

**TOWN OF JAMESTOWN  
TOWN COUNCIL MEETING**  
for  
**TOWN, WATER AND SEWER MATTERS**

March 21, 2022

A regular meeting of the Jamestown Town Council sitting as the Board of Water and Sewer Commissioners was called to order at the Jamestown Town Hall, Council Chambers, 93 Narragansett Avenue at 6:27 PM by Commission President Nancy A. Beye.

The following members were present:

Erik G. Brine (virtually via Zoom)  
Michael G. White  
Randall White

Also, present were:

Jamie A. Hainsworth, Town Administrator  
Roberta J. Fagan, Town Clerk  
Christina D. Collins, Finance Director  
Michael Gray PE, Public Works Director  
Peter D. Ruggiero Esq., Town Solicitor  
Denise Jennings, Water and Sewer Clerk

**AWARDS, PRESENTATIONS AND ACKNOWLEDGMENTS**

(None)

**READING AND APPROVAL OF MINUTES**

1) February 23, 2022 (regular meeting)

Motion was made by Commissioner Meagher, seconded by Commissioner Randall White to accept the February 23, 2022 regular meeting minutes. Vote: President Beye, Aye; Commission Vice-President Meagher, Aye; Commissioner Michael White, Aye; Commissioner Randall White, Aye

**OPEN FORUM**

Commission President Beye noted that this open forum would be for water and sewer matters only.

1) Scheduled requests to address: (None)

2) Non-scheduled request to address: (None)

## REPORT OF TOWN OFFICIALS

### 1) **Pumping Report:**

The Public Works Director reported the following:

- JR-1 well is in service.
- Pumping was down slightly for the month of February.
- Rainfall was up for the month of February.
- North Reservoir is @ capacity, usable storage-60MG.
- South Pond is @ capacity, usable storage- 6MG

### 2) **Town project reports:** *(See attached **Project Update Report dated March 2022**)*

#### **Treatment Plant-**

The Public Works Director reported the following:

- The new filter membranes will be arriving within the next week. He will be meeting with Suez Tomorrow (Tuesday, March 22<sup>nd</sup>) to discuss delivery, installation and the maintenance process.
- Water staff will continue with the membrane filtration cleaning process of the new membranes to extend their life also.

Commissioner Randall White asked for clarification regarding keeping the old membranes as a back-up. The Public Works Director stated that they would not be able to keep the old membranes as a back-up, as they have already exceeded their life cycle.

The Public Works Director reported that in April, the RI Department of Health will be conducting a Sanitary Survey of our water systems as required by the EPA. He further reported that this survey is conducted every three years.

#### **Transfer pumping/Reservoir-**

The Public Works Director reported that the Highway Department has assembled at the reservoir to work on the restoration of the stone wall and the bike path.

#### **Build-out analysis-**

The Public Works Director stated that he has attached a memo dated June 15, 2021 to his ***Project Update Report dated March 2022***, regarding the water main extension applications on East Shore Road and that this memo summarizes available water supply from the Safe Yield Study of the reservoir and the build-out analysis. The Public Works Director stated that this matter is on the agenda, as requested by Commission Vice-President Meagher.

Commissioner Meagher stated that she wanted to get discussion going on this matter and that this will also be on the Town Council portion of the agenda for further discussion. Brief discussion followed.

#### **Distribution system-**

The Public Works Director reported the following:

- Water Department staff have been out locating and marking existing valves, watermains and services along Narragansett Avenue, for our watermain replacement project.
- We have provided our annual report to the RI Department of Health for our cross-connection control program. We will be sending out informational flyers with the next water and sewer bills, to help educate customers on the importance of this matter.

It was the consensus of the Commission, to accept the Public Works Director's report, as submitted.

**LETTERS AND COMMUNICATIONS**

(None)

**UNFINISHED BUSINESS**

(None)

**NEW BUSINESS**

- 1) New Build-out analysis as requested by Vice-President Meagher  
Previously discussed.
- 2) Finance Director's Report: Comparison of the Water Budget to Actuals as of February 28, 2022
- 3) Finance Director's Report: Comparison of the Sewer Budget to Actuals as of February 28, 2022

Administrator Hainsworth stated that the Finance Director is available, if the Commission has any questions pertaining to the Water and Sewer Budget to Actuals.

