

**Approved Minutes of the  
Town of New Castle Water & Sewer Commission  
July 16, 3:00 PM  
Recreation Center**

**Members Present:** Normand Houle, Chairman, David McGuckin, Selectman, John Ireland, Richard White, Ben Jankowski, Department of Public Works

**Members Absent:** Walter Liff, Carl Roediger

**Also Present:** Christiane McAllister, Accountant, Anne Miller, Secretary

Chair Normand Houle opened the meeting at 3:00 p.m.

**1. Public Questions**

No public comments or questions were proffered.

**2. Individual Applications/Petitions**

No applications or petitions were presented.

**3. Approve Minutes of June 19, 2020 Meeting**

Mr. Richard White moved, and Mr. John Ireland seconded, to approve the minutes as amended. The motion carried unanimously. Ms. Christiane McAllister accepted a marked copy of the amended minutes from Chair Houle for delivery to Town Hall to be finalized.

**4. Financials**

**a. Review, approve and sign checks**

Chair Houle read the checks as presented which included expenses in both FY 2020 and FY 2021. Mr. White moved to approve the checks as read, and Mr. Ireland seconded the motion. The motion carried unanimously.

**b. Accountant's report**

**i. Hydrant Rental Costs**

Ms. McAllister received notification of a hydrant rental cost increase of \$300 from the City of Portsmouth.

**ii. Balances**

Water revenues and expenditures for the month of June 2020 and FY 2020 are complete, excepting possible small changes, as they reflect the billing and calculated water cost for the July 2020 meter readings.

The Commission-controlled water trust balance reflects last month's transfer in.

	End of June 2020	YTD 2020
Water Revenue	46,624.73	156,928.83
Water Expenditures	24,660.62	119,885.54
Water Net	21,964.11	37,043.29
Water Cash Balance	199,235.11	
Water Trust Balance (BOS)	147,304.59	
Water Capital Reserve Balance (W&S)	27,769.93	

The end of June and fiscal year sewer revenues and expenses aren't complete. Revenues don't include July meter readings for Authorities 2 and 3 and expenses don't include the June sewer costs. These figures haven't been received from the City of Portsmouth.

The Commission-controlled sewer trust fund reflects last month's transfer in and the Select Board-controlled sewer trust fund reflects the \$8,400 transfer out for engineering services.

	End of June 2020	YTD 2020
Sewer Revenue	71,909.29	537,461.65
Sewer Expenditures	90,979.29	595,190.77
Sewer Net	(19,070.00)	(57,729.12)
Sewer Cash Balance	289,169.86	
Sewer Trust Balance (BOS)	31,491.98	
Sewer Capital Reserve Balance (W&S)	41,538.51	

A full analysis of the year-end funds will be presented at the next meeting of the Commission.

### iii. Software transition

The software transition is on schedule. Current billing was generated using the old software and next week the same billing will be re-generated using the new software to provide a comparison as well as a balance/baseline to which incoming payments will be posted.

The Commission considered whether the new software presents an opportunity to change the nomenclature to more clearly describe the entities that comprise each Authority but determined that there is value in preserving the Authority labels. Ms. McAllister will bring a "cheat sheet" to the next meeting to show the scope of the Authorities.

#### iv. July Commitment

The total commitment for July 2020 is \$118,201.50. Ms. McAllister read the component amounts for the July Commitment:

Water billed	\$45,326.40	Authority 1
	\$1,173.06	Authority 4 (USCG)
Sewer billed	\$69,636.24	Authority 1
	\$2,065.80	Authority 4 (USCG)

Mr. White motioned to approve the July Commitment as read by Ms. McAllister. Mr. Ireland seconded. The motion was approved unanimously.

#### c. Meters affected by the water project

Commissioners discussed how to handle the water use costs for customers while hooked up to the temporary water supply; customers will not be billed for that usage because the town is not responsible for the cost of the temporary water. Water costs from Portsmouth are calculated using the meter readings, which do not reflect temporary water. DPW does provide a Shapleigh meter reading as measure of the Town's water usage to NHDES. (Sewer usage reports use the River Road pump station readings.) Shapleigh meter readings will continue for Town use only as an internal data point.

