


**ORANGE WATER AND SEWER AUTHORITY**
*Quality Service Since 1977*

March 20, 2008

Barry Jacobs, Chair  
Orange County Board of  
Commissioners  
P.O. Box 8181  
Hillsborough, NC 27278

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

Kevin Foy, Mayor  
Town of Chapel Hill  
405 Martin Luther King Jr.  
Boulevard  
Chapel Hill, NC 27514

**SUBJECT: Potential Use of the Jordan Lake Water Supply – Information for the March 31, 2008 Orange County Assembly of Governments Meeting**

Dear Chair Jacobs, Mayor Chilton, and Mayor Foy:

I'm writing to provide information about our intent to update OWASA's long-term Water Supply Plan with an evaluation of the estimated costs, benefits, and other considerations regarding the possible joint use of Jordan Lake.

**Background**

Information about this subject was presented and discussed at the September 20, 2007 Assembly of Governments meeting and later discussed with regional officials at intergovernmental meetings on October 30, 2007 and February 21, 2008.

OWASA currently holds a Level II allocation for future use of five percent of Jordan Lake's water supply storage capacity, which will provide an estimated five million gallons per day (MGD).

In 1989 OWASA purchased 125 acres adjacent to US Army Corps of Engineers (Corps) property south of US Highway 64 on the west side of Jordan Lake in the Pea Ridge - Seaforth Roads area (please see Attachment #1). Our property is close to the preferred site of a water supply intake recommended in a 1991 OWASA-commissioned engineering analysis.

The Town of Cary's intake is on the east side of the lake just north of Highway 64 (also shown on Attachment #1). The Corps has indicated that it will likely allow only one new water intake on the west side of Jordan Lake. Although OWASA owns the property described above, neither we nor any other local entity own or control rights to an intake location within the lake itself. Only the Corps has the authority to grant access for water supply facilities.

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### Discussion

Jordan Lake represents a possible water supply supplement for OWASA if our current plans for additional conservation and reclaimed water fall short of our goal of reducing future demands prior to the expanded Stone Quarry Reservoir coming into service (>2030). Jordan Lake could also provide a critically important "back-up" supply during droughts or other water supply emergencies. Two severe droughts in the past six years have further increased our awareness of the need for greater flexibility and additional water supply options.

It is impractical for OWASA alone to develop facilities at Jordan Lake, due to the high costs (perhaps \$40 million to \$50 million) of a water intake, pumps, and a 15-mile pipeline. The use of Jordan Lake would be more feasible in partnership with the City of Durham, Chatham County, and/or Orange County if the County so desires. (As you know, Orange County has an allocation of one percent of Jordan Lake's water supply storage capacity, which is estimated to yield 1 MGD.)

Durham's 10 percent allocation represents an estimated yield of 10 MGD. At this time, Durham obtains a portion of its Jordan Lake water through an interconnection with the Town of Cary. Improvements to that interconnection are now underway to increase the amount of water that Durham can obtain from Cary by this coming summer. Durham is also considering options for increasing its ability to withdraw water directly from Jordan Lake and has proposed a leadership role for planning and establishing a water intake and perhaps a water treatment plant on the western side of the lake. On March 3, 2008, the Durham City Council approved a resolution supporting regional partnerships and committing Durham's leadership (please see Attachment #2).

### Next Steps for OWASA

On February 28, 2008, the OWASA Board unanimously supported our staff's participation with the City of Durham, Chatham County, and Orange County in evaluating the potential joint use of Jordan Lake water.

The OWASA Board strongly believes that this work is critical to the larger initiative of updating our long-term water supply plan, especially in light of recent experiences with severe droughts, growing uncertainty about the potential effects of climate change, and water use profiles associated with emerging patterns of commercial, residential, and mixed-use development in the Carrboro-Chapel Hill community. It is essential that we understand the expected costs and benefits of a regional approach to Jordan Lake in order to objectively evaluate other water supply options, including the expansion of the reclaimed water system and/or achieving greater demand reduction through additional conservation. Although OWASA remains committed to our policy of maximizing the use of our local, highly protected water sources, it is possible that conservation, demand management, and reclaimed water may not by themselves provide the level of drought security that our community desires.

We recognize the importance of working closely with Carrboro, Chapel Hill and Orange County as we consider the regional Jordan Lake option in our updated water supply plan. We

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understand the important relationships among land use, growth management planning, the sustainable management of our water resources, and the need to consider those issues along with the benefits and costs of a Jordan Lake water supply partnership.