**ADJOURNMENT**

Motion was made by Commissioner Randall White, seconded by Commissioner Michael White to adjourn the meeting of the Jamestown Town Council sitting as the Board of Water and Sewer Commissioners at 6:46 PM. Vote: President Beye, Aye; Commission Vice-President Meagher, Aye; Commissioner Brine, Aye; Commissioner Michael White, Aye; Commissioner Randall White, Aye

Attest:

Denise Jennings  
Water and Sewer Clerk

## Project Update March 2022

### WELLS

JR-1, JR-3

- JR-1 is in service.

### TREATMENT PLANT

- In February I reported that the water department experienced operational failure of our membrane filters at the treatment plant. The cause was traced to microbial fouling where a biofilm developed on the membrane surfaces impacting water production. For the past several weeks the staff has implemented clean in place procedures. They have found that after each cleaning the filter efficiency improved and production and run times between cleanings increased. It appears that the procedures have made a positive impact and that we may be returning to filter efficiencies we observed before December. We will continue with the clean in place procedures until the new filters arrive in the fall.
- Every three years the RI Department of Health conducts a Sanitary Survey of our water system as required by the EPA. A sanitary survey is a review of a public water system to assess their capability to supply safe drinking water. Staff from the Department of Health inspect our facilities and review records from our water department. They review raw water sources, treatment, distribution system, finish water storage, pumps, monitoring and reporting, management and operation, and compliance.

### TRANSFER PUMPING/RESERVOIR

- The highway department have mobilized to the reservoir to work on the restoration of the stone wall and bike path.
- There is an item to discuss build-out analysis for the water district. Attached to my Project Update report is a memo that I provided to the Commission in June 2015 regarding the water main extension applications on East Shore Road. This memo summarized available water supply from our safe yield study of the reservoir and the build-out analysis within our district. I hope it is helpful to our discussion.

### DISTRIBUTION SYSTEM

South Pond @ 6 MG

Usable Storage, 6 Million Gallons

North Pond @ 60 MG

Usable Storage 60 Million Gallons

- Water Department staff have been locating and marking existing valves, watermain and services along Narragansett Avenue for the Surveyor to locate for the existing conditions plan for our watermain replacement project.
- Staff will begin our annual hydrant and watermain flushing program.
- We provided our annual report to the Department of Health for our cross connection control program. This program enforces the installation of backflow devices on all services within our distribution system. There are 1545 service connections on our system. Based upon available records we have 460 protected by backflow device. In 2022 there were 120 new devices installed due to sales and plumbing permits. Our goal is to have 100% compliance throughout the system.

### WASTEWATER TREATMENT PLANT

- The monthly average daily flow at the treatment plant for February was 0.69 million gallons per day. The monthly average allowed by our discharge permit is 0.73 million gallons per day. The peak daily flow was 1.2 million gallons due to rainfall and Inflow/Infiltration.

**Town of  
Jamestown, Rhode Island**

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PO Box 377  
Jamestown, RI 02835- 1509  
Phone: (401) 423-7220  
Fax: (401) 423-7229



**Date:** June 15, 2021

**To:** Board of Water and Sewer Commissioners

**From:** Michael Gray  
Public Works Director

**RE:** Water Extension Application  
East Shore Road

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We have received a total of 5 applications for water services that will require an extension of the 8" watermain within East Shore Road in the Rural Water District. The following applications have been received:

1. Christina Paolino, 68 East Shore Road
2. Glenn and Marjorie Andreoni, 10 Seaview Avenue
3. John and Julie Shekarchi, 20 Seaview Avenue
4. Sandra Nardolillo 72 East Shore Road
5. Jeffrey and Debby Saletin 14 Seaview Avenue

I have attached a figure showing the location of the five lots requesting water service and the extension of the watermain in East Shore Road.

In May there were questions relative to the build-out projections for the district and available water supply. Based on the Water Supply Management Plan in 2016 there were 3,184 existing residential water customers on the water system. The buildout analysis completed by the Town of Jamestown in 2000 projected that an additional 223 dwelling units could be connected to the Town water system within the existing district at full-buildout. Using an average of 2.38 persons/household the number of customers is 3,589 at full build-out.