Chair Houle proposed noticing the affected customers.

A subset of these customers was found to have "backward reading meters," but they are believed to be inaccurate. The phenomenon occurred when a customer with a leaking valve was disconnected from the metered source so that the inflow didn't register but the outflow through the leak was recorded by the meter in a backward reading. As a result, the DPW and Commissioners learned that the town's meters can/do record backward readings.

Within the context of the water project, in order to establish an accurate baseline for usage after reconnection, the DPW will record the meter reading at the time of reconnect to serve as the initial data point.

Sewerage costs during temporary water hook up, however, will be born by the Town and need to be billed. Manual invoices will be created based on last year's water readings (sewer bills are based on water usage) during the same period and sent out with a notice of explanation.

#### **5. Selectman's Report**

Selectman Dave McGuckin had nothing to report.

#### **6. NEI-related costs**

Chair Houle asked that the DPW keep him informed of issues and costs related to NEI and the SCADA system as they occur.

## **7. Continuing Business**

### **a. Public Hearings for fee/rate changes**

The topic was discussed at the Commission's June 19 meeting when they learned that the New Hampshire Municipal Association (NHMA) attorneys concluded that it is suggested but there is no requirement for a public hearing for rate-setting; the Town has not previously held public hearings for rate changes.

The decision to hold or not hold public hearings must balance the fact that the existing (no hearing) process has worked in the past, without objection with the intent to operate transparently. Commissioners believed that transparency is currently achieved via open meetings and the availability of rationale documented in meeting minutes at the setting of the rates. The topic was closed with the expectation that the Commission would continue with no change to its rate-setting process.

### **b. Sawtelle Bridge sewer line**

Given two 2018 pipe breaks, the Commission sought the expertise of Underwood Engineering (UE) to assess the condition of the sewer line that runs under the Sawtelle Bridge to determine what, if any, work is to be done to secure the infrastructure for the approximately 20-year period prior to the anticipated bridge and pipeline replacement.

An engineering opinion from UE states their belief that the cause of the breaks was the over-pressurization that occurred when the new River Road pump station restarted in 2018.

After repair of the breaks, and in response to an inquiry, the Town reported to NHDES that it planned to replace the line concurrent with the bridge's replacement, in approximately 20 years. As no objection was heard, the Commission believes that any additional interim efforts are being undertaken at the Town's discretion, without NHDES mandate.

To date, the pipe has been inspected as part of the patching work and the intention is to repair or replace any compromised brackets that hold the line in place on the beam under the bridge, and every five-year inspections will be conducted until the line is replaced. These steps are to ensure that the force main is in serviceable condition and well-anchored.

Other additional possibilities were discussed with UE: by-pass plumbing, replacing the air release valves, and a full non-destructive acoustic assessment of the pipe condition.

### **By-pass plumbing**

UE provided a cost estimate of \$100,000 - \$150,000 to install by-pass plumbing at both ends of the Sawtelle Bridge sewer line to provide for a temporary fix in the event of a potential under-bridge line failure. Commissioners discussed the necessity of a by-pass install given that the pipes appear to be in working order and will be inspected every five years. Should the line break, trucks can be used as an alternative temporary solution while the line is repaired.

Chair Houle summarized the conclusion and Mr. McGuckin moved that:

“The Water & Sewer Commission assessed the cost-effectiveness of installing by-pass plumbing at both ends of the bridge at an Underwood Engineering estimated cost of \$100,000 - \$150,000 and decided this was not appropriate or cost-effective at this time.”

Mr. White seconded the motion. The motion carried unanimously.

#### Air release valves

Based on the theory that a water hammer may have contributed to one of the breaks, the Commission considered inspection and possible replacement of the air release valves located at the crest of the Sawtelle bridge and near the former Tarbell property at the high point of Portsmouth Avenue to minimize the possibility of future water hammers that place undue stress on the line.

