

# NVC UTILITIES MEETING

## MINUTES

March 11, 2016

**A quorum was not met therefore no action item were voted on. The Superintendent report is provided to recap the status of the utilities.**

### SUPERINTENDENT'S REPORT

#### NORTHPORT VILLAGE CORPORATION - UTILITIES DEPARTMENT

March 11, 2016

#### Sewer Department

##### January 2016 Effluent Monitoring Data

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

January flow averaged 16,089 gpd compared to 4,952gpd in 2015. Daily flow ranged from a low of 4800 gpd to a high day of 140,200 gpd during the month. Precipitation for the month was 2.79" versus 4.17" in 2015.

TSS and BOD<sup>5</sup> averaged 1.3 lbs. /day (17.0 mg/l) and 3.9 lbs. /day (53.5 mg/l), respectively compared to 0.6 lbs./day (16.2 mg/l) and 2.5 lbs./day (95.3 mg/l) in January 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, BOD<sup>5</sup> 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	January	December	November	YTD Lo	YTD Hi	YTD Ave	2015 Ave	DEP Monthly Limit	Exceedances
Flow GPD	<b>16,089</b>	19,266	18200				<b>15407</b>	<b>&lt;63000</b>	0
Precip Inches	<b>2.79</b>	4.48	3.64				<b>3.84</b>	<b>n/a</b>	0
TSS lbs/day	<b>1.3</b>	1.8	1.9				<b>3.3</b>	<b>&lt;76</b>	0
TSS mg/l	<b>17.0</b>	17.6	18.5				<b>28.7</b>	<b>&lt;145</b>	0
BOD <sup>5</sup> lbs/day	<b>3.9</b>	7.9	6.1				<b>8.7</b>	<b>&lt;107</b>	0
BOD <sup>5</sup> mg/l	<b>53.5</b>	86.4	49.8				<b>104.6</b>	<b>&lt;203</b>	0
TSS% Removal	<b>94</b>	93.9	93.6				<b>89.2</b>	<b>&gt;50</b>	0
BOD% Removal	<b>82</b>	70.2	82.8				<b>63.9</b>	<b>&gt;30</b>	0
pH lo	<b>6.8</b>	6.9	6.8				<b>6.92</b>	<b>&gt;6.0</b>	0
pH Hi	<b>7.1</b>	7.1	7.0				<b>7.15</b>	<b>&lt;9.0</b>	0
S.S. ml/l	<b>&lt;0.1</b>	<0.1	<0.1				<b>&lt;0.1</b>	<b>Report</b>	0
TRC mg/l	<b>na</b>	na	na				<b>.02</b>	<b>&lt;.052</b>	0
F Col/100 ml	<b>na</b>	na	na				<b>&lt;1..26</b>	<b>&lt;15-ave</b>	0

F Col/100 ml	na	na	na			<1.58	<50-max	0
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**Note:** The last exceedance for flow was *118 months ago (2/2006)*. The last exceedance for fecal coliform was *39 months ago (8/2012)*. The last exceedance for BOD was *16 months ago (9/2014)*.

February 2016 Snapshot

The NVC WTP is expected to be in full compliance with its license limits in February pending the DEP’s completed review of the NVC’s discharge monitoring report. Flow during the month averaged 27,859 gpd. The report for precipitation as measured by the Belfast Water District (BWD) at the Little River Station was 5.38 inches.

Bay Street Sewer Main Project

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 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 line 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.

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 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.

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](http://www.easternpipeservice.com). Click on the “Ultra-liner Installation Video” – amazing!

**Drinking Water**

January 2016 Usage and Water Quality

Water consumption during January averaged 12,380 gpd compared to 9,877 in 2015. No leaks were reported.

The average weekly chlorine residual in the drinking water was .11 ppm/Cl<sup>2</sup> compared to the recommended goal of >.20 to <1.0 ppm/Cl<sup>2</sup>. The EPA MCL is 4.0 ppm.

The monthly coliform water sample test result was negative.

#### Automated Water Meter Reading System

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 about 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.