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March 14, 2011

Township Supervisor  
12050 Old Belding Road  
Belding, MI 48809-9318

***Grattan Township and Grattan/Vergennes Sewer Systems***  
**February 2011 Monthly Operations Report**

Dear Frank,

The final electrical and mechanical capital improvement projects are currently being completed according to the prioritized Assessment of Facilities report. A final list of proposed projects will be available soon.

As always I would be happy to elaborate on any of the submitted information or provide any additional information that would assist the township board. Please do not hesitate in contacting me.

Sincerely,



John Rydbeck  
(616) 890-5768

Infrastructure Alternatives - Grattan Township Sewer System Operations Manger

Attachments: BCL PS#14 and ML PS#9 Corrective Maintenance Reports

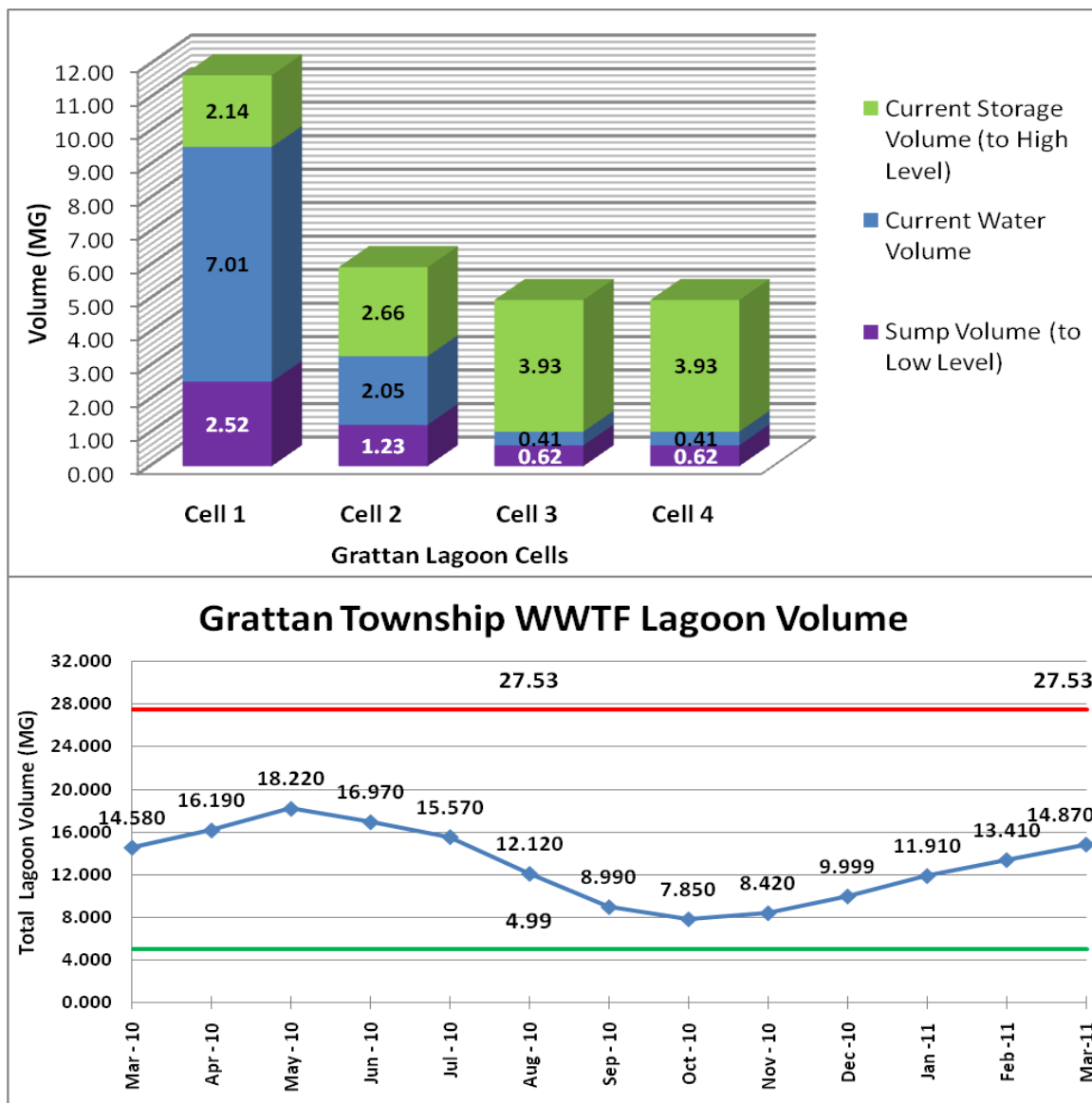
## Grattan Township Wastewater System

### Executive Summary:

The monthly CMR for February 2011 is currently being prepared for submission to the DNRE. The wastewater influent flow for the month of February was 0.892MG, with an additional 0.511MG from rainfall<sup>1</sup> (calculated from 2.96" rainfall over ~280,000ft<sup>2</sup> lagoon surface areas). The following shows the relationship of these variables:

