

NVC UTILITIES MEETING

MINUTES

October 9, 2015

Attendees:

Superintendent; Dick McElhaney
Distribution Operator; Bill E. Paige
Office Manager; Paul Bartels

Board Members:

Dick Brockway
Judy Metcalf, via phone
Denis Wang
Steve Flowers

Denis Wang called the meeting to order at 2:30 PM.

Minutes

Dick Brockway moved to accept the minutes of the September meeting, seconded Steve Flowers – **Voted and approved.**

Visitors Concerns:

Mark Lynch from the Northport School Board reviewed the special needs of a larger meter at the Vault for a new sprinkler system at the school. The capacity will have to be increased from 4” to 6”. He had been told that it would cost about \$100,000 but Dick McElhaney said it should cost about 12 to 15 thousand dollars. Dick reviewed the various types of fire [service](#) meters that may be needed but it will be up to the engineers to tell the NVC what the flow requirements are before sizing any new meter and that the School will be responsible for the cost of a meter upgrade and new water service connection for the sprinkler system. Mark said they are on a schedule to complete the engineering design in November, put it out for bids in December and commence work in January, depending on bond approval.

New Business:

Dick McElhaney reviewed the effects of the last heavy rain event. He said there was a minor spill over that was reported to the Maine DEP (see below).

Denis Wang discussed the reason for nitrate testing for future reference. We do not have high nitrate counts now. High nitrates can contribute to acidification of the ocean.

Dick Brockway said that the Utilities could incur paving expenses because the timing of the Town’s paving projects will not coincide with the Bay Street project if performed coincident with the planned Maple Street rebuilding in spring 2016. Would like to have the Bay Street included in the Maple Street project but done separately. Dick Brockway moved to recommend that the Overseers provide the option to have Bay Street done at a different time than Maple Street, seconded by Denis Wang – **Voted and approved.**

SUPERINTENDENT’S REPORT

NORTHPORT VILLAGE CORPORATION - UTILITIES DEPARTMENT

October 9, 2015

Sewer Department

August 2015 Effluent Monitoring Data

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

August flow averaged 15,226 gpd compared to 15,300 gpd in 2014. Daily flow ranged from a low of 8,300 gpd to a high day of 20,800 gpd during the month. Precipitation for the month was 1.98” versus 3.22” in 2014.

TSS and BOD⁵ averaged 6.9lbs/day (55.0 mg/l) and 20.3lbs/day (160 mg/l), respectively compared to 4.3lbs/day (29.1 mg/l) and 30.2lbs/day (194 mg/l) in August of 2014.

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 | August | July | YTD Lo | YTD Hi | YTD Ave | 2014 Ave | DEP Monthly Limit | Exceedances |
|--------------------------|--------------|-------|--------|--------|-----------------|----------|-------------------|-------------|
| Flow GPD | 15226 | 14952 | 2618 | 34,940 | 14889 | 16113 | <63000 | 0 |
| Precip Inches | 1.98 | 1.89 | 1.29 | 4.89 | 2.72 | 4.7 | n/a | 0 |
| TSS lbs/day | 6.9 | 6.3 | 0.3 | 6.9 | 2.6 | 2.43 | <76 | 0 |
| TSS mg/l | 55 | 54.8 | 9.7 | 55.0 | 29.7 | 22.7 | <145 | 0 |
| BOD ⁵ lbs/day | 20.3 | 23.0 | 1.6 | 23.0 | 7.9 | 8.8 | <107 | 0 |
| BOD ⁵ mg/l | 160 | 178 | 16.2 | 195 | 115.5 | 95.6 | <203 | 0 |
| TSS% Removal | 81.0 | 81.1 | 81.1 | 95.3 | 89.7 | 92.2 | >50 | 0 |
| BOD% Removal | 44.8 | 38.6 | 32.8 | 94.4 | 60.1 | 67.6 | >30 | 0 |
| pH lo | 6.8 | 7.0 | 6.8 | 7.0 | 6.96 | 6.95 | >6.0 | 0 |
| pH Hi | 7.2 | 7.2 | 7.2 | 7.3 | 7.2 | 7.23 | <9.0 | 0 |
| S.S. ml/l | 0.15 | 0.13 | <0.1 | 0.15 | <0.1 | <0.1 | Report | 0 |
| TRC mg/l | .02 | .02 | .02 | .02 | .02 | 0.01 | <.052 | 0 |
| F Col/100 ml | <1 | <1 | <1 | <3.16 | <1.33 | <1 | <15-ave | 0 |
| F Col/100 ml | <1 | <1 | <1 | <10 | <1.78 | <1 | <50-max | 0 |

Note: The last exceedance for flow was **113 months ago (2/2006)**. The last exceedance for fecal coliform was **34 months ago (8/2012)**. The last exceedance for BOD was **11 months ago (9/2014)**.