Lisa Bryer, the Town Planner, and I reviewed the 2014 comprehensive community plan update to determine the water system build-out to compare with the water supply management plan projections. Based on the comprehensive plan, 273 potential new units could be added to the municipal water system. This number includes vacant lots, sub dividable properties, and affordable housing units. The comprehensive plan also

includes both the urban district and lots within the rural district south of Hamilton Avenue and on Beavertail where watermains exist today. Based on these projections an additional 625 new residents could be added to the water system using 2.29 persons per household. The Comprehensive Plan study projected more units than the original 2000 study but the increase in population is less than the original 2.38 persons per household based upon updated census data at that time. Using the 2014 comprehensive plan update there will be a total of 3,809 customers at full build out. Today in 2021 there are 3,242 residential water customers on the system.

Since 2014 there have been 32 new dwelling units built in the urban water district and one accessory family dwelling unit based on building permit records. Therefore 241 units remain of the total build-out scenario for both urban and rural (south of Hamilton Ave) districts using the comprehensive plan estimate.

The per capita average day demand in the water district is 41 gallons/per person. Presently the average day demand for the entire water system is 152,000 gallons per day (GPD). Based on the additional 241 units there could be an additional 551 customers for full build out adding a demand of 22,591 GPD to our water system, increasing the total to 174,591 for the average day demand. Extensions north on East Shore Road have not been included in any of the build-out projections. One application was received in the past for an extension on East Shore Road but it was denied by the Commission.

I have attached a figure showing the Seaview Avenue neighborhood with the number of bedrooms indicated for each dwelling to determine the total daily demand for a watermain extension. RIDEM regulations estimate daily flows for single family dwellings at 2 people per bedroom with 115 GPD per bedroom unit. The average consumption for Jamestown water is 41 GPD per person and the census data is 2.29 people per household. Using the RIDEM estimates for two people per bedroom is more conservative in determining the total average daily demand for this exercise.

The total daily water use for just the 5 applications received is 1725 GPD using DEM water use estimates and 1230 GPD using the average for Jamestown with 2 per bedroom. If all 24 households were to connect to an extension around Seaview Avenue, the demand would increase to a total of 8,740 GPD using DEM water use estimates or 6,232 GPD using the average for Jamestown.

## **SAFE YIELD**

Safe Yield is that maintainable yield of water from a surface or ground water source or sources which is available continuously during projected future conditions, including a repetition of the most severe drought of record, without creating undesirable effects. The safe yield study performed in 2000 modeled the two reservoir systems in Jamestown based upon the drought of record that occurred in RI in the 1960s to determine the daily estimate of our supply.

The Safe Yield for North Pond is 185,000 gallons per day based upon the study conducted in 2000. South Pond can provide 100,000 gallons per day but unfortunately transferring water to North Pond can only be used when South Pond is spilling over. During the peak summer season and into the fall, South Pond does not spill over so water cannot be transferred. Therefore, this additional source is not reliable for estimating our safe yield capacity. Well JR-1 can provide an additional 50,000 gallons per day when in use. During drought conditions the well pump must be monitored for the level of water in the well. The well pump is turned off when the groundwater level reaches the pump elevation in the well.

## **CONCLUSION**

To determine the safe yield of a water source the study is based on projected future conditions that include a repeat of the most severe drought of record experienced. This period for RI was through the 1960s and not the drought conditions that caused the reservoir to go dry in 1993. Since 1993 well JR-1 was placed on line and we now have the ability to transfer water from South Pond to North Pond. Both have added to our overall supply but they are not reliable in determining the overall safe yield of the system. The monthly trending reports that I provide to the commission indicate that our average day demand is above our safe yield for approximately 5-6 months every year during our peak season. Daily averages can also exceed 350,000 gallons per day on weekends during the summer. When you factor in the remaining 6 months outside of the peak season the average day demand is 152,000 GPD for the year.

We cannot predict what the build out scenario will look like for Jamestown or when that may occur. Future demands on the water system are based upon lots available for development and estimates on housing units. What is not included are increases due to changes in commercial uses or the addition of accessory units beyond the projected number of 25 in the comprehensive plan for build out. As of this year only 1 accessory unit has been built based upon the building permit records.

It is our responsibility to manage our water resources to ensure an adequate supply to accommodate present and future needs for our community within the water district. These assets are owned and paid for by the customers within the district. Extensions are prohibited in the rural district by our regulations. In the past the commission has allowed an extension in the rural areas south of Hamilton Avenue and Beavertail when it has improved the quality or quantity of water furnished to existing water uses as allowed by regulation.

The applicants make a compelling argument for their need to connect to the water system. They have provided testimony that their wells do not produce sufficient water to support the dwelling and that the water quality is now impacted by salt water intrusion.

