



UTILITY ADVISORY COMMITTEE
REGULAR MEETING
WEDNESDAY, APRIL 11, 2018
5:00 PM – 7:00 PM
CITY HALL
MAP ROOM

(MADISON AVENUE ENTRANCE)
280 MADISON AVENUE NORTH
BAINBRIDGE ISLAND, WA 98110

AGENDA

1. CALL TO ORDER / ROLL CALL / ACCEPT OR MODIFY AGENDA / CONFLICT OF INTEREST DISCLOSURE
5:00 PM

CO- CHAIR: ANDY MARON

CO- CHAIR: JEFF KANTER

MEMBERS: STEVE JOHNSON
TED JONES
NANCY NOLAN

EMILY SATO
JIM THRASH

LIAISON: RASHAM NASSAR

2. PUBLIC COMMENT – 5 MIN.
3. PUBLIC WORKS UPDATE: RATE STUDY AND OTHER PROJECTS (BARRY) – 5 MIN.
4. DISCUSS FIRE CODE DRAFT (JEFF / JIM) – 35 MIN.
5. DISCUSS TEMPLATE FOR UAC UTILITY REVIEW (TED) – 75 MIN.
6. COMMENTS FOR THE GOOD OF THE ORDER
7. ADJOURNMENT
7:00 PM

April 1, 2018

City of Bainbridge Island

Utility Advisory Committee

Recommendations on Fire and Other Municipal Codes Impacting Island Water Systems

Background

The COBI municipal code sections applicable to water systems understandably focuses on the City owned systems. Today's code is likely a holdover from when Winslow was the City. Today, there are 28 Class A¹ water systems on the island (two are owned by COBI and four owned by Kitsap Public Utility District) and approximately 155 Class B² water systems.

In 2016 the Utility Advisory Committee **responded** to concerns that small rural water systems were forestalled from upgrading due to interpretation of the BIMC and construction requirements **by recommending** the inclusion of a policy in the Utility Element of the Comprehensive Plan to encourage cost effective upgrades of water systems to improve both water quality and possibly fire flow.

The City Council thereafter adopted the following Policy as part of the Utilities Element of the Comprehensive Plan:

Policy U11.5: Adopt standards that differentiate between urban and non-urban density fire flow requirements. A differential policy is needed to promote cost effective water system upgrades by the many small water systems on the island.

In 2017, the City Council added implementation of this policy to the UAC's work plan. Accordingly, a subcommittee of the UAC began research on governmental regulations of upgrades of water systems serving single family residences in an effort to develop the standards and /or policy that would accomplish the goals of Policy U11.5.

The subcommittee's research included review of the current COBI Fire Code and other relevant City codes, review of fire codes from other jurisdictions, meetings with Bainbridge Island Fire Marshall Luke Carpenter, the Fire Marshall of Kitsap County, KPUD, City staff, and managers of various small water systems, and discussions with the Public Works Department regarding the City's Design and Construction Standards.

The subcommittee's research uncovered the following findings:

- 1) Water systems upgrades and improvements are subject to COBI's Fire Code, The City's Right of Way Design and Construction Standards, and regulations contained in the Washington Administrative Code and promulgated by the Department of Ecology and the Department of Health's Office of Drinking Water.

¹ Having 15 or more connections or serving public schools.

² Having 3 to 14 connections.

