

Upper Oconee Watershed Network
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April 12, 2016

Mayor and Commission,

Thank you for the opportunity to comment on the Public Utilities Department's Service Delivery Plan. My name is Kyle McKay, and I write today on behalf of the Upper Oconee Watershed Network (UOWN). UOWN is an all-volunteer group dedicated to protecting water resources and improving stream health in our watershed through community-based monitoring, advocacy, education, and recreation.

UOWN is proud to see the county investing in repairing its aging sewer and water infrastructure to keep our citizens safe! Furthermore, we support the minor water and sewer rate increases to fund the repair and long-term asset management of local infrastructure. However, UOWN is opposed to the expensive (\$20M in "preliminary" funding) and unnecessary water supply reservoir proposal (fact sheet attached).

According to the Georgia Environmental Finance Authority (GEFA), water supply reservoirs tend to cost \$4-10M per million gallons per day of water yield³. The current proposal has an unspecified size, location, and timeline, but assuming a target yield of 10 million gallons per day, this project could cost on the order of \$100M, which translates to approximately \$800 for every citizen in Athens Clarke County. Other alternatives should be explored before this financial burden is loaded onto ACC citizens, some of which include: demand management via public education (which continues to work in ACC), novel billing structure, water recycling, and infrastructure retrofit.

Hydrologically, we do not need and cannot support a new reservoir. Peak use rates of 2006 will not be exceeded in the next 75 years, based on the city's demand projections (Page 16). Furthermore, our local rivers have already been over-allocated based on current permits, and it is unclear what water source the county will use to fill the reservoir.

Bear Creek reservoir was a visionary project that keeps our community safe during drought. The proposed reservoir is an unnecessary, environmentally damaging effort that will cost rate payers millions of dollars, damage another local ecosystem, and extract more water from our already over-tapped rivers. **UOWN recommends the Mayor and Commission: (1) strike the reservoir proposal from the service delivery plan and (2) redirect Public Utilities to allocate funds toward water demand management, rather than the 19th century "solution" of additional water supply.**

I am unavailable for Tuesday's meeting, but I would be happy to discuss any of these issues should questions arise (970-980-9747 or skmckay@gmail.com).

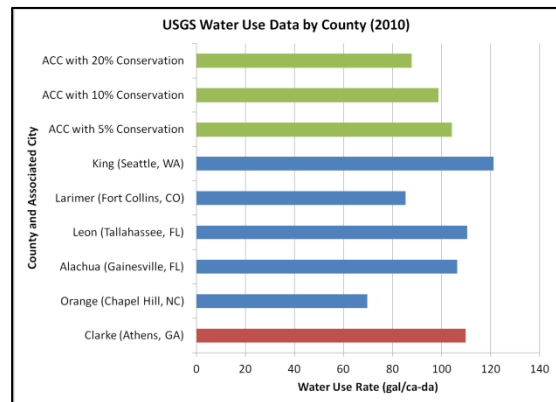
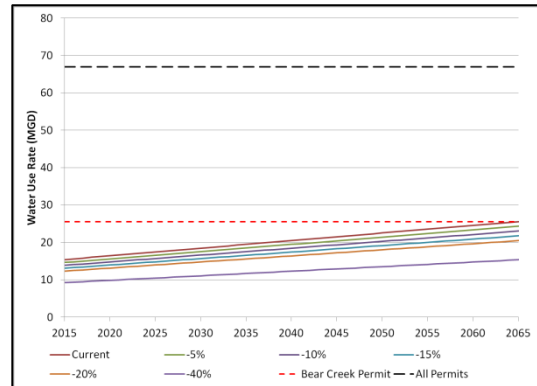
Thank you,
Kyle McKay, Ph.D., P.E.
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Why is a reservoir the wrong solution for Athens-Clarke County?

- We don't need it.** The basis for the proposed reservoir is formed on the faulty logic that Bear Creek Reservoir is our community's only water source. However, this reservoir is our third option for local water supply and represents less than 40% of our permitted withdrawal capacity¹. Athens currently uses around 15 millions of gallons of water per day (MGD), but the county is permitted to withdraw 67 MGD. The following figure shows the ACC's demand projection (126 gallons per person per day) relative to all three permits.
- Economic costs will be more than expected.** Reservoirs are expensive projects. The current plan budgets \$20M for land acquisition only, not including design, construction, operations, and maintenance. An international study² of reservoir building found that 3 out of 4 projects overrun cost estimates with actual costs 96% greater than estimates, on average. This trend continues with local water supply reservoirs³. For instance, the final price for Hard Labor Creek Reservoir was \$350M, 800% higher than the original cost estimate of \$41M. The citizens of Athens-Clarke County (and water rate payers) don't want to get stuck with a bill this size!
- Conservation is working for Athens!** Under the leadership of ACC's Water Conservation Office, Athens has reduced overall water use by ~25% since 2006, while the city grew by nearly 10,000 residents. These improvements are astounding, but there is still plenty of room for additional conservation. For example, Chapel Hill, North Carolina (a comparable university town) uses about 40% less water than Athens⁴!

Conservation, reuse, and economic incentives (e.g., altered rate structures) provide key options for encouraging reduced water use.
- Environmental costs are enormous.** Reservoirs are environmentally damaging pieces of infrastructure that inundate natural areas, alter river flows, and disrupt organism movement and should only be used as a measure of last resort for meeting municipal demand.



¹ State-issued withdrawal permits are: 25.5 million gallons per day (MGD) for the North Oconee River, 16 MGD for the Middle Oconee River, and 25.5 MGD for Bear Creek Reservoir.

² Ansar A., Flyvberg B., Budzier A., and Lunn D. 2014. Should we build more large dams? The actual costs of hydropower megaproject development. *Energy Policy*, 69, 43-56.

³ Emanuel B. and Hoffner J. 2012. Money pit: The high cost and high risk of water supply reservoirs in the Southeast. *American Rivers*, Atlanta, Georgia.

⁴ Data from the U.S. Geological Survey. <http://water.usgs.gov/watuse/data/2010/index.html>.