



City of Rochester, New Hampshire
PUBLIC WORKS DEPARTMENT
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MEMO PUBLIC WORKS & BUILDING COMMITTEE AGENDA

TO: PUBLIC WORKS AND BUILDINGS COMMITTEE
FROM: PETER C. NOURSE, PE
DIRECTOR OF CITY SERVICES
DATE: November 9, 2023
SUBJECT: Public Works & Buildings Committee Meeting
Meeting Date *Thursday November 16, 2023, at 7PM*

There will be a Public Works and Buildings Committee Meeting held on Thursday November 16, 2023, at 7PM. This meeting will be at City Hall in City Council Chambers

AGENDA

1. Roll Call
2. Approval of the October 19, 2023, PWC Minutes
3. Public Input
4. FY24 Proposed Paving List
5. Public Informational Meetings Upcoming
 - Route 11 Capacity and Safety Enhancements-Wednesday January 31, 2024@ 7:00 PM at The Public Works Department, 209 Chestnut Hill Road, Rochester, NH
 - Milton Road/Salmon Falls Road/ Amarosa Drive Intersection Improvements Thursday January 25, 2024, @ 7:00 PM at The Public Works Department, 209 Chestnut Hill Road, Rochester, NH
6. Other

Public Works and Buildings Committee
City Hall Council Chambers
Meeting Minutes
October 19, 2023

MEMBERS PRESENT

Councilor Jim Gray, Vice Chairman

Councilor John Larochelle

Councilor Alexander de Geofroy

Councilor Steve Beaudoin

MEMBERS ABSENT

Councilor Donald Hamann, Chairman (excused)

OTHERS PRESENT

Peter C. Nourse PE, Director of City Service

Dan Camara, Coordinator GIS & Asset Mgmt.

John Sykora, Weston & Sampson

Tim Labrie, Weston & Sampson

Jackie Raab, 23 Grove Street, East Rochester

MINUTES

Councilor Gray called the Public Works and Building Committee to order at 7PM

1. Approval of September 21, 2023, Meeting Minutes

Councilor Beaudoin made a motion to accept the minutes of the September 21, 2023, meeting as presented. Councilor de Geofroy seconded the motion. Councilor Larochelle requested to amend on page 7 under lead update its states reference to lead it states it nowhere close to maximum contaminant level (MCL). It should read he stated that this is nowhere close to the action level for lead. Councilor Beaudoin amended the motion to reflect this change. Councilor de Geofroy seconded the motion. The motion passed unanimously.

Ms. McDormand took the roll call attendance. Councilor Beaudoin, de Geofroy, Larochelle and vice chair Gray were all present. Councilor Hammann was excused.

2. Public Input

Jacke Raab lives at 23 Grove Street, East Rochester and was present to discuss the Waste Management Host agreement. Ms. Raab requested that the next negotiation of the Waste Management contract add additional yard waste pickups. Mr. Nourse stated that the current schedule is two times in the spring and two times in the fall. The dates in 2023 are the first and third week of May and first and second week of November. Mr. Nourse noted you can also drop off leaf waste at the residential drop off Monday, Wednesday, Friday and Saturdays. Mr. Nourse also mentioned that bagged leaves can go in the trash toter if there is room. Councilor Gray suggested an email blast regarding the leaf pickup information. Also Ms. Raab wanted to thank Mr. Nourse for the water line work that was completed on

Highland Street, she has already noticed an improvement.

3. Sewer System Master Plan Update by Weston Sampson Engineers

Mr. Nourse stated that the Sewer System Master Plan (SSMP) was commissioned by the City in 2021. This plan is a long-term effort to identify and control infiltration and inflow into the City's sewer system and determine how we need to grow sewer infrastructure to accommodate future growth of the city. Infiltration/inflow takes up valuable capacity in the sewer pipes which limits growth, and requires increased electricity and chemicals use at the pump stations and treatment plant. Mr. Nourse noted it cost the taxpayers millions of dollars if not corrected. Mr. Nourse stated that infiltration is the introduction of clean groundwater into sewer system through aged pipes and manholes and inflow is the introduction of clean water into the system through sump pumps, roof and foundation drains or cross connections between road drainage systems and the sewer system. Mr. Nourse noted that deliberate inflow is illegal per Chapter 200 of the City's ordinances. Mr. Nourse further mentioned that a sewer system master plan is a requirement of the City's Administrative Order on Consent (AOC) towards its obligations under the Great Bay General Permit for nitrogen. Mr. Nourse stated that Weston and Sampson are the City's consulting engineers for this effort and they have provided the two past updates to this Committee. Mr. Nourse noted that work to date includes ongoing determination of priority infiltration/inflow areas of the sewer collection systems. Mr. Nourse stated that they have flow metered the City's 27 sewer catchment areas, smoke tested over 200,000 feet sewer main, flow isolated 32,000 feet (cctv'd) closed circuit television inspections 50 thousand feet and are now performing building inspections for nearly 5,000 buildings. Mr. Nourse introduced Tim Labrie and John Sykora of Weston and Sampson Engineers for the update. Mr. Sykora presented a power point presentation, (ATTACHED to minutes). He stated this is their third presentation and noted some of this presentation will be review. Mr. Sykora went over the terms & definitions that are used.

