

MINUTES OF THE WATER & SEWER COMMISSION MEETING
TUESDAY, JANUARY 24, 2017
3:00 P.M.

Members Present: Walter Liff, Chair, John Ireland, Member and Acting Chair, Normand Houle, Member, Richard White, Member, Steve Tabutt, Supervisor of Public Works, Reg Whitehouse, Alternate

Also Present: Anne Miller Secretary, Clint Springer, guest, Andy Schulte, guest

Members Absent: David McGuckin, Ex-Officio Select Board, Chet Fessenden, Alternate

Mr. John Ireland called the meeting to order at 3:00 p.m. and asked the public to sign in.

1. Discussion of Underwood Water System Evaluation Conclusions

Secretary's Note: The Underwood Water System Evaluation is "an evaluation of the municipal water distribution system in order to identify capital improvement projects." As a consequence of the findings, the Town of New Castle Select Board is taking steps to present water system upgrades to the public with the possibility of a Warrant at Town Meeting in May, 2017. As the Water & Sewer Commission members have a level of experience and expertise with the town's water system, the Commission hopes to develop a consensus position regarding the various alternative infrastructure projects proposed in the Underwood Evaluation to offer to the Select Board and the public.

Mr. Ireland summarized his view regarding the option for replacing water lines with 12" versus 16" pipes, stating that the more 16" pipe that can be laid now, the better the future situation will be. Even if the water is restricted by the 12" line that brings the water from Pierce Island, a 16" line through the town would lessen friction loss. He estimated the incremental cost for the town of New Castle portion, which Mr. Ireland noted was the only section the town can control, to be \$400,000, or 11%.

While Mr. Ireland noted that while there may not be much more capacity for building new single family residences, there is the possibility of a hotel coming in, and that would render the 12" pipe insufficient. The town is currently faced with the need to replace pipes because they are too small to handle the demand, even in some cases where the materials are still sound. If the expectation for the materials is, as Mr. Ireland believes, for a 100 year lifecycle, then it would be a waste to have to replace them because they aren't large enough to handle potential growth.

Mr. Normand Houle asked about the impact on fluid dynamics when a larger pipe (16") is fed by a smaller pipe (8" or 12") and whether a size difference between two connected pipes is important. Mr. Ireland answered that it is material as the smaller pipe would cause a reduction in flow due to friction loss; a 16" pipe fed by 8" pipe, for example, would be less advantageous. However, in that scenario, whatever pressure remains when the water reaches the 16" pipe, will not be lost as quickly as it would through a smaller pipe. Mr. Clint Springer added that as long as the pipe can stay filled, fire pumps can increase the pressure.

Mr. Houle described that currently the pipe from Odiorne to Crosby's is 8". Mr. White added that he has heard the Rye line, running from the Rye side of the bridge to Sagamore Avenue, described as both 8" and 10", but he doesn't know for sure. He does know that in pre-planning for the Wentworth by the Sea Resort in the mid to late 1980's, when looking for water supply, the closest hydrant in Rye, located at the Wentworth by the Sea Country Club, measured 500 gallons/minute. Regardless of pipe size, 500 gallons/minute (possibly less now) is indicative of the system capability.

Mr. White addressed Mr. Houle's question about a smaller diameter feeder pipe by noting the proposed larger, 16" pipe wouldn't just be fed by one smaller pipe, but three: 8" or possibly 12" pipe from Pierce Island, 12" pipe from Little Harbor Road, and possibly an 8" pipe from Rye (either Odiorne Point or Wentworth Road.) The only area where the town has control is between the meter pits, Shapleigh to Wentworth Road & Main Street. For this, Mr. White recommends a 16" pipe and proposes that the cost of 16" pipe plus the cost of engineering be presented for vote at Town Meeting. In the event of the town's approval, it would send a strong message to the City of Portsmouth that New Castle is serious about this problem. The next move would be theirs.

Mr. Houle asked for clarification about Underwood alternative 1E, which goes from Shapleigh to the Rye bridge, beyond the meter boundaries described by Mr. White. Mr. White responded that the scope described in alternative 1E would be the most desirable, but the areas across Pierce Island and across the island to the bridge are beyond the town's control. He recalled comments by David McGuckin, that the City of Portsmouth wants to see that the town of New Castle is serious before they spend on their related improvements.

Mr. Houle pointed out a 5-year plan from the Underwood Evaluation in which the town's portion totaled \$3.7 million of the total \$8.3 million project (with 12" pipe) and wondered which cost would be proposed to the voters. Mr. White responded that only the town's portion, or \$3.7 million plus the cost to upgrade from 12" to 16", which Mr. Houle estimated to be \$500,000, for a total of \$4.2 million, would be proposed to address the 16" pipe from Shapleigh to Wentworth Road & Main Street.