The valves are circa 1975 and are exposed to salt. Mr. Jankowski noted that the bridge valve was repaired in 2011 when it was found to be leaking. With Evroks, the construction firm that is currently working on Sawtelle bridge, the DPW was recently able to inspect the bridge valve to determine that it is not currently leaking. A complete assessment would require a detailed hydraulic transient pressure analysis. Were a valve to fail, there is a parts lead time of 3-4 weeks to get a generic valve. It is believed that the valves can be acquired from and replaced by E.J. Prescott. Mr. White noted that access to the valve may not require Evroks' staging since it can be reached via an access hatch on the bridge.

Given their age and the possibility of future malfunction, the Commission considered an outright replacement of the valves rather than bearing the cost of a detailed hydraulic transient pressure analysis with the possibility of also needing to replace the valves now or within the 20 years prior to complete bridge line replacement. In either case, the Commissioners considered contracting an engineer, for a days consultation at an estimated cost of \$1,000 to collect more information before making this decision.

Chair Houle will follow up with Andy Sharpe and report findings at the next meeting.

#### Acoustic testing

Acoustic testing is a non-destructive method of assessing and predicting the useful life of the sewer pipe. Based on UE's experience on a similar project, the cost is expected to be no less than \$40,000.

The Commission agreed that the testing was not necessary or cost-effective.

#### U-bolt holddowns

After earlier identifying that some of the u-bolts that hold the sewer pipe in place under the bridge are compromised, Evroks provided a \$50,200 proposal to remove and replace all of the brackets, approximately 70. An alternative is to utilize Evroks inspection plus a structural engineer to determine which brackets need replacement, with a written report, at a cost of \$4,500 — although there is some confusion over whether that option will cost \$6,700 which includes \$2,200 for one day's use of the inspection crane with operator. Commissioners recalled that the initial estimate of compromised u-bolts was 25% of the total.

Mr. White noted that the inspection could serve as the Town's first of its every five-year inspections. It was agreed the \$4,500 alternative for Evroks inspection and structural engineering would either result in substantial savings by limiting the number of brackets for replacement or identify a potentially bigger problem if one exists.

Chair Houle will confirm that the total cost is \$4,500 before the Commission moves forward.

### c. Backflow prevention

The City of Portsmouth has agreed to be the Town's agent in the management of backflow preventer inspections and Chair Houle circulated a draft letter to advise customers of the procedure and their obligation. For straightforward outside irrigation users, inspection is required once per year.

The Commissioners discussed the status of the Town's inventory of irrigation backflow preventer users and determined it is incomplete. They believe the total number to be between 35 and 50. It appeared that 15 have been confirmed to date, but after discussion, it was suggested that the identified quantity is 29. Those customers with a second meter but no irrigation system, are not required to use a backflow preventer. Further, some customers do utilize an irrigation system, but not a second meter. Ms. McAllister may be able to look for seasonal high water users to narrow the set of potential backflow preventer users. DPW staff may be available to contact customers and/or view the properties to verify their presence. Ms. McAllister and Mr. Jankowski will review and verify the list of identified backflow preventer customers. The DPW will investigate and finalize the remainder of the backflow preventer users by going door to door over the next few weeks. Chair Houle should be kept apprised of the status.

All high-risk systems, most often fire suppression sprinkler systems, require backflow preventers and twice per year inspections. There are six presumed high-risk systems in the New Castle water district — MHT school, USCG facility, Portsmouth Yacht Club, UNH, New Castle Public Safety Building, Great Island Inn — and possibly private residences with fire suppression systems. A next step will be to conduct a risk assessment of backflow customers.

## **8. New Business**

### a. Status of River Road pump station

The River Road pump station isn't currently functional.

