

**Town of
Jamestown, Rhode Island**

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Date: August 20, 2024

To: Kathleen Crawley
Acting General Manager
Rhode Island Water Resources Board

From: Michael Gray, P.E.
Public Works Director

RE: Written Assessment of the relevant sections of the current approved Water Supply System Management Plan as it applies to the final Decision for:

Zimmiski and Gagnon Jamestown Water Service Extension
Saletin Jamestown Water Service Extension
Andreoni Jamestown Water Service Extension
Frechette Jamestown Water Service Extension

The following four applications for water services that will require an extension of an 8” watermain within East Shore Road in Jamestown were reviewed and denied by the Jamestown Water and Sewer Commissioners (*Commission*):

1. Jeffrey and Deborah Saletin, 14 Seaview Avenue, Jamestown
2. Glenn and Marjorie Andreoni, 10 Seaview Avenue, Jamestown
3. Stephen Zimmiski & Suzanne Gagnon, 7 Seaview Avenue, Jamestown
4. Paul Frechette, 19 Seaview Avenue, Jamestown

Each of the owners applied for a water main extension and connection due to poor water quality and low water quantity from the wells on their properties. The following assessment as requested by the Water Resources Board applies to all four applications, and the decisions by the Commission which are consistent with the Water Supply System Management Plan (*WSSMP*).

Background

In 1968, the General Assembly enacted special legislation creating the “Board of Water Commissioners for the Town of Jamestown” and granting the Board the authority to acquire by purchase or eminent domain the privately owned service area and infrastructure from its then-owner, the Jamestown Water Company. (*WSSMP*, § *ES-1 and Appendix B*). The main service area was limited to the Village area of Jamestown and is identified as the “Urban District”. All other areas within Jamestown are identified as the “Rural District”. (*WSSMP*, § *ES-1 and § 2.6.1*). Water is supplied to the Rural Water District south of the village. (*WSSMP*, § *2.6.1 and Figure 2.3*). All four applications are located within the Rural Water District, north of the Urban District and do not front on an existing water main.

Water service connections in the rural water district are subject to the approval of the Board of Water and Sewer Commissioners. The *WSSMP* specifically recognizes that Jamestown Water is only legally obligated to supply drinking water to this Urban District. (*WSSMP* § 2.9.3) (“*The Town of Jamestown is obligated to supply drinking water to properties located within the Urban Water District*”). The Rules and Regulations (*Regulations*) adopted by the Commission set the standard for connections to the water districts, as well as the standard to be applied when asked to expand its service area by way of extensions of water mains. A “connection” to a watermain is defined by the existence of a watermain along the frontage of the property. When there is no watermain along the frontage of property, the property owner must obtain an “extension” of the watermain to the property first, so that a “connection” can be made. Therefore, a request for an extension of a water main is actually a request to extend the service area. (*Because of the relatively small supply capacity of the system, no expansion of the Urban Water District is planned or anticipated at this time.*) (*WSSMP* §2.6.4).

In and around 2009, the Regulations were amended to specifically prohibit extensions of water mains outside the Urban District. *Regulations, §14B(b)(4)* (“*Extensions to and within the rural district shall be prohibited*”). The Regulations, however, grant the Board the discretion to make an exception to this prohibition and allow an extension, or any other improvement to the Water System, if the extension will “improve the quality or quantity of water furnished to existing uses”. The increased demand on the system, and in particular increased usage within the Urban District due condominium developments and connections, compelled the Board to take action to protect the limited resource.

Supply

The system consists of two surface reservoirs (North Pond and South Pond) and two supply wells (JR-1 & JR-3) located in a single watershed. (*WSSMP § ES-2, § 2.3*) North Pond is the primary reservoir with a capacity of 70 million gallons and receiving its water from surface runoff. South Pond has poor water quality and is only used as a supplemental supply. Water from South Pond is transferred to and mixed with North Pond by pump and water line connecting the two sources. Water is only transferred from South Pond when water is spilling over the outlet at the dam. During dry periods when this source is needed, water is not spilling over the dam and the South Pond reservoir is not available to supplement the supply at North Pond. Due to this requirement and its poor water quality, South Pond as an available supply of water is doubtful (*WSSMP § 5.3, § 5.4, & § 5.5*). Based on the RIDEM analysis and drought of record North Pond has a safe daily yield of 185,000 gallons per day (*GPD*). (*WSSMP § 5.5*)

Two bedrock wells (JR-1 & JR-3) were drilled just south of North Pond to augment the supply with capacities of 45,000 to 55,000 (*GPD*). (*WSSMP § 2.3.2*) RIDEM limited the pumping to 50 gallons per minute (*GPM*) and restricted the use to alternate operation to a 48 hour schedule limiting their use to only one well operating per day. (*WSSMP § 2.3.2*) Well JR-3 is currently not in use due to poor water quality therefore only JR-1 is being used for supply.