$$1.460+MG \text{ (Tot. Lag. Dec.)} = 0.892MG \text{ (Inf.)} + 0.511MG \text{ (Rain)} - 0.000MG \text{ (Irr.)} + 0.057MG \text{ (Ice/snow)}$$

In addition, the following data shows the wastewater flow into the lagoons:



<sup>1</sup> Rainfall data taken from the National Weather Service Kent County Airport Station

**Emergency Call-Outs:**

- Wednesday February 2, 2011 12:00 a.m. – 8:00 a.m. POWER OUTAGE BPI-PS#5 and BPI-PS#6: IAI On-call operator, Bob Stephens, received call from the stations mission and Sensaphone dialers. Due to the extreme snow storm IAI operator, John Rydbeck, also assisted with the response. BPI PS#5 was inaccessible due to 4ft to 5ft drifts that covered the county road that leads to the pump station. Power was restored at 10:30 a.m. on Thursday February 3, 2011. No sewer overflow or sewer back-up occurred from this event.
- Thursday February 3, 2011 9:30p.m. – 11:30p.m. BPI-PS#5 HIGH LEVEL ALARM: IAI on-call operator received a high level alarm from the pump station’s Sensaphone dialer. IAI operator Russ Johnson arrived on-site and turned Pump 1 into the “HAND” position. The pump station then began operating properly. Through troubleshooting the station no problem was discovered and the pump station continues to operate properly. Cold weather could have been responsible for the controls not initiating the pump to turn on in “AUTO”, thus causing a high level alarm.
- Tuesday February 15, 2011 12:30p.m-3:00p.m. BPI PS#1, BPI PS#5, BPI PS#6 POWER OUTAGE: IAI operator, Robert Carlstrom, received the power outage alarms from the pump stations Sensaphone and mission dialers. The duration and size of this power out did require the use of the portable generator. No sewer overflow occurred from this event.

**General Operation Information / Housekeeping:**

- None

**Preventative Maintenance:**

- The preventative maintenance tasks have been completed for February 2011 and available for review upon request.

**Corrective Action / Significant Tasks Completed:**

- None

**Pending Projects:**

- New Influent [magnetic] flow meter at BPI-PS #1 to monitor influent flow and log to Mission dialer.
- Replace Grattan WWTF discharge flow [propeller] flow meter at the DNRE’s request and replace with a magnetic flow meter to log daily/hourly flow to the Mission dialer.
- Install a rainfall tipping bucket at the Grattan WWTF to monitor daily/hourly rainfall at the site and establish alarm notification through the Mission dialer. The irrigation system will have the ability to be remotely disabled after receiving alarm notifications of a rainfall event.
- The replacement of control panels according to the prioritized list obtained from the Assessment of Facilities report.

## Grattan/Vergennes Township Wastewater System

**Executive Summary:** There was no monitoring or discharge during the month of February. There was no construction on irrigation upgrade project. The CMR for February 2011 is being prepared for submission.