- Gpd: gallons per day
- Mdg: million gallons per day
- Gpdim: gallons per day per inch per mile
- SSO: sanitary sewer overflow
- SSES: sewer system evaluation survey
- Infiltration: groundwater entry into sewer system via pipe and manhole defects
- Inflow: surface runoff entry into sewer system via storm system, roof leaders pumps, etc.
- I/I: infiltration and inflow
- CCTV: Closed Circuit television Inspection
- CMOM: Capacity, Management, Operation and Miantenance

Councilor Larochelle asked the question if the Gpdim means gallons per day per square inch cross section per mile. Mr. Sykora said yes. Mr. Sykora stated that EPA AOC issued in March 2021 sets forth requirements to be completed by October 31, 2024. He stated that the studies are conducted because of impacts on capacity and he noted high rain fall events limit growth and development. Mr. Sykora state that Rochester has sewer mains

that are over 100 years old. He explained that the analysis has been done to determine the cost to the City of Rochester for extraneous flow. Mr. Sykora stated that the estimate for each gallon of infiltration/inflow costs the City roughly \$3.00 per gallon to pump, treat and dispose of. He noted that using a life cycle cost of 20-years, this equates to roughly \$45 per gallon over the 20-year period. Councilor Beaudoin said the \$3.00 seemed like an awful high number and wanted to know how that was calculated. Mr. Sykora said it was an overall cost of electricity at the treatment plant, chemical used, salaries, all things waste water. Councilor Gray asked Mr. Nourse to provide a break down how the \$3.00 was calculated. Mr. Nourse stated that he has provided this before and doesn't mind providing it again. He stated that if you take the over cost of all capital costs, personnel, electricity cost put that together it is straight math. Mr. Nourse stated that the sewer rates have not historical followed where they need to be to support this. Mr. Sykora reviewed the sewer system master plan components.

- Sub-area delineation
 - Flow metering and analysis
 - Sewer System Evaluation
 - Survey (SSES) Investigation
- Plan Development
Hydraulic Sewer modeling Evaluation of sewer system expansion areas
Pump station upgrade prioritization plan update.

Mr. Sykora stated that staff set up 23 separate areas for metering to estimate peak infiltration and inflow rates per sub-area. He stated when reviewed it is estimated that infiltration is 1.10 million gallons per day of peak infiltration calculated and there are several metered areas considered excessive or over the 4,000 gallons per day per inch per mile threshold. Mr. Sykora stated that the inflow is estimated at 2.83 million gallons per day of peak inflow calculated, 5-year, 24-hour storm of 0.18in/hour intensity, 80 percent of total inflow volume occurs in 43 percent of total LF. He explained that the investigations for infiltration were conducted using television inspection, manhole inspections and flow isolation which are all still ongoing. He stated the inflow investigations have been done using smoke testing which was completed in 2022 and building inspections, which are ongoing, and dye testing as needed. Mr. Sykora stated that there are approximately 4,500 building inspections to be completed. He stated that individual letters have been sent to property owners requesting access to their properties. He noted that a two-person team with identification goes to the property by appointment, when possible, and door to door if no response has been received. Mr. Sykora stated that the team is there to visually identify potential inflow sources and document any existing defects. He noted that while staff is there they will also be looking to identify water service materials to assist with the Lead Service Line inventory. Councilor de Geofroy asked when they see a drain tied to the sewer, is it usually malintend or just ignorance. Mr. Sykora stated it's typically a lack of information and an education piece that needs to be brought to people's attention as the homeowner likely does not understand how this impacts capacity for the City's system. He stated that the building inspections started two weeks ago and seven hundred buildings have been completed. Mr. Sykora stated they

