system declines to the purple block on the attached graph, OWASA shall declare a Stage 1 Shortage. OWASA may, at its own discretion, initiate Stage 1 use restrictions – with or without corresponding drought rate surcharges – earlier than indicated on the graph, but not later.
5. When total water in storage declines to the red dashed line within the purple block on the attached graph, OWASA staff will recommend that water purchases begin; however, no purchase or use of OWASA's Jordan Lake allocation shall be made without explicit approval

* *The graph is based on an average daily raw water demand of 8 mgd. Trigger levels for greater or lesser demands will be correspondingly higher or lower than those depicted here.*

by the Board of Directors. Restrictions shall, and purchases may, continue until storage returns to levels above the red dashed line within the purple block. Further, restrictions shall continue until storage returns to the “rescission” levels specified in OWASA’s State-approved *Water Supply Shortage Response Plan*.

6. OWASA shall provide regular updates to its customer community and to local governments throughout the drought. The Board and staff shall be available to attend meetings of the local governments to provide information about supply and demand conditions and to provide any information or answer questions elected officials may have.
7. The OWASA Board shall review this protocol (a) concurrently with its review of OWASA’s State-approved *Water Shortage Response Plan* (as required in conjunction with Local Water Supply Plan updates that must be submitted to the NC Division of Water Resources at least once every five years); (b) following any drought during which mandatory water use restrictions were implemented; and/or (c) at any time deemed necessary to reflect changes in water supply and demand conditions or other new information.

Draft - Drought Response Operating Protocol (Average Annual Withdrawals of 8.0 MGD)



The proposed responses are based on the risk of depleting OWASA's existing Cane Creek/University Lake/Quarry Reservoir system to the Emergency Storage level. Those risks do not consider Jordan Lake to be part of OWASA's existing or "regular" water supply portfolio, but only as a supplemental or auxiliary source for use during extended drought or emergency conditions.

Water Shortage Advisory: Aggressive public awareness/education effort. May be initiated earlier at OWASA's discretion, but not later.

Stage 1 Shortage: Mandatory use restrictions -- with or without rate surcharges -- may be initiated earlier at OWASA's discretion, but not later. *Stage 1 will be declared before OWASA authorizes water purchases from other utilities or uses its Jordan Lake allocation.*

Recommend Water Purchases: OWASA staff will recommend that water purchases begin after Stage 1 has been declared; however, no purchase or use of OWASA's Jordan Lake allocation shall be made without approval by the Board of Directors.

Stage 2 Shortage: May be initiated earlier at OWASA's discretion, but not later.

Stage 3 Shortage: May be initiated earlier at OWASA's discretion, but not later.

Water Supply Emergency: Emergency actions will be taken to obtain supplemental water to ensure the protection of public health, safety and welfare. Such actions would likely include installation of temporary facilities to pump water from the Haw River to Cane Creek Reservoir if Cane Creek/University Lake/Quarry Reservoir storage declines to this level.



ORANGE WATER AND SEWER AUTHORITY

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

October 21, 2011

Mayor Mark Chilton
Town of Carrboro
300 West Main Street
Carrboro, NC 27510

Mayor Mark Kleinschmidt
Town of Chapel Hill
405 Martin Luther King Jr. Boulevard
Chapel Hill, NC 27514

**SUBJECT: PROPOSED CLARIFICATION OF THE WATER AND SEWER
MANAGEMENT, PLANNING AND BOUNDARY AGREEMENT**

Dear Mayor Chilton and Mayor Kleinschmidt:

I'm writing to follow-up my letter of June 10, 2011, regarding our proposed clarification of the Water and Sewer Management, Planning and Boundary Agreement (WSMPBA) as it pertains to OWASA's access and use of its Jordan Lake water supply allocation.