### **Emergency Call-Outs:**

- Wednesday February 2, 2011 ML-PS#9 9:00p.m. - 10:30p.m. HIGH LEVEL ALARM: IAI on-call operator Bob Stephens received an alarm call from the stations Sensaphone dialer. Once on-site, it was found that Pump 2 was tripped. An amp test was done and showed the pump was within the normal range. On 2/7/2011 JC from Grandtech was on-site to troubleshoot the pumps and electrical components and found no apparent problems with the electrical controls.
- Friday February 4, 2011 6:00p.m. - 1:00a.m. BCL PS#14 HIGH LEVEL and POWER FAILURE ALARMS: IAI on-call operator, Robert Carlstrom, received alarm call from the pump station's Mission dialer. Robert arrived on-site to find the pump station functioning properly. Shortly after the pump station sent out the wet well normal notification the pump station sent out a power failure. Troubleshooting of the pump station showed no apparent reasoning for the events. It was determined by JC from Grandtech that the main breaker for the pump station was bad and undersized thus causing the power failure on 2/7/2011. The breaker was replaced on 2/18/2011. IAI operators Robert Carlstrom and Russ Johnson pulled and unclogged the pump on 2/7/2011. No sewer overflow occurred from this event.
- Friday February 11, 2011 3:00a.m.-6:00a.m. ML PS#5 LAG LEVEL ALARM: IAI on-call operator, Robert Carlstrom, received a from the pump station Sensaphone dialer. Robert arrived on found the both pumps running and the station finished pumping down the normal level. The pumps were tested and Pump #2 showed some irregularities. Additional IAI staff Russ Johnson and Chris Chambers assed with pulling pump #2 later in the afternoon. Part of a plastic flower pot was found in the volute blocking the discharge of the pump. After the pump was placed back in the wet well a draw down and amp test were preformed. The tests showed the pump to be in the expectable range.
- Friday February 11, 2011 7:00p.m-8:30p.m. ML PS#5 LAG/HIGH LEVEL ALARM: IAI on-call operator, Russ Johnson, received a from the pump station Sensaphone dialer. Russ arrived on found the both pump station functioning properly. A draw down was done to verify the pumps were pumping, confirming both pumps were pumping in line with historical data. The lag float was lowered six inches to ensure that it would actuate before the high level float to prevent false alarms. No sewer overflow occurred from this event.
- Friday February 11, 2011 9:00p.m-11:30p.m ML PS#9 LAG/HIGH LEVEL ALARM: IAI on-call operator, Russ Johnson, received a from the pump station Sensaphone dialer. Russ arrived on-site and found pump#2 was tripped out. An amp test confirmed the pump was plugged. Pump#1 was put in the lead position and the pump was scheduled to be pulled during routine operation hours.
- Saturday February 12, 2011 3:30p.m.-8:00p.m ML PS#9 LAG/HIGH LEVEL ALARM: IAI on-call operator, Bob Stephens, received a from the pump station Sensaphone dialer. Bob arrived on-site to find pump#1 was tripped out. IAI operators Bob Stephens and Chris Chambers pulled and unplugged both pumps. Large amounts of gauze were found wrapped around the impellers of both pumps. No sewer overflow occurred from this event.
- Wednesday February 16, 2011 7:00p.m.-11:00p.m ML PS#9 LAG/HIGH LEVEL ALARM: IAI on-call operator, Bob Stephens, received a from the pump station Sensaphone dialer. Bob arrived on-site to find both pumps were tripped out. Both pumps were pulled and unplugged. Large amounts of gauze were found wrapped around the impellers of both pumps. No sewer overflow occurred from this event.

**Emergency Call-Outs Continued [Grattan-Vergennes]:**

- Thursday February 17, 2011 4:00a.m-7:00a.m. ML PS#5 LAG/HIGH LEVEL ALARM: IAI on-call operator, Russ Johnson, received a from the pump station Sensaphone dialer. Russ arrived on found the both pump station functioning properly. A draw down was done to verify the pumps were pumping, confirming both pumps were pumping in line with historical data. JC from Grandtech was on-site the afternoon of 2/18/2011 and checked out the pumps and electrical components. It was determined that a wire lead in the pump off float had an intermittent short that was nearly impossible to determine through conventional troubleshooting. A new float was replaced in the station by IAI operations staff.

**General Operation Information / Housekeeping:**

- The construction permit for the irrigation upgrade is currently being reviewed by the MDNRE. Funding and presenting construction bids will formally begin after a construction permit is issued.

**Preventative Maintenance:**

- The preventative maintenance tasks have been completed for February 2011 and available for review upon request.

**Corrective Action / Significant Tasks Completed:**

- Thursday February 24, 2011 BCL PS#14 PUMP#2 PLUGGED: Pump #2 was picked up from Fixall and installed on Thursday February 24, 2011. Later Thursday evening the pump tripped out. The following day 2/25/2011 Russ Johnson and Robert Carlstrom pulled and unplugged the pump.
- Thursday February 24, 2011 ML PS#9 PUMP#2 PLUGGED: During routine pump station checks in was found that pump#2 was tripped out. The following day Russ Johnson and Robert Carlstrom pulled and unplugged the pump. Suspecting the pumps motor was damaged due to high amps the pump was brought to Fixall Electric to be checked out. Fixall Electric found the pump's motor to be in good operation, however the cutters and gasket were in need of replacement. A small hole in the volute was also plugged with an epoxy. The pump is anticipated to be completed in early March for installation.

**Pending Projects:**

- A new influent [magnetic] flow meter at BCL-PS #1 for influent monitoring.
- Grattan/Vergennes WWTF irrigation upgrade.
- The replacement of control panels according to the prioritized project list from the Assessment of Facilities Report.
- New pump mounts installed at BCL-PS #1 and ML-PS 6.
- A spare parts inventory is being generated.