While a specific time table has not yet been established by Durham or Chatham County, we understand that they will move expeditiously with their evaluation of the possible joint use of Jordan Lake. This initiative may be our only opportunity to participate effectively and help shape decisions about regional collaboration for more sustainable management and protection of Jordan Lake.

We look forward to working with you on these important matters.

Best regards,

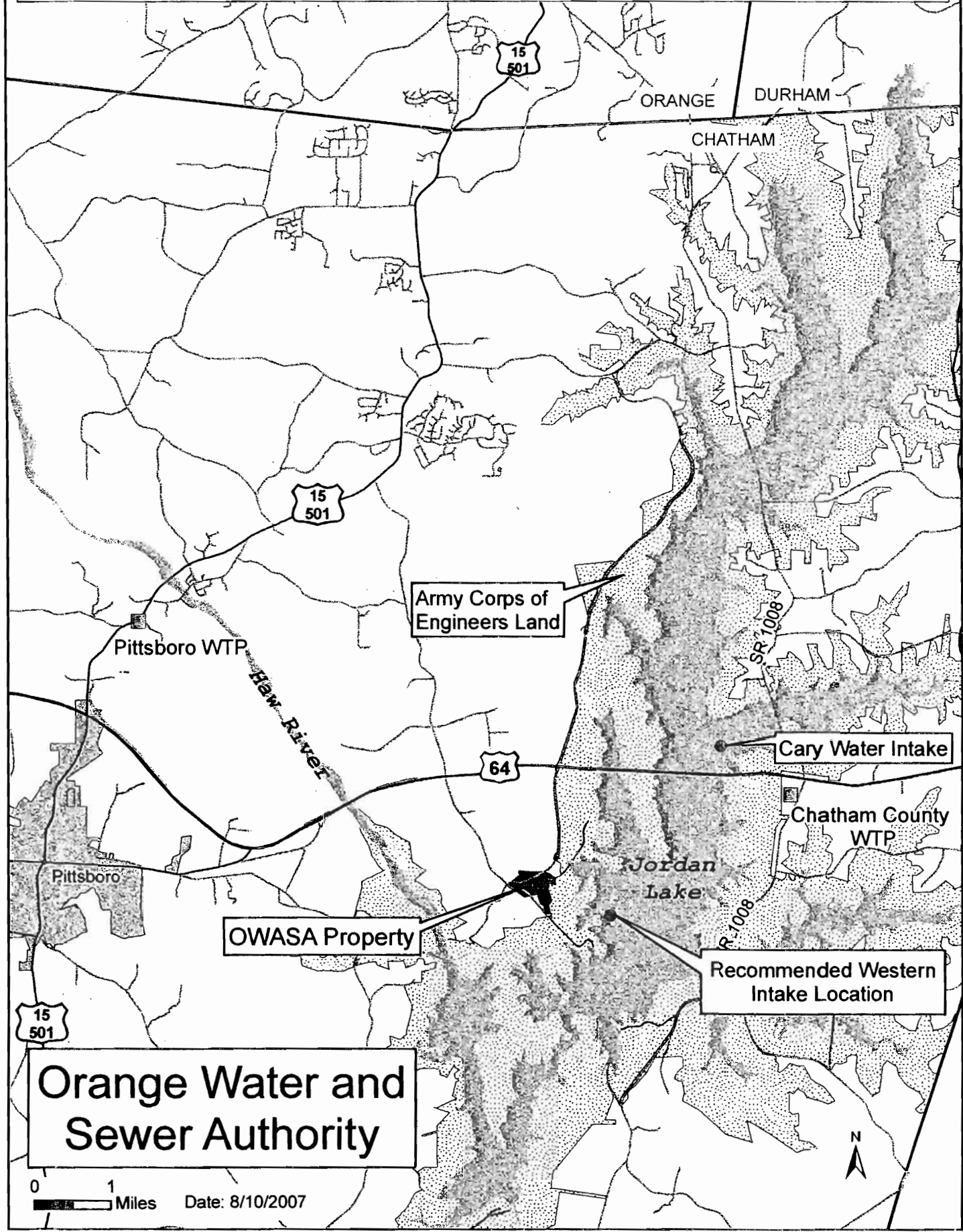


Randy Kabrick, P.E.  
Chair of the OWASA Board

Attachments

- c: Ms. Laura Blackmon, Orange County Manager (w/encs.)
- Mr. Roger L. Stancil, Chapel Hill Town Manager (w/encs.)
- Mr. Steven Stewart, Carrboro Town Manager (w/encs.)
- OWASA Board of Directors (w/encs.)
- Ed Kerwin, OWASA Executive Director (w/encs.)

