



Agenda Abstract

BOARD OF COMMISSIONERS

Meeting Date: Aug 28, 2023
Department: WSAC and Utilities
Agenda Section: BOC/WSAC Joint Meeting
Public hearing: No
Date of public hearing: N/A

PRESENTER/INFORMATION CONTACT

Water and Sewer Advisory Committee (WSAC) and Utilities Staff

ITEM TO BE CONSIDERED

Subject: Water and Sewer Advisory Committee recommendations for utility rate structure and cross connection code changes

Attachments:

Institutional customer usage (from February 2023 joint meeting)

Summary:

1. Evaluate Utility Rate Structure for Institutional Customer Class: For the past several years, and temporarily delayed by the pandemic, members of WSAC have been discussing in great depth the town's utility rate structure, which is currently the same for all customer classes with exception of the in-town vs. out-of-town differential. The committee has sought advice from outside experts, staff, the board, and online and written technical resources. Joint meetings with the town board were subsequently formally requested by WSAC to discuss rate structure and other key topics directly with the Board of Commissioners. Already through past WSAC recommendations and board actions, the utility rates have been adjusted gradually to reduce the minimum usage included in the base charge over the past several years which has lowered bills for low water users. Unanimously and unwavering WSAC and the board have underscored financial solvency as an absolute baseline for any rate structure option.

At the May 2022 joint WSAC/BOC meeting two ideas regarding rate restructuring were discussed – the rate differential for in-town and out-of-town and non-residential rates. Rate structure changes to address the differential were not advanced by the board but the potential for furthering non-residential rate structure revisions remained open. WSAC continued to discuss non-residential classes. At its November 2022 WSAC meeting, small business relief and tiered rate structures were discussed but no further path forward was determined. Institutional and town no-charge usage were requested from staff. Institutional customers generally include government agencies and university systems, public and community schools and churches. Account examples include the town, Orange County, UNC Hospital, Durham Tech, and the various churches around town. At the February 2023 joint meeting, the institutional (including town no-charge) usage was presented. WSAC suggested an increasing block rate analysis for the institutional class customers (i.e., higher rates as water usage increases). They voted to recommend to the board that when time, the board authorize an evaluation of the impacts of an increasing block rate structure on the institutional customer class on utility revenue. WSAC is hereby requesting that the board authorize Raftelis Financial Consultants include in its scope of services in performing various utility rate tasks for the town an analysis of a new rate structure for the institutional customer class.

2. Revise town code 14-56 regarding cross connection requirements for existing residential in-ground swimming pool owners: Cross connection (backflow prevention) code 14-56 has been established since 2008 and requires certain backflow prevention devices be installed, maintained, and tested by property owners on their private property based upon identified potential or existing types of severe or moderate hazards as identified in the code or by the authorized town backflow prevention authority if not specifically stated. Staff had been working on program compliance of severe and moderate cross connection hazards for non-residential facilities for the past several years. After such accomplishment they had moved next to identify remaining facilities with existing or potential severe hazards, which includes residential hazards as all customers connected to the system are subject to the backflow prevention ordinance. The code states that swimming pools are a severe hazard and require a Reduced Pressure Zone (RPZ) assembly be installed.

Because swimming pools require a building permit and can be searched in the county system, staff started with this hazard for its next program compliance effort. Note staff had spoken with the county back in 2022 to ensure the town was included on building permit applications for new swimming pools so it could require backflow prevention at the time of permit application (prior, the county was unaware of the ordinance so earlier swimming pool permits were not included for sign off by the town). The town gathered data and sent a compliance letter, reviewed for legal content, to approximately 40 of initially identified 60 existing in-ground pool owners. The letter stated the code, a date to comply, and to contact town staff to discuss any questions or extension needs. Approximately 50% of the recipients approached the town board for relief of the requirement stating reasons ranging from financial hardship and device unsightliness to using less expensive devices and disbelief a backflow event would ever occur. A full presentation to the board on the ordinance, approved methods of backflow prevention, and specifically focused on the residential swimming pool options was given in May 2023 by staff. The board then paused any enforcement of the ordinance on those receiving the letter, asked WSAC to look at any lesser expensive alternatives and to include input from the impacted parties.

WSAC held a special meeting in June 2023 with impacted customer participation to discuss the subject code pertaining to them. Two resulting motions were made regarding the existing code:

- a. Continue to require new swimming pool construction include installation of a reduced pressure zone (RPZ) assembly. There was one nay vote.
- b. For existing in-ground, indirectly connected swimming pools (i.e., those not having an auto fill feature and topping off the pool with their hose), the required backflow prevention solution is to allow an air gap (i.e., a physical separation between the end of a water source and the body of water) combined with a hose bibb vacuum breaker (i.e., a plumbing device affixed to a home hose bibb that prevents the back siphonage of water into the home plumbing or water system under properly installed conditions). A site inspection will be made to ensure there are no additional severe hazards that would require an RPZ device. An air gap agreement, signed by the homeowner and notarized, is required to be filed with the Utility Department. The education component of the air gap solution will provide guidance including no hose filling during hydrant flushing, a recommendation to replace the hose bibb vacuum breaker every five years, advisement against removing the breakaway screw, description and examples of proper air gap spacing as being one inch above the flood rim level or twice the diameter of the pipe. The air gap agreement is required to be resubmitted upon permitted plumbing modifications or the sale of the property. Non-compliance with the ordinance (including not signing the agreement) will result in the property requiring a reduced pressure zone (RPZ) assembly. There was one nay vote.

At its August 2023 regular meeting, the WSAC was presented additional information that demonstrated actual reverse meter flows in the town's water system. Some were correlated to water main breaks and

hydrant flushing. Some were suspected water theft (possible reversing of meters). Some were not able to be explained. Two were from homes with swimming pools. Members also heard from staff about other non-testable and unrecognized (per plumbing code and cross connection technical manuals) backflow prevention devices that could be added to meters such as vacuum breaker expansion wheels and check valves and potential options to install these with cost recovery as a non-compliance option. This additional information did not modify the previous motions.

NEXT STEPS: If amenable to the WSAC recommendations, town staff will present revised code to WSAC and subsequently the board for approval. If the code is indeed relaxed for this special circumstance, further discussion and recommendations will be taken and presented back on the matter of those that complied with the original town code and installed RPZs per the compliance letter. Initial informal discussions have occurred between the town attorney and staff regarding allowable use of town funds and reasonable parameters for any options presented. The air gap agreement will be finalized. The educational component has already begun and will continue. There have been social media posts, a page in the annual water quality report and a video is in production. Note that staff has taken the initiative to construct an air gap stand device that will secure the hose firmly above the pool rim to provide as part of the educational outreach. The site evaluations will take place and a summary prepared.

Financial impacts:

Item 1: Raftelis Financial Consultants has proposed a \$9,000 “if-authorized” rate structure analysis cost task item. It is anticipated the rate structure analysis on just the institutional class may not take the full amount. The consultant will be performing a variety of tasks for the town, and this would be one added task item. The town is currently working on revising the scope and fee for the contract which will include development of a rate model and other financial rate analysis needs.

Item 2: No current large financial impact to the town with current request except for staff time and material costs to construct the air gap stand.

Staff recommendation and comments:

No further comment.

Action requested:

To continue to resolve this matter for this subset of customers in an orderly fashion and to not overburden staff or overwhelm all with discussing and solving multiple intertwined and complex matters at once, feedback is requested on the above two WSAC motions. Next steps will follow.