have found that there are twenty-one sump pumps hooked to sewer, nine floor drains hooked to sewer and eleven open clean outs. Mr. Sykora stated that he is anticipating completing the building inspections in the spring of 2024. Councilor Beaudoin asked if there have been any issues with people letting them into the buildings. Mr. Sykora said it's been great. He noted that most folks have been helpful, and he noted that it is not mandatory. Councilor Beaudoin asked if they would be letting the committee know if there is a lot of resistance because the committee might want to consider other options to encourage homeowners. Mr. Sykora said this is the first run trying to get as much information as they can to determine if sump pumps are contributing to the issue and if there are certain areas of the City where the issue is prominent. Mr. Nourse said the building they can get into will say a lot, and they will be able to get to the extent of the problem. Mr. Sykora said in 2024 they are going to do a pump station evaluation, sewer system modeling and manhole inspections. He stated that in 2025 the city will be working on the infiltration construction defects identified in 2022 and 2023, Weston and Sampson will complete a sewer system expansion areas study. Mr. Sykora stated that work is in progress right now on Eastern Avenue sewer rehabilitation design. He stated that staff found that there is severe corrosion and deterioration in the pipe on Eastern Avenue. He noted that Rochester's plan is a 13-year program that includes investigation work and construction work. Mr. Labrie displayed a software program on the monitors. He explained how it is used to track all the work and stated that it is GIS based and that it will work with the City's GIS systems. He noted this will make the sewers system master plan easier to follow as it is able to break down the work by fiscal year and where funds were used. Councilor de Geofroy said when they start addressing the infiltration/inflow the water has to go somewhere do we see it being an issue putting strain on stormwater abatement systems or is it fairly manageable compared to other stormwater issues. Mr. Nourse stated that in East Rochester infiltration/inflow in 2007 the project replaced old sewer pipes that acted like sponges and the ground water table went up there can be negative effects. Mr. Sykora recommends when doing a lining project you want to try to rehab as much as you can.

4. Suitability of Public Waste and Drinking Water Utilities to Support the Granite Ridge Development District-Initial Review

Mr. Nourse stated that the Granite Ridge Development District on Route 11 contains 1,000 acres of mostly developable land. He noted it is an economic corridor for the region and that the first phase of Waterstone Development has been in retail operation for some years. Mr. Nourse stated that the second phase is currently being designed and will include, like the first phase, public infrastructure which supports both retail and residential development. Mr. Nourse noted that the residential development in the district was approved by the City Council when Article 8 of the Zoning Ordinance was updated last year. Mr. Nourse stated that when residential was approved he was concerned about the capacity of water and sewer, particularly since the city has recently upgraded the Route 11 sewer Pump Station at 1.5 million dollars and the downstream River Street Pump Station which was completed in 2021 for roughly the same cost. Mr. Nourse noted that the engineers sized these upgrades based upon the knowledge they had at the time which included the 2009 Granite Ridge Development District master plan which called for a commercial/retail buildout and the 2019 mayberry study which indicated the mixture of retail and workforce housing. Mr. Nourse noted that residential water and wastewater demands are typically greater than retail/commercial. Mr. Nourse stated that he commissioned Weston and Sampson to

perform a utility adequacy evaluation of the district for a full build out scenario to include a moderate amount of residential. Mr. Nourse stated that they evaluated what the existing developed land is producing for wastewater flows and using standard engineering approaches estimated what the future loading will be once the balance of developable land is developed. Mr. Nourse noted they evaluated water and sewer pipe pressures, flows and capacities and the capacity of the Route 11 sewer pump station and its downstream River Street Pump Station. Mr. Nourse stated that at this time they have a draft report, and their development assumptions are being reviewed by Planning and Economic Development. Mr. Nourse stated that the existing water infrastructure is adequate for the full build out using reasonable assumptions, so he isn't going to focus on that. Mr. Nourse mentioned on the sewer side, it appears that the existing capacities of the Route 11 pump station and the downstream River Street pump station will support a full build out again using reasonable assumptions including limited residential. Mr. Nourse stated he will caveat to this stating that the build out assumptions were for limited residential. The pump stations can accommodate a full district build out that would not exceed about 600 residential units including the approximate 200 units proposed in the Waterstone Phase II development, the 600 units total is from Economic Development what he understands to be a desired max of the city. Mr. Nourse mentions that the evaluation indicates that about 3,600 feet of existing sewer along Route 11 from about Little Falls Bridge Road to the Route 11 Pump Station is undersized to accommodate full build out. Mr. Nourse noted the 10-inch diameter pipe along this stretch will be flowing at over 80% capacity which is the standard maximum. Mr. Nourse stated this pipe will need to be upsized and probably best to be completed as part of the Route 11 capacity and safety improvement projects which is a NHDOT-City Local Public Agency Project that is looking to start construction in 2025. There may be some surplus ARPA funds available to move towards this new project expense to offset the sewer expense. Mr. Nourse said that we are fairly confident in our preliminary conclusions, but we do need to extend this study downstream from River Street Pump Station to The Wastewater Treatment Facility. Mr. Nourse noted that he will look to present to the Planning Board in the near future. Mr. Nourse stated that if a very large water demand is proposed such as a large medical facility, that would impact the assumptions. Councilor Beaudoin asked if this information would be going to the Planning Board, so they know what they are reviewing. Mr. Nourse stated when they have the final report, which will also include water, they will present this to the Planning Board. Councilor Larochelle said that this is a great presentation, and he appreciates that. Councilor Gray said he would like to see on Ten Rod Road how the sewer is over there, he believes it would be up hill from Route 11. Councilor Larochelle asked during the heavy rain fall if they exceeded the capacity of the Wastewater Treatment Plant. Mr. Nourse said no that they are designed for 5 million gallons a day but can actually treat over 10 million gallons a day.