At our meeting last night, the OWASA Board adopted the attached resolution, which includes the following:

- 1. The "Policy Resolution Regarding Water Purchases to Mitigate the Risk of Shortage During Periods of Extended Drought" adopted by the OWASA Board of Directors on June 9, 2011 is hereby rescinded and replaced by this resolution.*
- 2. OWASA shall only purchase water from other communities or obtain water from its Jordan Lake storage allocation during periods of increased drought risk after it has declared a Stage 1 Water Supply Shortage per OWASA's State-approved Water Shortage Response Plan and OWASA's Water Conservation Standards as incorporated therein.*
- 3. The Carrboro Board of Aldermen and Chapel Hill Town Council are hereby requested to reconsider their actions of March 1, 2011 and April 25, 2011 and to approve previously proposed language in the Agreement (WSMPBA) to clarify that nothing therein shall be construed to prevent OWASA from obtaining water from its Jordan Lake allocation for use by OWASA customers. OWASA respectfully requests that Carrboro and Chapel Hill approve those changes by November 30, 2011.*
- 4. OWASA shall continue to encourage water conservation and the use of reclaimed water, and will continue its existing policy and practice of providing advance notice of a potential or impending shortage to customers and local governments.*

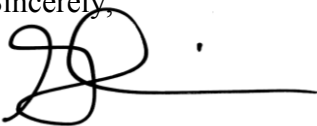
The Board of Directors was unanimous in the view that encouraging our community to continue its outstanding efforts at water conservation remains a key component of OWASA's Long-Range Water Supply Plan.

After determining to revise its policy to reflect that OWASA will not purchase water from its Jordan Lake water supply allocation in times of drought until after declaring a Stage 1 Shortage, the Board also voted to resubmit its request to the Chapel Hill Town Council and Carrboro Board of Aldermen that the WSMPBA be clarified to prevent any interpretation that could limit OWASA's ability to access its allocation of water from Jordan Lake.

We continue to strongly believe that permanent and secure access to our Jordan Lake allocation represents the most cost-effective and reliable insurance policy during an increasingly uncertain future, and that such access will also allow us to better optimize the use of our Orange County water supply sources during future droughts.

We respectfully request your support and are standing by to answer your questions.

Sincerely,

A handwritten signature in black ink, appearing to be 'Gordon Merklein', followed by a horizontal line.

Gordon Merklein, Chair
OWASA Board of Directors

Enclosure

c: Chair Bernadette Pelissier, Orange County
Mayor Tom Stevens, Town of Hillsborough
OWASA Board of Directors
Mr. Frank Clifton, Orange County Manager
Mr. Eric Peterson, Hillsborough Town Manager
Mr. Roger Stancil, Chapel Hill Town Manager
Mr. Matt Efird, Interim Carrboro Town Manager
Ms. Carolyn Elfland, Associate Vice-Chancellor for Campus Services
Ed Kerwin, OWASA Executive Director

POLICY RESOLUTION REGARDING WATER PURCHASES TO MITIGATE THE RISK OF SHORTAGE DURING PERIODS OF EXTENDED DROUGHT

WHEREAS, the Board of Directors of Orange Water and Sewer Authority (OWASA) adopted the *Long-Range Water Supply Plan Final Report, April 8, 2010* (the Plan) as a principal guide for future policy and investment decisions regarding the provision of a sustainable, reliable and cost-effective water supply for OWASA's current and future customers through 2060; and

WHEREAS, the Plan included the following five primary recommendations (summarized):

1. "Continue to promote water conservation and efficiency through customer awareness and education, targeted technical assistance, conservation pricing, and support for increased water efficiency standards in new and renovated buildings. The reliability of our local water supply sources assumes that recent gains in water use efficiency will be sustained during the next 50 years.
2. "Continue to pursue the Quarry Reservoir expansion (shallow version) as the most cost-effective, long-term option for a supplemental supply source. This will maximize local control of a substantial increment of supply with minimal additional capital investment.
3. "Continue participation in the Jordan Lake Partnership in order to retain OWASA's water supply storage allocation and to ensure cost-effective access to that allocation through secure and permanent agreements with nearby utilities.
4. "Develop water purchase/sale agreements with neighboring utilities that secure the permanent ability to cost-effectively purchase water under appropriate conditions of supply and demand providing additional flexibility and redundancy in the event of critical facility failure, extreme weather, or other unforeseen/emergency circumstances.
5. "Work cooperatively with the elected boards of Carrboro, Chapel Hill, and Orange County to amend the 2001 *Water and Sewer Management, Planning, and Boundary Agreement* to resolve any unnecessary constraints on access to OWASA's Jordan Lake allocation and to ensure a reliable and sustainable water supply for the future;" and