# Selected Water Supply Facilities in the Jordan Lake Vicinity



**Orange Water and Sewer Authority**

0 1 Miles Date: 8/10/2007

RESOLUTION SUPPORTING REGIONAL PARTNERSHIPS FOR WATER SUPPLY PLANNING AND THE ESTABLISHMENT OF A WESTERN WATER INTAKE ON THE B. EVERETT JORDAN RESERVOIR

WHEREAS, the Research Triangle Region of North Carolina has experienced three droughts within the past six years; and

WHEREAS, the B. Everett Jordan Reservoir (Jordan Lake) has proven to be a reliable source of water supply; and

WHEREAS, the Research Triangle Region has for over 50 years served as North Carolina's, and in many respects, America's, foremost center for technology, communication, pharmaceutical, and life-sciences research; and

WHEREAS, the Research Triangle Region continues to grow and serve as the premier economic engine for our State; and

WHEREAS, the local government jurisdictions in the Research Triangle Region have responsible and thoughtful land use plans to accommodate the projected growth of our Region; and

WHEREAS, the City of Durham, Chatham County, Orange County, and the Orange Water and Sewer Authority (OWASA) have each received a Jordan Lake Water Supply Allocation, but currently do not have direct access to Jordan Lake; and

WHEREAS, the Town of Cary provides direct access to Jordan Lake for its customers and the customers in the Town of Apex, Town of Morrisville and the Wake County portion of Research Triangle Park; and

WHEREAS, by agreement, the Town of Cary currently provides access to Jordan Lake through its facilities to Chatham County and the City of Durham; and

WHEREAS, only about two thirds of the total water supply capacity of Jordan Lake is currently allocated, and only about half of that allocated amount is currently being used; and

WHEREAS, a regional water supply planning effort would be consistent with the North Carolina Regional Water Supply Planning Act of 1971, which states in part that *"It should be the role of State Government to provide a framework for comprehensive planning of regional water supply systems, and for the orderly coordination of local actions relating to water supply, so as to make possible the most efficient use of water resources and to help realize economies of scale in water supply systems;"* and

WHEREAS, the City of Durham has determined that working together with its potential partners of the Town of Apex, the Town of Cary, the County of Chatham, the Town of

Morrisville, the County of Orange, the County of Wake and OWASA (on behalf of OWASA's customers in the Town of Carrboro, the Town of Chapel Hill and southern Orange County) to plan for future water supply and use of Jordan Lake is a prudent, responsible and necessary action to promote the health, safety and welfare of our citizens; and

WHEREAS, Jordan Lake is a regional asset and it is understood that the use of its water supply requires a comprehensive and coordinated regional approach that will provide sustainable benefits, including:

- Establishing a single new intake on the western side of the lake thereby reducing the potential number of structures, transmission, and treatment facilities
- Reduced unit costs through economies of scale in facility design, construction and operation
- Increased flexibility and reliability of local water supplies, especially during droughts and other dynamic events
- Enhanced ability to comply with increasingly stringent federal and State drinking water standards
- Improved cooperation between local water utilities and ease of regulatory oversight; and

WHEREAS, the City of Durham has determined that working together with its potential partners of the County of Chatham, the County of Orange and OWASA to develop a western Jordan Lake water intake is a prudent, responsible and necessary action to promote the health, safety and welfare of our citizens; now, therefore

BE IT RESOLVED, that the City of Durham does hereby commit to taking a leadership role in a partnership for regional water supply planning; and furthermore

BE IT RESOLVED, that the City of Durham does hereby commit to working expeditiously with its potential partners in the establishment of a western Jordan Lake water intake, and possibly to build an associated water treatment facility; and furthermore

BE IT RESOLVED, that the City Manager shall proceed with the negotiation of such Interlocal Agreements that will establish the particulars of participation in such partnerships; and furthermore

BE IT RESOLVED, that the principles of regional cooperation, environmental stewardship, mutual and collective benefit, proportional representation, and financial sustainability guide the negotiations; and furthermore

BE IT RESOLVED, that copies of this Resolution shall be transmitted to the governing bodies of the Counties of Chatham, Durham, Orange and Wake, and the municipalities of Apex, Carrboro, Cary, Chapel Hill, and Morrisville, and the Board of Directors of OWASA for their consideration and appropriate action.

**APPROVED BY  
CITY COUNCIL**

MAR 3 2008

*D. Ann Gray*  
CITY CLERK