Jamestown Shores residents have been experiencing the same conditions over the years and have been able to manage the issues of groundwater quality and quantity with

technology and increasing storage. The reports provided by Christina Paolino for 68 East Shore Road in support of the application states that there are no alternatives available for a new well and that treatment is not an option due to the poor water quality onsite. Applications received from 10 Seaview, 20 Seaview, 14 Seaview, and 72 East Shore Road do not have the supporting documentation for each of their wells but all owners state that they experience the same problems of salt water intrusion and lack of available water during periods of the year.

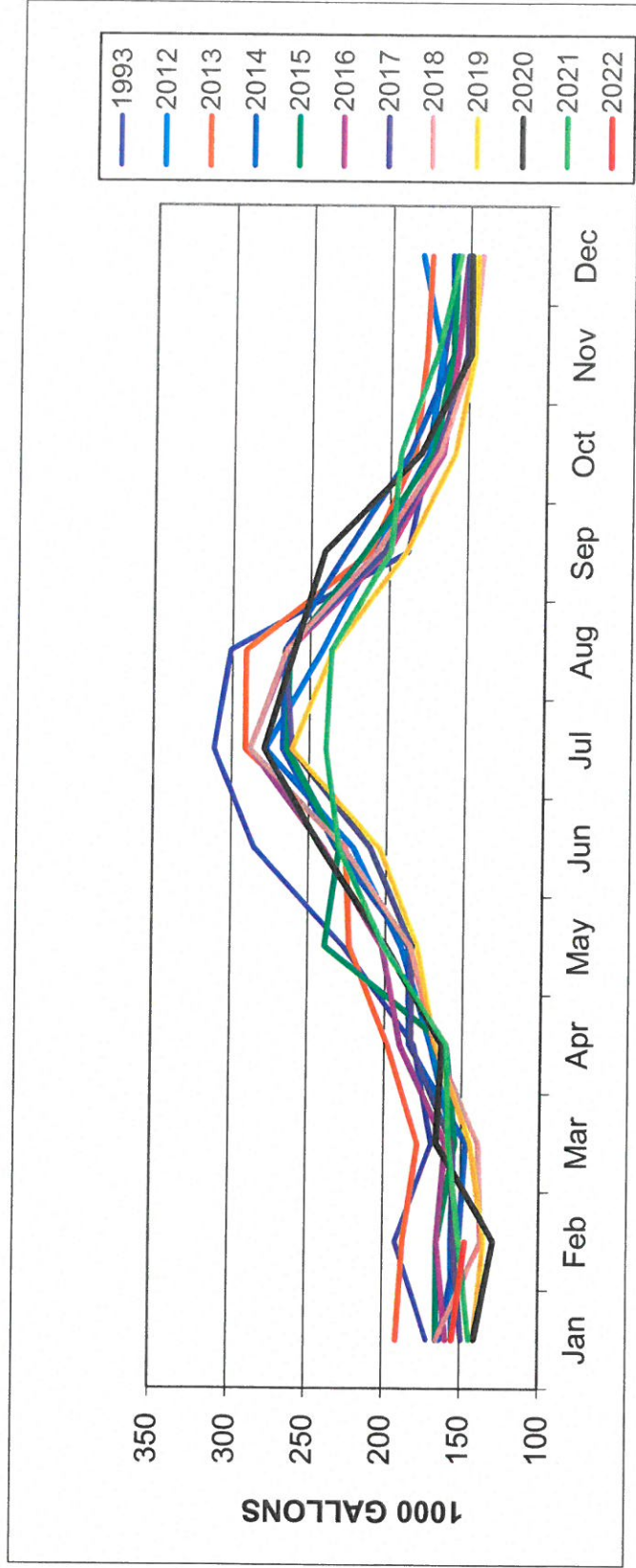
If the Commission is planning to provide additional water to the rural district we must do a more in depth study to determine where water mains will be allowed and how the water is managed for future growth in the community. The Comprehensive community plan build out analysis projected 85 vacant lots (100 units), 40 sub-dividable properties (88 units), and 85 units of affordable housing for the 273 potential new units in both the Urban and Rural districts on the water system but not East Shore Road. Past Commissions have not approved extensions on East Shore Road fearful that the main would creep north as one property after another apply with similar onsite issues with wells. I cannot predict how far this main will go north if allowed but we must assume there are others experiencing difficulty. In the past year I have been contacted by property owners on Highland Drive as well, to determine the feasibility of water extensions in that neighborhood.

