

NVC UTILITIES MEETING

MINUTES

April 8, 2016

Present: Chairman David Crofoot; Committee members: Steve Flowers, Denis Wang, Judy Metcalf and Dick Brockway by phone, William Paige, D.O., Paul Bartels

Chairman Crofoot called the meeting to order at 2:30 PM.

Minutes

Judy Metcalf moved to accept the minutes of the February meeting, seconded by Denis Wang – **Voted and all approved.**

Financials:

Audited Water and Sewer financials had some discrepancies – will discuss with Steve at a later date.

SUPERINTENDENT'S REPORT

NORTHPORT VILLAGE CORPORATION - UTILITIES DEPARTMENT

April 8, 2016

Sewer Department

February 2016 Effluent Monitoring Data

The NVC Wastewater Treatment Plant (WTP) was in full compliance with its wastewater discharge license in February. There were no license exceedances.

Due to a continuation of the unusually mild and rainy winter season, the typical wet season of the fall has continued into February and now March as well. February flow averaged 27,859 gpd compared to 2,618 gpd in 2015. Daily flow ranged from a low of 5,000 gpd to a high day of 111,200 gpd during the month. Precipitation for the month was 5.38” versus 2.37” in 2015.

TSS and BOD⁵ averaged 3.0 lbs. /day (13.1 mg/l) and 8.7 lbs. /day (40.8 mg/l), respectively compared to 0.3lbs./day (16.5 mg/l) and 1.6lbs./day (80.6 mg/l) in February of 2015.

See performance table below for this month's comparisons, averages, year-to-date highs and lows, permit limits, and year-to-date (YTD) exceedances. Testing frequency is continuous for flow, weekly for TSS, BOD⁵ and fecal coliform (May thru Sept), daily for pH and settleable solids (ss), and twice per day for total residual chlorine (May thru Sept).

Monthly Performance Table

Parameters	February	January	December	YTD Lo	YTD Hi	YTD Ave	2015 Ave	DEP Monthly Limit	Exceed-ances
Flow GPD	27,859	16,089	19,266	16089	27859	21974	15407	<63000	0
Precip Inches	5.38	2.79	4.48	2.79	5.38	4.09	3.84	n/a	0
TSS lbs/day	3.0	1.3	1.8	1.3	3.0	2.2	3.3	<76	0
TSS mg/l	13.1	17.0	17.6	13.1	17.0	15.1	28.7	<145	0
BOD ⁵ lbs/day	8.7	3.9	7.9	3.9	8.7	6.3	8.7	<107	0
BOD ⁵ mg/l	40.8	53.5	86.4	40.8	53.5	47.2	104.6	<203	0
TSS% Removal	95.5	94	93.9	94	95.5	94.8	89.2	>50	0
BOD% Removal	85.9	82	70.2	82	85.9	84	63.9	>30	0
pH lo	6.8	6.8	6.9	6.8	6.8	6.8	6.92	>6.0	0
pH Hi	7.2	7.1	7.1	7.1	7.2	7.15	7.15	<9.0	0
S.S. ml/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Report	0
TRC mg/l	na	na	na	na	na	na	.02	<.052	0
F Col/100 ml	na	na	na	na	na	na	<1.26	<15-ave	0
F Col/100 ml	na	na	na	na	na	na	<1.58	<50-max	0

Note: The last exceedance for flow was **119 months ago (2/2006)**. The last exceedance for fecal coliform was **40 months ago (8/2012)**. The last exceedance for BOD was **17 months ago (9/2014)**.

March 2016 Snapshot

The NVC WTP is expected to be in full compliance with its license limits in March pending the DEP's completed review of the NVC's discharge monitoring report. Flow during the month averaged about 21,584 gpd. The report for precipitation as measured by the Belfast Water District (BWD) at the Little River Station will be about 6 +/- inches.

Effluent Manhole Tide Level Transmitter

The ultrasonic tide level transmitter that was destroyed during last year's flood at the treatment plant was replaced and installed on March 25, 2016. The unit provides a real time measurement of the impact astronomical high tides and/or storm surges have on the accuracy of the treatment plant's effluent flow meter and the degree for which flow is over reported.

Bay Street Sewer Main Project

Due to a lack of a quorum at the last Utility Committee meeting, the below is carried over for further discussion and a Board recommendation:

Ted Berry Inc. has submitted a price of \$78,500 to replace approximately 200 feet of 8-inch sewer main on Bay St using their pipe bursting trenchless technology. The price includes \$3500 for advance cleaning and a CCTV video inspection. The \$75,000 for the new HDPE pipe equates to about \$375 per linear foot which compares very unfavorably to work that they have previously done in the Village for \$50-\$60 per linear foot (\$14,000) using this same replacement technology. According to Dirigo Engineering there are no other companies in Maine who can replace pipe of this size in this manner.