WHEREAS, the Board continues to believe that the Plan's recommendations remain sound, and that they reflect OWASA's best professional judgment consistent with its responsibilities to OWASA's customers, to the Towns of Carrboro and Chapel Hill, and to the University of North Carolina at Chapel Hill; and

WHEREAS, notwithstanding this commitment to the *Long-Range Water Supply Plan*, the Board also acknowledges and understands from actions taken by the Carrboro Board of Aldermen on December 8, 2009 and March 1, 2011, and by the Chapel Hill Town Council on April 25, 2011 that those elected bodies do not believe that OWASA should purchase water from other communities or obtain water through its Jordan Lake storage allocation during drought conditions unless OWASA has first declared a Water Supply Shortage; and

WHEREAS, recent drought scenario simulations demonstrate that if the record drought of 2001-02 had not ended abruptly in October 2002, OWASA would have had to execute

emergency plans to install a temporary piping and pumping system from the Haw River to the Cane Creek Reservoir by the end of November 2002; however, with permanent and secure access to its Jordan Lake allocation and through the use of interconnection infrastructure that now exists, OWASA would not have had to take such extreme and costly actions; and

WHEREAS, permanent and secure access to Jordan Lake represents the most cost effective and reliable “insurance policy” during an increasingly uncertain future, and such access will also allow OWASA to better optimize the use of its Orange County water supply sources during future droughts; and

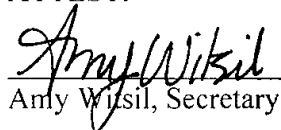
WHEREAS, retaining OWASA’s Jordan Lake allocation remains an essential component of plans for a reliable and sustainable water supply future, and because the support of the Carrboro, Chapel Hill and Orange County elected boards will be needed in OWASA’s efforts to retain that allocation, the Board of Directors resolves to enforce the following policy with respect to water purchases and use of its Jordan Lake allocation in times of water shortage due to drought.

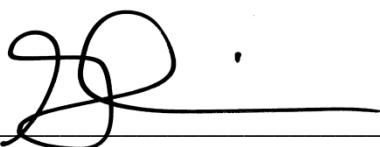
NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF ORANGE WATER AND SEWER AUTHORITY THAT:

1. The *Policy Resolution Regarding Water Purchases to Mitigate the Risk of Shortage During Periods of Extended Drought* adopted by the OWASA Board of Directors on June 9, 2011 is hereby rescinded and replaced by this resolution.
2. OWASA shall only purchase water from other communities or obtain water from its Jordan Lake storage allocation during periods of increased drought risk after it has declared a Stage 1 Water Supply Shortage per OWASA’s State-approved Water Shortage Response Plan and OWASA’s Water Conservation Standards as incorporated therein.
3. The Carrboro Board of Aldermen and Chapel Hill Town Council are hereby requested to reconsider their actions of March 1, 2011 and April 25, 2011 and to approve previously proposed language in the Agreement to clarify that nothing therein shall be construed to prevent OWASA from obtaining water from its Jordan Lake allocation for use by OWASA customers. OWASA respectfully requests that Carrboro and Chapel Hill approve those changes by November 30, 2011.
4. OWASA shall continue to encourage water conservation and the use of reclaimed water, and will continue its existing policy and practice of providing advance notice of a potential or impending shortage to customers and local governments.

Adopted this 20th day of October 2011.

ATTEST:


Amy Witsil, Secretary


Gordon Merklein, Chair