The homeowners that have applied will want an answer to determine the direction they must take to get potable water. The commission will need to weigh making decisions for new connections now knowing that there will be denial for development somewhere in the district in the future. Water resources are finite and must be available continuously without creating undesirable effects for all uses that are on the system in the future.



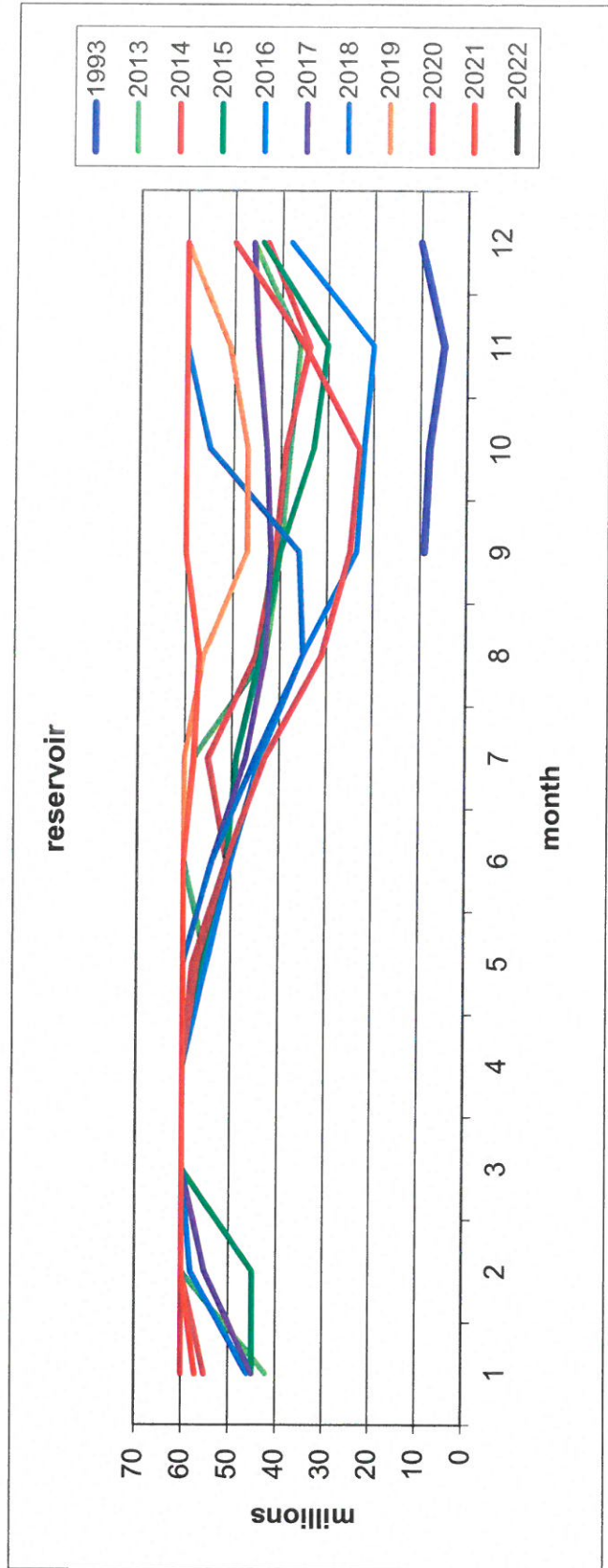
	1993	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Jan	171	173	239	172	155	191	163	165	159	149	165	141	141	144	155
Feb	192	173	210	158	156	187	151	165	165	155	137	135	129	151	155
Mar	169	165	198	157	155	178	147	154	160	156	139	144	166	158	147
Apr	181	196	210	180	170	198	184	160	190	183	167	167	163	160	160
May	227	195	180	212	190	223	185	239	202	183	184	179	200	201	201
Jun	285	215	218	226	221	226	232	230	240	210	227	204	242	230	230
Jul	311	277	274	279	278	291	267	264	288	261	288	261	279	239	239
Aug	301	290	251	254	242	291	266	263	264	266	265	235	260	236	236
Sep	188	245	193	205	210	212	227	215	201	203	208	189	241	199	199
Oct	175	259	182	175	175	184	187	172	166	170	168	158	180	193	193
Nov	166	226	160	164	167	177	160	160	157	151	148	146	149	170	170
Dec	158	230	167	158	180	174	161	158	151	151	142	145	149	156	145

