



Town of Pittsboro, North Carolina

Engineering Department

Memorandum

To: Mayor Bill Terry and Town Board of Commissioner's

From: Fred Royal, PE, Town Engineer

Subject: Jordan Lake Partnership Western Intake Feasibility Study

Date: December 8, 2014

Background

The Town of Pittsboro has been working with the Jordan Lake Partners (JLP) since March 16, 2009, via a Memorandum of Understanding (MOU). That partnership was developed as a result of the available 100 million gallons per day allotment remaining for public water supply in Jordan Lake. The Town has identified Jordan Lake as its secondary source for public water supply beyond approximately 2030. The partnership consists of all regional municipalities and counties with an interest in or current use for Jordan Lake water as a primary or secondary public water supply.

Since the MOU, the JLP has held meetings that has required extensive staff time for the purpose of developing a regional water model, an interconnection study, developing future water demand projections and preparation for the Town of Pittsboro Water Allocation Application, submitted on November 14, 2014 to NCDENR.

Town Hall ~ PO Box 759 ~ Pittsboro, NC 27312

Email: froyal@pittsboronc.gov

Phone: (919) 542-2063

Fax: (919) 542-2310

As a review, the provisional water demand projections for the Town of Pittsboro are as follows:

2020 – 3.3 MGD

2030 – 7.7 MGD

2040 – 10.1 MGD

2050 – 10.8 MGD

2060 – 11.7 MGD

Fiscal Years 2015 - 2030

Incrementally increase the Town's existing water treatment plant capacity from 2 MGD to 6 MGD at the Haw River WTP over the next 15 years.

*Estimated Capital Cost at full build-out: \$25 - \$30M
(Operation and Maintenance (O&M) costs are not included)

*The incremental strategy is intended to reduce costs by increasing in 2 MGD steps, once in approximately 2020 (2 to 4 MGD) and again in approximately 2025 (4 to 6 MGD). Financing requirements, actual demand, WTP up-grade alternatives and other variables will be factors to consider in this approach. The 2 MGD steps are intended to remain ahead of the demand.

Discussion

Western Intake Feasibility Study (water delivered in FY 2030+)

As a balanced approach to the Haw River source, Pittsboro staff will continue working with the JLP Western Intake Partners (OWASA, Chatham County and the City of Durham) to develop a draft plan for the new proposed raw water intake, water treatment plant and finished water distribution network. Pittsboro is requesting an allocation of 6 MGD from Jordan Lake. The finished water from Jordan Lake would be pumped in a pipe from the new treatment plant to Pittsboro, where the town can plan a distribution system for this new water in the future. The other partner's finished water would be pumped further north to their respective water distribution systems.

The Commissioners were provided a complete copy of the feasibility study at the November 24, 2014 regular business meeting as an FYI.

The study considered three alternatives:

Alternative 1: Regional Water Treatment Facility – Construct a treatment facility on the OWASA property adjacent to Jordan Lake and pump finished water to all partners.

Capital Cost: \$315.8M

Alternative 2: Jordan Lake Water Treatment Facility and South Durham Treatment Facility – Construct two treatment facilities, one at the Jordan Lake location for Chatham County and Pittsboro use and one in Durham County for the other partners use.

Capital Cost: \$345M

Alternative 3: Jordan Lake Water Treatment Facility and Raw Water Pumping to Partners – Construct one treatment facility, same as Alternative 2 above and pump raw water to existing treatment facilities at OWASA and Durham.

Capital Cost: \$411.6M

From an economic standpoint for all of the partners, Alternative 1 is recommended as the preferred alternative by the study for further consideration. There are many variables and complexities associated with any of the alternatives based on the consideration that three independent local governments and one regional water and sewer authority are involved. Nevertheless, the need exists for the partnership to continue dialog and make recommendations to their elected bodies of the next steps forward.

As the partnership process moves forward, it may become evident that interim agreements and/or other opportunities for cost-effectiveness and meeting individual partner needs should be considered. As an example, Chatham County and Pittsboro may find cost-savings in jointly funded interconnections or other facilities for the delivery of finished water.

As previously discussed, the preferred alternative requires that the partners come to a series of understandings and agreements with respect to further planning of next steps, costs, schedules of activities and organizational recommendations that aligns the partners individual needs with the projects organizational and implementation requirements.

It is therefore anticipated that staff will come back to the Town Board of Commissioners on a routine basis with reports and recommendations concerning this partnerships progress. The next anticipated recommendation may include a Memorandum of Understanding (MOU) for taking the next steps with the partnership.

Recommendations

Receive this report as an FYI. Prepare for future reports concerning recommendations of the partnerships organization and implementation activities.