Demand

The service area has 1,285 residential connections with a population of approximately 3,184 people, of the 5,472 residents in Town. (*WSSMP §*

ES-2, § 4.1) The remaining residents are served via individual wells. Average day demand (*ADD*) based upon metered water use is 0.156 million gallons per day (*MGD*) for 2021. A peaking factor of 2.0 is used to estimate a maximum day demand (*MDD*) of 0.312 *MGD*. (*WSSMP § ES-4, 4.2*) The current and projected future *MDD*, as well as the *ADD* during the peak summer season, exceed the safe yield of North Pond and often exceeds the combined safe yield of North Pond and JR-1 (*WSSMP § ES-5*).

The *WSSMP* further cautioned that “the public water system is also currently drawing a greater volume than the safe daily yield of North Pond, the primary supply source at certain times of year. This causes great fluctuations in the amount of usable stored water in the reservoir from year to year.” (*WSSMP § 9.2.2*). Drought conditions and high demand during the summer season in 1993 created a crisis situation for the Jamestown water supply system. The National Guard was deployed for months to deliver approximately 7.5 million gallons of water to Jamestown to avoid running out of water. (*WSSMP § 5.3.2*). Since that time Jamestown Water maintains an emergency interconnection agreement with North Kingstown Water for future water emergencies. (*WSSMP § 2.5*)

Conclusion

The four applications were received and reviewed by the Board for consistency with the Water and Sewer Commission Rules and Regulations for the Rural District and under the standards established in R.I. General Laws 46-15-2.

Each applicant provided information relative to the quality of water and yield of the well on their property. Laboratory analytical reports and well pumping studies were provided that indicate water quality is poor due to salt water intrusion and yields are low as compared to well production standards for residential wells in Rhode Island. Experts in the field of water supply, treatment, and engineering were present at Commission meetings to provide testimony regarding well data and the limitations for the individual properties to produce potable water to support single family dwellings. All four properties are located north of the existing service area and requested approval to extend an existing water main to their property for a water connection.

Commission Rule, §14B(b)(4) (“Extensions to and within the rural district shall be prohibited”). The Regulations, however, grant the Board the discretion to make an exception to this prohibition and allow an extension, or any other improvement to the Water System, if the extension will “improve the quality or quantity of water furnished to existing uses”. The applicants provided individual well and property information to support the request for a water connection but they did not provide any information on how an extension of a watermain to their property in the Rural District outside of the service area would improve the quality or quantity of water furnished to existing uses.

The Jamestown Board of Water and Sewer Commissioners was created by a special act of the general assembly in 1968 to allow for the purchase of the existing Jamestown Water Company. All costs to operate, improve, and maintain the water supply and distribution system are the responsibility of the customers (rate payers) in the system. The primary objective of Jamestown water is to operate a water system for the benefit of, and to meet the legitimate needs of, the customers in its service area. (*WSSMP § 1.1*). One of the specific goals are to plan for future development such that the water supply system is not extended beyond its capacity, in order to provide safe, clean drinking water. (*WSSMP § 1.1*) As such the Board of Commissioners have adopted Rules and Regulations to protect this resource and ensure its wise and responsible use. Extensions are prohibited outside of the service area to protect the municipal water system and maintain the available water supply to meet existing and future demand. This is consistent with the Strategic Plan for the Water Resources Board to “...regulate the proper development, protection, conservation and use of the water resources of the State”. (*WSSMP § 1.3*) By their very nature extensions, expansions, and new connections outside of the current water service area are injurious to and endangers the Commission’s obligations to its present users.

The WSSMP is intended to ensure that the District identifies and achieves “the effective and efficient conservation, development, utilization, and protection of this finite natural resource in ways that meet the present and future needs of the state and its people.” *R.I. Gen. Laws § 46-15.3-1.1(b)*.

The WSSMP must specifically include, *inter alia*, “A description of the water system(s) covered, including sources of water, the service area, present and anticipated future users, and other important characteristics.”

The WSSMP complies with this requirement by specifically identifying the Urban District as the primary service area of the Water District. (*WSSMP*, § *ES-1*, § 2.6.1, *Figure 2.3*, § 2.6.4). As the WSSMP makes clear, a considerable portion of the Town's population resides outside the water system service area. (*WSSMP* § 2.6.4). The WSSMP does not obligate the Commissioners to provide water service everywhere in Town or to areas outside of the Urban Water District not presently receiving water service.

Commission Rule, §14B(b)(4) allows the Board discretion for making such improvements, including extensions, which shall, in the opinion of the Board, improve the quality of quantity of water furnished to existing water uses. All four applicants are located outside of the water service area and require an extension of a watermain. No evidence was offered to the Commission in any of the applications to demonstrate or show how the extension would improve the quality or quantity of water furnished to existing users. For the reasons set forth in the WSSMP and the Rules concerning extensions outside of the service area the Commission denied each of the applications for water extension and connection.