### PUMPING REPORT



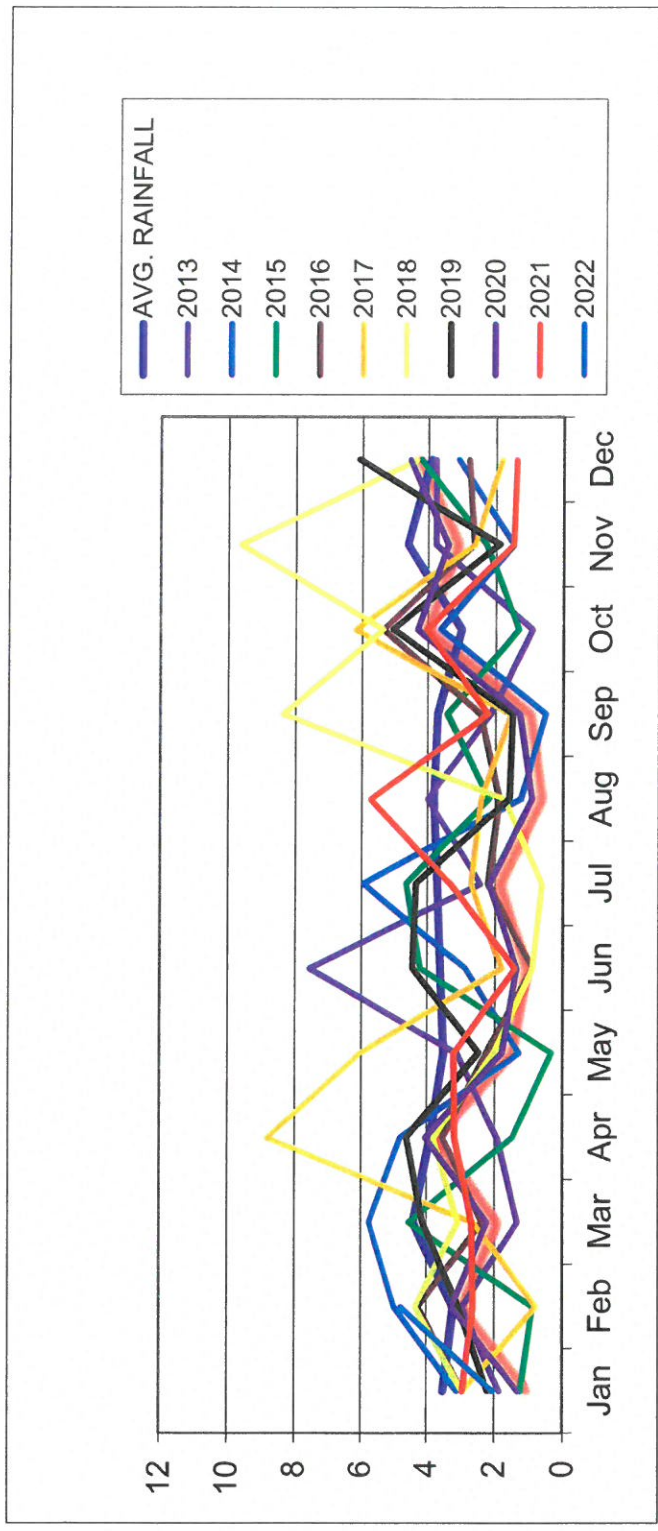
# RESERVOIR LEVEL

	1993	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Jan	9	60	42	55	45	46	45	60	60	60	57	60
Feb		60	60	60	45	58	55	60	60	60	60	60
Mar		58	60	60	60	60	60	60	60	60	60	60
Apr		60	60	60	60	60	60	60	60	60	60	60
May		60	55	58	56	55	60	60	60	57	60	60
Jun		54	60	51	51	50	54	60	60	51	60	60
Jul		49	58	55	49	44	47	60	60	43	58	60
Aug	9	43	43	45	44	35	43	35	56	31	57	60
Sep	8	40	40	41	40	23.5	42	36	47	25	60	60
Oct	5	38	38	39	33	22	43	55	47	23	60	60
Nov	10	35	36	34	30	20	45	60	51	35	60	60
Dec		42	46	43	44	38	46	60	60	50	60	60