#### Flow meter

On June 19, 2020, the 1998 flow meter at River Road pump station failed completely and requires replacement. This is the meter used to determine and report the Town's sewerage usage. The cost is expected to range from \$9,000- \$12,000 plus the cost of septic trucks. DPW secured two estimates:

ADInstruments (ADI) proposed an exact fit replacement meter that requires 80 days lead time at a cost of \$9,819. This option would require NEI to be involved in interfacing the meter with the SCADA system as well as training.

NEI, working with Motion Industries, proposed a different length meter with a custom spool piece to fit the River Road station with 4-5 weeks lead time at a cost of \$12,850.

Both options involve hiring septic pump trucks during the new meter installation. Mr. Jankowski explained that septic pump trucks would be less expensive than using the by-pass plumbing. Use of the by-pass would likely involve a day of work to set up the by-pass infrastructure, making it less attractive than trucking.

Commissioners discussed whether the other two meters are prone to the same failure. Mr. Ben Jankowski described that all three meters were purchased in 1998 but the other two are running without problems. While the Quaterdeck and Steamboat meters are read and used to validate the River Road readings, they don't have any urgent or critical use with exception of identifying leaks in the system, especially at high tide. It was agreed that the Steamboat and Quaterdeck data collection is useful, but doesn't require the advance purchase of replacement meter(s) to hasten the repair of a potential future meter failure at these locations.

Mr. White noted past problems with the SCADA system interface. An NEI contract would hedge the potential for these problems and allow for a single responsible entity. The ADI v. NEI cost differential is likely the difference between what would be an added cost to the ADI solution for NEI's additional interface and training work.

Chair Houle asked and Mr. McGuckin agreed to communicate and support the Commission's request for the Select Board's Sewer Trust funds in the approximate amount of \$14,000-\$15,000 (which includes the use of septic trucks while under construction) to complete the flow meter replacement work. With the Select Board's endorsement, Mr. Houle will draft a formal request to the Board. Ms. McAllister indicated that a signed contract must precede the formal application to expend funds. McGuckin will follow up with Ms. McAllister about the process.

#### b. NEI quarterly maintenance review

Commissioners addressed the recommendations of NEI's April 16, 2020 report.

1. The Commission agreed to have NEI resolve the relocation of the fan and light switches at the River Road station.
2. The Commission agreed to have NEI replace and rewire the float switch for the flood alarm.
3. Chair Houle noted the flow meter error report calculations and ask Mr. Jankowski to provide guidelines for acceptable error levels at the next meeting.
4. Chair Houle, noting that the server batteries are reading low and are scheduled for replacement by NEI, asked Mr. Jankowski to provide information about battery life. Additionally, he requested that the DPW observe the battery replacement process to determine if future battery changes can be handled by the Department.

c. Regarding the water vault at Wentworth & Main

Water main replacement contractor, Granese & Sons, Inc. proposed work for the water vault at the corner of Wentworth Road and Main Streets where the New Castle and Portsmouth water systems connect.

Chair Houle wondered whether there may, in the future, be a time when the check valves are reintroduced and/or the meter replaced.

Mr. White has photos from inside the vault that indicate the spool is labeled as 6-inch, which would create a hydraulic restriction to the Town's new 12-inch pipe distribution system. This needs to be discussed with the City of Portsmouth.

Chair Houle will ask UE engineer, Andy Sharpe, for the rationale behind Granese's recommendation to install a new 8-inch valve at the edge of the road. Commissioners would prefer to see a 12-inch valve to accommodate New Castle's line upgrade and in anticipation of the Portsmouth-side upgrade to 12 inches.

**9. Any Other Business for the Board**

a. Island Items

The June *Island Items* article was never published so Chair Houle will update that article for the next issue.

b. Ordinance update

Chair Houle suggested that the quantity of ordinance changes may suggest the near-term need for a wholesale update to the ordinance.

**10. Adjourn**

Mr. White moved and Mr. Ireland seconded the motion to adjourn. Motion carried.

The meeting adjourned at 6:04 p.m.