Given this "wildly disproportionate estimate", it became necessary for the Sewer Department to reconsider replacing the Bay St sewer main using traditional excavation

methods. Dirigo Engineering has suggested that the NVC ask Farley & Sons to extend their prices for the Maple Street project to Bay Street. If Farley is agreeable to this, the cost would be in the vicinity of \$20,000 or about \$100 per linear foot, including service laterals and a new manhole and location to save the large tree in front of Rosenblum's. To date, no bid or response from Farley & Son has been received.

To provide the Village with another alternative, the Sewer Department reached out to Eastern Pipe Service, LLC of Bow, NH to inquire about the possibility of rehabilitating or re-lining the existing ceramic (clay) sewer main on Bay St to repair the pipe rather than to replace it. Their estimate to re-line the pipe is \$9,950 if the pipe can be determined to be suitable for pipe liner rehabilitation. This cost includes \$2950 for advance cleaning and a TV video inspection to determine suitability; and \$7000 for re-lining or \$35 per linear foot. Assuming the lack of any failure of the PVC pipe liner, absolutely no excavation is necessary as the re-instatement of service laterals is done internally using robotic lateral cutters. Re-lining the sewer could be done in a day.

Copies of Ted Berry and Eastern Pipe quotations are provided under separate cover. For those interested, a good video of Eastern Pipe's re-lining procedure can be found on their website at www.easternpipeservice.com. Click on the "Ultra-liner Installation Video" – amazing!

Drinking Water

February 2016 Usage and Water Quality

Water consumption during February averaged 13,106 gpd compared to 10,382 in 2015. No leaks were reported.

The average weekly chlorine residual in the drinking water was .17 ppm/Cl² compared to the recommended goal of >.20 to <1.0 ppm/Cl². The EPA MCL is 4.0 ppm. The monthly coliform water sample test result was negative.

Automated Water Meter Reading System

Due to a lack of a quorum at the last Utility Committee meeting, the below is carried over for further discussion and a Board recommendation:

Per the request of the Utilities Committee, Ti-Sales Water and Wastewater Supplies of Sudbury, MA was approached to request a cost to fully restore the automation of the trimesterly water meter reading process and estimate a payback on the investment.

The cost to purchase new handhelds, upgrade the software and 3 days of training is \$11,098. As a second option, the cost to purchase used handhelds (one generation back and identical to the system Belfast is currently using), upgrading the software and 3 days of training is \$4890. Handhelds, new or used, as well as the operating system will be no longer supported beginning in 2018 according to the Ti-Sales sales rep.

According to the water department distribution operator, who already uses a touchpad to read the meters and will have to maneuver a second, larger device to fully automate the readings in often times tight quarters, no net savings in labor are anticipated. However, it is estimated that about 9 hours x ~\$20/hr. = \$180 of labor annually will be saved by eliminating the need for the office manager to manually enter 321 meter totalizer readings. Accordingly, the estimated payback for the new meter reading package is \$11,098 / \$180 per year = 61.6 years. Conversely the payback in years for the used equipment is 27.2 years.

Finally, as an FYI, the Belfast Water District is currently accessorizing (for about a \$100 per meter) their existing water meters with radio transmitters for walk-by or drive by reading of their 2200 meters and the 600 monthly invoices they normally send out each month. Since the NVC Water Department will be retiring a \$35,000 bond in 2018, this might be a better time to revisit this issue.

Copies of the new and used meter reading packages are provided under separate cover.

Discussions:

After discussing McElhaney's findings with regard to the replacing of the sewer main on Bay Street, Judy Metcalf moved to recommend to the Overseers that Dick McElhaney move ahead with the proposal from Eastern Pipe Service for rehabilitating or re-lining the existing ceramic (clay) sewer main on Bay Street to repair the pipe rather than to replace it for a cost not to exceed \$11,500, seconded by David Crofoot – **Voted, all approved.**

A lengthy discussion about the pros and cons for automating the meter reading concluded that the human involvement in the process was more valuable than the possibility of time savings in the office, which is about one to two hours of data entry per billing cycle. The error factor of writing down of numbers is just as error prone as punching in the numbers on a bulky machine in the field while juggling the two pieces of equipment. The committee decided it will take McElhaney's advice and wait until the future when TI Sales will have developed a more elegant piece of gear, which is in the works now.

Water for the Drinkwater School – The tap into the main is done and in the process of running the line to the school – line is in the school but not connected. A temporary line is on the fire hydrant and could be used in emergency if there's a problem connecting the new line.

Next Meeting date set for May 13, 2016 @ 2:30 PM

Voted to adjourn at 3:00 PM

Respectfully submitted by,

Paul Bartels