- 2) There appears to be a differential review process by the City of Bainbridge Island with regard to water system projects. What governs the review process seems to be determined by :
 - a) Whether the system is owned by the City or an independent purveyor including KPUD,
 - b) Whether the water system construction/extension is in response to a building permit for new or remodeled structures, and
 - c) Whether the work is performed in the City's right-of-way.
- 3) BIMC sections that address water systems are:
 - a) BIMC Title 13, chapters 13.08, 13.10, 13.18, and 13.20 Public Services –Water – codifies the policies and procedures of presumably the City owned water systems.
 - b) BIMC Title 20 Fire Code – Codifies requirements for buildings not water systems
 - c) BIMC Design and Construction Standards, sections 10-15 – Codifies construction practices and specifies materials for water system infrastructure in the city right-of-way.
- 4) BIMC Title 13 appears to apply to only City owned systems while Title 20 of the Fire Code applies to the entire Island. *However, there are 11 references in code section 20 to Code section 13. It is therefore unclear whether specific sections of 13 that are referenced in section 20 of the code apply to non-city systems.*
- 5) Amendment B 105.1 of the COBI Fire Code³ section 20.04.110 provides the foundation for fire flow requirements for one and two family dwellings of 3600 square feet or smaller at a rate of 1,000 gallons per minute. The section then provides various exceptions for construction where the mandated flow is not available. While the section does not provide for a required time period, the IFC code as adopted specifies one hour. Thus, this Code, by reference requires a water system to have a fire flow storage capacity of 60,000 gallons.
 In Addition to fire flow storage, the Department Health's Office of Drinking Water requires a water system to have sufficient water storage to provide for peak day system during an event.
- 6) The Construction standards outlined in section 10-15 for the installation of water systems in the City Right-of-Way are extensive and appear to have been originally *written for* extensions to the Winslow system. *However, as currently written, these standards can be construed to apply to independent water systems creating an undue burden on smaller systems outside of the City's Winslow core.*
- 7) Achieving the requirements of the fire code and the right-of-way code, as written, along with other jurisdictional codes may result in upgrade designs that are cost prohibitive for many of the water systems on the island. As a result, aging water systems may find the financial and physical requirements beyond their capacity. The unintended consequence of the current regulations may actually be impeding implementation of water quality and fire flow improvements and disaster preparedness.
- 8) Kitsap County's Fire Code amends the International Fire Code, the basis for all fire codes including COBI's Fire Code, to reduce the required fire flow requirements to 500 gallons per minute for 30 minutes. Apparently, many other communities do the same, and this standard is also contained in the Washington Survey and Ratings Bureau standards. This standard reduces the required fire flow

³ Based on the International Fire Code

storage to 15,000 gallons.

- 9) The standards currently included in COBI's Fire Code were initially promulgated for the more densely populated parts of the island served by the larger City of Bainbridge Island water system. It was not originally conceived to be the standard for the rest of the island which is primarily served by smaller water systems.
- 10) Based on discussions with the Fire Marshall and Public Works director, there is not currently an expectation that independent water systems comply with the standards as strictly interpreted.
- 11) While the current COBI Fire Code does not on its face provide for water systems to depart from the 1000 GPM fire flow standard based on size or capacity, Fire Marshall Luke Carpenter currently uses his discretion, as authorized under section B 103.1 of the IFC, to provide a more pragmatic and reasonable approach for single family residences under 5000 square feet. He permits construction of such a structure if the serving water system can provide 500 gallons per minute and further requires sprinklers for houses over 5000 square feet.
- 12) Fire Marshall Luke Carpenter estimates that 40% of homes on Bainbridge do not have access to adequate fire flow storage.
- 13) Pragmatically, the current governmental review process for water systems is different depending on whether the system is new, is connected to City, KPUD or smaller preexisting water system, or is served by an individual well. The level of City review is also affected by whether the water system work is to be performed in a City right of way.
- 14) When a water systems wishes to upgrade its facilities, there needs to be greater clarity and certainty about the review by the Planning Department, Public Works Department, and the Fire Marshall.

After drafting an initial proposal, the subcommittee had several meetings with the Utility Advisory Committee at large and with the Fire Marshall Carpenter.

At these meetings the UAC and Fire Marshall Carpenter agreed that it would be useful to create a **working group** of various interested parties including representatives of Group A water systems and the Fire Marshall to focus on these issues so as to encourage better fire safety on the island. Also, there was a recommendation that a member of the City Public Works Department attend these meetings to assist with any questions regarding the City's Design and Construction Standards.

Fire Marshall Carpenter also noted that the International Fire Code is due to be revised in 2018 and by the City in 2019, and *the working group could provide input* about any and all issues that smaller water systems were encountering in following the fire and other municipal codes when upgrading their systems.

The objective of these meetings would be to work with the Fire Marshall and the Public Works Department to create revised codes that would encourage more cost effective upgrades to small water systems to improve water quality and fire flow where possible.

UAC Recommendations:

1. Assemble a committee of Group A representatives to discuss their concerns with the Fire Marshall and the city's Public Works department.

2. Clarify Code section BIMC 20.04.110 to reflect the Fire Marshall's actual current approach for residential construction. See Background #13 above.
3. Review and create fire code standards that are easily understood by both new developments and water systems seeking to upgrade their facilities.
4. Review and clarify Utilities and Right of Way uses section 10-15 water line requirements.
5. Review and provide clarity regarding BIMC 13 sections on water as to its impact, if any, on non-city owned systems.
6. Given climate change and the occurrence of more wildfires, review and map current fire flow capacities throughout the City and examine the Critical Areas Ordinance with respect to creating a defensible space with fuel reduction measures for reducing fire hazards.
7. Work to provide uniform water system standards. These standards need to be sensitive to the limitations of small water systems.

Attachments

Just attach all of Jeff and Jim's research as outlined in his draft of the UAC recommendation and referenced code sections.