September 2015 Snapshot

The NVC WTP was in full compliance with its license limits in **Sept.** pending the DEP’s completed review of the NVC’s discharge monitoring report. Flow during the month averaged just over 15,333 gpd. The report for precipitation as measured by the Belfast Water District (BWD) at the Little River Station was 11.87 inches.

Discharge Incident/Spill Report

Heavy flow on Wednesday 9.30.15 from an epic, perhaps a 500-year rain storm of 10.31 inches during an extreme high tide/storm surge flooded out the final effluent holding tanks of the treatment plant. Luckily the two ultrasonic level transmitters, which became fully submerged, were not damaged.

Approximately 2000 gallons or less of a mixture of seawater and effluent gushed out from the final manhole covers and into the ocean until the tide receded. As required, the incident was reported to the Maine DEP. No environmental impact occurred and no discharge license parameters were exceeded during the event.

Kudos to Bill Paige for his heroic efforts in keeping the utilities and the Village assets in tact from what was a historic climate event.

Fall Septic Tank Cleanings

Moore's Septic is scheduled today (weather permitting) to clean out the two septic tank trains used during the summer season. The tanks are cleaned twice per year in spring and fall. Going forward, the influent flow will be directed to a single train of tanks through the remainder of the fall, this winter and into the spring.

Seasonal Chlorination

The effluent chlorination/de-chlorination chemical metering system was shut down for the season on October 1st. The system to disinfect the treated wastewater before it is discharged into the bay to protect public health ran without a glitch this season under, as always, the masterful control the Village's operator, Fernie Barton for the 150 days in operation.

Effluent Nitrate Testing

Test results for nitrates of 18 grab samples of final effluent were submitted to Utility Board members for their information under separate cover. Values averaged 1.8 mg/l and ranged from < 1 to 5 mg/l. These concentrations are typical/pervasive of concentrations found in sea water, rain water, drinking water, ground water and storm water run-off.

Along with nitrate, pH and alkalinity values for each source of water mentioned above were also included in the report so that members could put this information into its proper perspective for comparison.

Board member, Dr. Denis Wang had requested this information last year. The nitrate sampling and testing took place from March 28, 2014 to February 28, 2015 and were performed by the contract superintendent. Alkalinity and nitrate were measured in house using Hach Chemical Company test strips. PH was tested using an Orion 401(a) EPA compliant pH meter.

Drinking Water

August 2015 Usage and Water Quality

Water consumption during August averaged 37,931 gpd compared to 38,378 in 2014. No leaks were reported.

The average weekly chlorine residual in the drinking water was .18 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.

Proposed Utility Budgets for 2016

The proposed water and sewer budgets for the 2016 fiscal year were sent to Board members under separate cover. Revenues and expenses remain balanced.

The default line for the water budget is the sinking fund line item account. For the sewer it is the repair mains line item.

Of significance, \$2000 over last year's budget in both Utilities was added into the employee benefits line item account to accommodate the **Utility and NVC benefit package** for staff that includes for the first time vacation and holiday pay etc. This new package was implemented in mid-2015.

Funding was added back in to the line item account for outside water testing in the sewer budget to do BOD and TSS testing. Previous labor expenses to do this testing that had been budgeted for the collection system operator over the last year and a half were defunded.

The two way split of the contract operator's wages between the sewer and water departments was adjusted from 73% sewer and 27% water to 64% sewer and 36% water for 2016 to help balance sewer revenues with expenses and to enable the department to fully fund the mandatory USDA sinking fund amount. The 73%/27% split was a 2005 change from a 50/50 split in aid of a then unbalanced water budget.

Small increases in operating costs in both utilities were absorbed under the current user rates. User rates have been stable since 2005 when customers experienced their last rate hikes.

While the user rates for water will remain stable and/or even go down some in the near future as bonds are paid off, pressure to increase the sewer rate is slowly building as cash reserves are used up to fund capital projects and expenses increase slightly each year against a customer base growth rate that is near finite as a condition of the EPA 301(h) waiver permit. The condition in exchange for the waiver of the secondary treatment requirement prohibits the extension of the wastewater collections system that could otherwise increase the customer base.

Next Meeting date set for November 6, 2015 @ 2:30 PM

Voted to adjourn at 3:17 PM