Mr. Houle guided the meeting, beginning with a review of page 22 of the Underwood Evaluation which states “it is recognized that the recommended option does not meet all ISO flows under the modeled conditions. If the town desires to meet 100% of the ISO flows, Underwood Engineering (UE) would recommend additional study and modeling to identify cost effective alternatives before pursuing higher cost options presented in this study (16” main).” Mr. Houle asked the Members whether they agreed that 16” modeling should be done. Mr. White noted that, to provide the flow rates in the 16” scenario, Underwood must have done a model. Mr. Houle suggested some scenarios for further modelling:

- A modification of option 1D to include supply lines of 12” from Rye, 12” from Campbell’s Lane, and 12” from Shapleigh with a 16” line in New Castle
- Current supply line components (no change from current Portsmouth or Rye feeds), with a 16” line in New Castle
- Supply line components including a Shapleigh upgrade to 12” and an unchanged 8” Rye line

Mr. White thought there may be some value to this new modelling in order to answer some questions, if the cost were only a few thousand dollars. At a high cost, he suggested foregoing the new modelling. The significant factor is that two water lines on the Wentworth Road end of the island, the line (exact size unknown) installed to the Wentworth by the Sea Resort going all the way to Sagamore Avenue in Rye, and the 12” line coming into Campbell Island which loops through the Wentworth by the Sea Association neighborhoods with lines ranging from 8”-12”, tie into the old, 8” line. It is that old line from the intersection of Little Harbor & Wentworth Roads to the corner of Main Street & Wentworth that produces 300 gallons per minute flow. If the old line doesn’t change, then there is no way to bring the available water from those two sources into town.

Observing a public comment from the January 17, 2017 public meeting, that all property owners should benefit from improved flows, not only those on or near the main lines, Mr. Houle asked whether the Commission might be better served by endorsing Underwood option 1G which enhances option 1D by adding looping around the island to increase fire flows at an additional cost (above the 1D cost) of \$932,000. Mr. White answered that in this case, modelling will show how the main line improvements affect the flows to the hydrants along the dead end spurs.

Mr. Ireland added that beyond the engineering and funding challenge for the spurs, there may be a legal challenge to secure easements where new pipe is being laid in new areas. Mr. White added that some of the spur work falls within the Village water district, while other work falls in the City of Portsmouth-served area. Mr. Tabbutt suggested a different idea to move the meter pit down Wentworth Road to the intersection of Wentworth and Pit Lane, and run the loop through

on Pit Lane then over to Quarterdeck Lane for a Quarterdeck Lane loop. This could remedy the difficult situation caused by the higher elevations in that area.

Mr. Ireland, in response to the spur question, felt the Underwood statement that “further evaluation is recommended to determine cost effective looping scenarios” is a valid observation, and consistent with the Members’ position. Mr. Houle proposed that the Commission’s position state that a looping study be considered in the out years.

Mr. Houle described the current state of the \$3 million New Castle water project that continues to occupy a priority position on the City of Portsmouth Capital Improvements Plan (CIP) and observed that historically this project is ranked as high priority but gets deferred. The City has been awaiting the decision about whether the bridge from Rye will be replaced with a fixed bridge, which would accommodate hanging a new water line underneath, in order to determine the most efficient water route onto the island. The bridge-located line would likely cost less than the allocated \$3 million, leaving the difference for other projects. If the town supports a 16” line, Mr. Houle proposed that the Commission encourage the Select Board to ask, or even insist that, the City honor its \$3 million commitment to New Castle water with the hope that that funding would contribute to the cost of an upgrade to 16” main on the City water side of the island.

Mr. White reasoned that the City should move forward on infrastructure upgrades even before the bridge decision is made because the longer replacement of that section of pipe is postponed, the more it will cost.

Members agreed to request that the Select Board urge the City of Portsmouth to spend the \$3 million CIP earmark on laying new 16” pipe in the City water portion of the island, without waiting for the bridge decision.

Pertaining to the possibility of running a new main under the bridge from Rye, Mr. White noted that the pipe would be fed by Rye water which services the area from BG’s Boat House on Wentworth Road all the way to the Rye side of the bridge. Further, the Rye water line is a continuation of the City of Portsmouth line that runs from Sagamore Avenue to BG’s Boat House. The crossing of jurisdictions creates the potential for even more political barriers, as a new line would require cooperation from Rye as well.

Having discussed the issue, members summarized their position in the statement: *We endorse alternate 1E and recommend that the town of New Castle move forward with the replacement of that section of 16 inch line which is within the New Castle water district.*

The Members unanimously endorsed the statement, noting that Mr. Walter Liff was not present, having departed the meeting earlier.

Mr. Houle will draft the conclusions of the discussion then re-present them in draft letter form to Members and continue to modify the draft letter until the Commission agrees that it accurately reflects its position.

2. Adjourn

Mr. Houle moved to adjourn the meeting and Mr. White seconded. Motion carried, unanimously.

The meeting adjourned at 4:15 p.m.