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Jan	3.5	1.85	1.22	2.94	2.94	2.94	2.19	1.3	2.94	2.04
Feb	3.2	2.94	0.86	4.25	0.76	4.33	3.06	3.26	2.62	4.77
Mar	4.4	1.32	4.53	2.36	2.62	3.07	4.11	2.21	2.66	
Apr	3.9	1.92	1.47	3.53	8.8	3.79	4.61	4.03	3.18	
May	3.5	3.11	0.32	2.24	6.03	2.03	2.46	1.79	3.2	
Jun	3.6	7.55	4.2	0.89	1.79	0.89	4.44	1.36	1.4	
Jul	3.7	2.42	4.63	2.19	2.7	0.61	4.33	2.16	3.3	
Aug	3.8	3.98	2.17	1.88	2.4	1.73	1.58	0.91	5.71	
Sep	3.7	2.13	3.41	2.42	1.54	8.35	1.49	1.27	2.19	
Oct	3	0.9	1.31	5.33	6.18	5.34	5.04	4.29	4.03	
Nov	4.6	3.76	2.27	2.63	2.61	9.61	1.89	3.39	1.47	
Dec	3.9	3.76	4.2	2.79	1.81	4.33	6.09	4.53	1.38	
Total	44.8	35.64	30.59	33.45	40.18	47.02	41.29	30.5	34.08	6.81

## RAINFALL







TOWN OF JAMESTOWN WWTF  
MONTHLY REPORT  
February 2022

Douglas Ouellette, Superintendent

## Parameters

	<u>Monthly Avg.</u>	<u>Permit Limit</u>	<u>Notes</u>
Flow	.6974 MGD	.73 MGD	
Daily Max	1.202 MGD		
BOD Removal	99.2%	85%	% Removed
TSS Removal	92.0%	85%	% Removed
Fecal Coliform	1.19	No limit, report only	
Enterococci	3.10	(<35 cfu/100ml Monthly)	(<276 cfu/100ml Daily)

## Environmental Compliance (Violations)

There are no violations to report for the month of February.

## Complaints

There were no complaint(s) received for the month of February.

## Alarms

There was one alarm to report for the month of February. (1) low Cl2 alarm.

## Septage

The facility received no septage for the month.

## Sludge Production

The facility processed 25,500 gallons of sludge through Wastewater Services Incorporated.

## Maintenance Management

The Crew completed 57 work orders for the month of February.

## **Chemical Use**

The facility used 926 gallons of Sodium hypochlorite and 0 pounds of lime for process control.

## **Collection System**

28 pump station inspections were completed. 12 Gen Set inspections were performed. All stations are operating as designed.