5. Proposed Disposition of Polychlorinated Biphenyls (PCB) Class action Lawsuit Settlement

Mr. Nourse stated that a settlement payment has been received by the city as a result of this class action lawsuit settlement. Mr. Nourse noted these funds currently reside in the deferred revenue account. The class action lawsuit is the City of Long Beach, et al. V. Monsanto Company, et al. from the US District Court for Central District of California. Mr. Nourse noted that more information can be obtained at the settlement website:

www.PCBClassAction.com . Mr. Nourse stated that Rochester was awarded \$17,414.03. and now needs to delegate them for use. He stated that the Finance Director has requested we recommend appropriate environmental use for these funds. Mr. Nourse stated that there is perpetual ground water monitoring required by NHDES at the closed landfill on Old Dover Road. Mr. Nourse noted that the permit is renewed every 5 years and requires annual monitoring. He explained that the department typically budgets about \$17,000.00 a year but actual expenses can be greater depending on the sample schedule. Mr. Nourse stated that there will be an agenda bill in the November City Council meeting to move these funds from the deferred revenue into a non-lapsing general fund account used to supplement the annual monitoring budget as needed. Councilor Gray said he doesn't feel it is inappropriate for this committee if it chooses to recommend to full council.

Councilor Beaudoin MOVED to recommend to full council to apply the \$17,414.03 from the Polychlorinated Biphenyls class action lawsuit settlement to the General Fund CIP for Ground Water Monitoring. Councilor de Geofroy seconded the motion. MOTION CARRIED BY unanimous voice vote.

6. Other

Proposed Shift of Surplus ARPA Funding from a Major Water Infrastructure Project to Another

Mr. Nourse stated that the water main relining project received 2 million dollars of City ARPA funds. Mr. Nourse mentioned. The investigations this past spring showed that the condition of this main feed from the Water Treatment Facility to the City distribution system was in a good state and did not require relining. The main was video inspected, cleaned, and isolation infrastructure and re-routing occurred with this funding. Mr. Nourse stated that about 1.5 million remains of the ARPA from this project. Mr. Nourse stated that detailed presentations of the water main relining and rerouting project were given at the April and May 2023 Public Works Committee meeting. Mr. Nourse stated the ARPA funding must be encumber in 2024 and spent by 2026. Mr. Nourse is looking to redirect this funding towards another water infrastructure upgrade project. Mr. Nourse suggested that Salmon Falls Booster Pump Station upgrades be considered. This project has been a planned project and is estimated at 2.5 million. Mr. Nourse stated the reason for selecting this project is that there is some urgency to this need due to anticipated growth in that pressure zone and Tara Estates build out. He noted that Albany needs more water and there will be a school in the area, and we have existing pressure problems there. Mr. Nourse mentioned that the proposed solution may have a shorter construction schedule than a full construction project. Mr. Nourse stated that much of the work involves factory assembly of a new skid mounted booster pump station. Mr. Nourse noted that if the ARPA funds can be re-directed to this project, he will request the other one million as part of the FY2025 CIP Budget. Mr. Nourse mentioned that a drinking water trust fund application for the \$1 million balance will be submitted but if awarded we will adjust the budget during deliberations. Councilor de Geofroy asked if they are seeing cost increases with these projects like other projects are. Mr. Nourse said yes and

that he will be asking for less new projects in the next budget, and more additional money for existing projects.

Councilor de Geofroy MOVED to recommend to full Council to refer the ARPA Fund Delegation to the Finance Committee with a recommendation that the remaining City ARPA Funds allocated to the 20” Transmission Rehabilitation be re-allocated to the Salmon Falls Booster Station. Councilor Beaudoin seconded the motion. The MOTION was carried by unanimous voice vote.

Councilor Gray made a motion for adjournment at 8:20 PM

Minutes respectfully submitted by Laura McDormand, DPW Administration & Utility Billing Supervisor