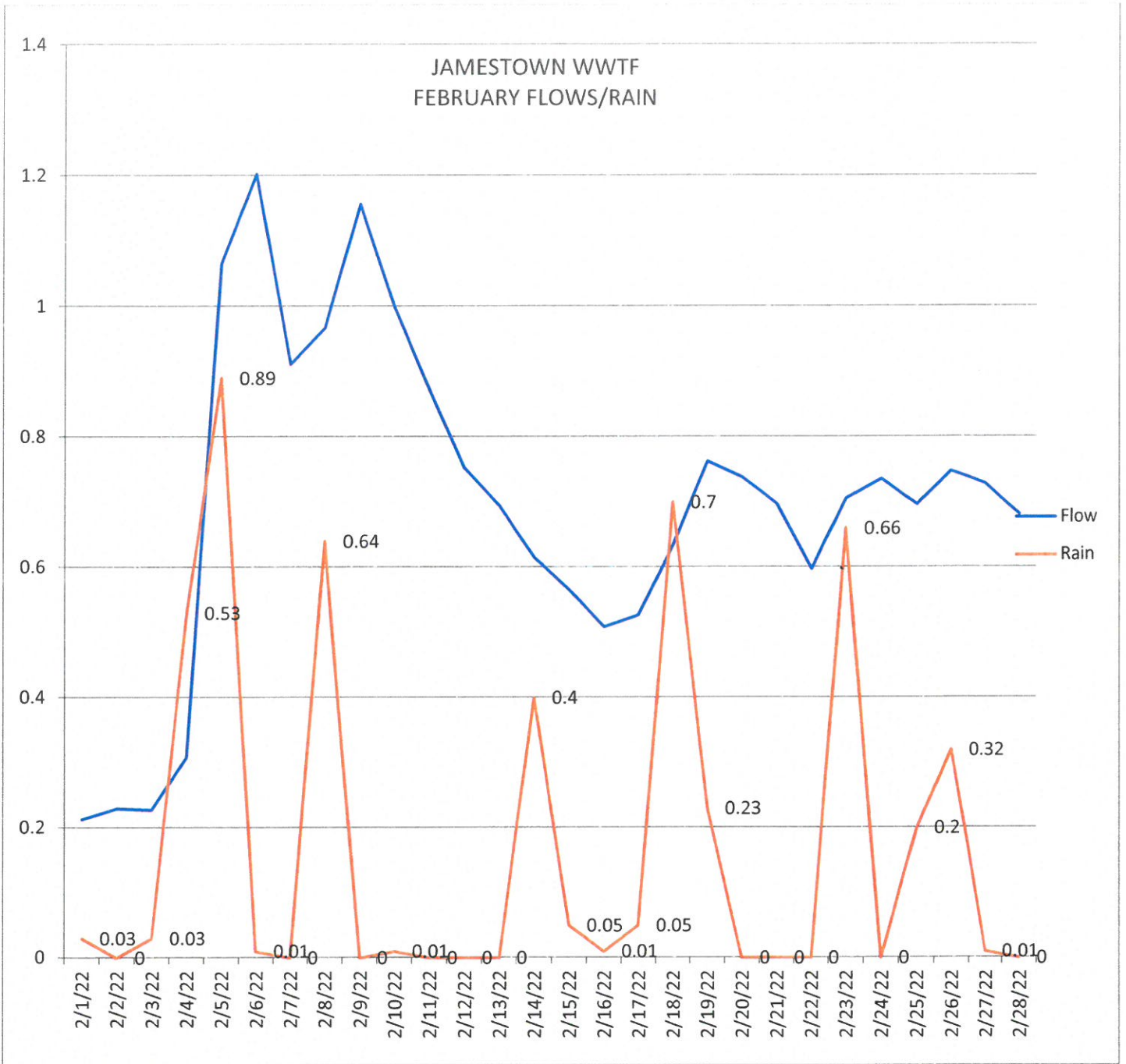
## **Energy Use**

Energy use at the plant for the month was: 218 KWH

## **Precipitation**

Precipitation measured in at 4.77"

# Graphs





### **A new Build Out Analysis**

I propose that the town engage in a thorough, fact finding review of our community to replace the "build out analysis" completed many years ago. The old analysis reviewed the village area, the water and rural water districts, in an effort to see the potential for future development. I suggest a new review should not just look at empty lots, but all properties, because as we are witnessing, the desire to redevelop existing structures is becoming ferocious. And the impacts of such development on not only the water district but the single source aquifer that serves all of Jamestown, is enormous.

This analysis would look at the patterns of development that exist in Jamestown now, in an effort to consider and predict the potential for development and redevelopment. We would use tax assessor data to create a mapped data base that reveals building size and the number of bedrooms and baths. In the village, or rather the water district specifically, we would add the Water department records that reveal water use per lot and per bedroom. In the areas outside of the water district, we would utilize the information provided by RIDEM regarding septic systems, as well as tax assessor data. Simply comparing the current use data with the potential use of the existing properties gives us information about the status of our water system.

**Why? What's the point of doing this?** First of all, we need better data. If we are to continue to deny (or approve) connections to the water system, we need real information to back us up.

We also need information that reveals the potential for development and redevelopment. For example, the low lying apartment building at 63 Conanicus Ave housed 5 apartments and 6 bedrooms, according to tax assessor records. That has been replaced with three multistory structures that house at least ten bedrooms in total. These new buildings represent not only an enormous change in the physical presence of the structures, but in the use of our most precious resource, water. And in the water district, we must also consider our second most precious resource, the capacity of our sewer system to accommodate our waste.

We need to be able to predict a future where our citizens will still have water. As water commissioners we need to think about the restrictions we may need to install (or relax) and the water conservation or transformation methods we need to test out or establish, such as the use of gray water in residential homes.

And as town councilors, we may want to consider if water use, specifically articulated in the number of bedrooms per lot, is a more appropriate means of organizing development than just the current zoning regulations.

While I would request that this effort be completed by the town, I bring it before the Board of Water and Sewer because the implications for our Water and Sewer Regulations may be the most profound.