NORTHERN MORAINE WASTEWATER RECLAMATION DISTRICT

113 Timber Trail, Island Lake, Illinois 60042

REGULAR MEETING MINUTES

March 12, 2019

Present: Trustees: Ken Michaels, John Ragland, Dena Battaglia, Timothy Brunn
District Manager: Mohammed Haque; District Clerk: Deborah Martin
Guests: Victor Filippini, Jr.: District Attorney
Others: Mayor Charles Amrich, Village of Island Lake; Ed McGinty, Treasurer, Village of Island Lake; Brian Bartnick, Director of Public Works, Village of Island Lake

President Michaels called the meeting to order at 7:30 p.m.

1. CALL TO ORDER:

Roll Call: Dena Battaglia - Present
Timothy Brunn - Present
John Ragland - Present
Lydia Ryberg - Absent
Ken Michaels - Present

2. PLEDGE OF ALLEGIANCE:

Those present stood and pledged allegiance to the flag.

3. PRESENTATION & APPROVAL OF MINUTES:

a. Regular Meeting, February 12, 2019

Motion by Trustee Brunn to approve the Regular Meeting minutes of February 12, 2019 as presented.
2nd by Trustee Ragland.
4 ayes 0 nays 0 abstain **MOTION CARRIED**

b. Executive Meeting, February 12, 2019

Motion by Trustee Battaglia to approve the Executive Meeting minutes of February 12, 2019 as presented.
2nd by Mr. Ragland
4 ayes 0 nays 0 abstain **MOTION CARRIED**

4. TREASURER'S REPORT:

The Treasurer's Report was presented by Mrs. Battaglia.
Motion by Mr. Brunn to approve the Treasurer's Report for the month ending January 31, 2019 as presented.
2nd by Mr. Ragland
4 ayes 0 nays 0 abstain **MOTION CARRIED**

5. PUBLIC COMMENTS:

Mayor Charles Amrich from Village of Island Lake approached the Board concerning the probable development of a Circle K gas station, food mart and car wash at the intersection of Route 176 and River Road in Island Lake. The developers have expressed concern over the cost of the connection fees required by the District. He asked if the Board would consider giving the developers a break in these fees. Mr. Ed McGinty, Treasurer of the Village of Island Lake, asked for a formal quote from the District for connection fees for this development. President Michaels informed the group that at this time, no drawings have been provided by the developer to the District; without these drawings it would be difficult to give such a quote without knowing what the needs of this developer for any intended construction would be. Mr. Michaels and the Board assured the group that the District would be fair, but needed to be mindful of giving no preferential treatment to any developers. President Michaels and the Board informed the guests that the District is open to working with developers. The Village

of Island Lake representatives informed the Board that the Highway Department would be meeting with the developers in the next week and would let them know what the District requires from them.

President Michaels formally introduced the new District Attorney, Vic Filippini to those present.

6. MANAGER'S REPORT:

Manager Haque updated the Board on the progress for Woodman's sewer; issues concerning the lift station controls will be addressed with the developer. He reported that the SCADA and Automation project has some needed engineering and design help; a proposal from Automation Services and Design was less than Trotter and Associates, and Automation Services and Design has been hired to begin Phase 1 of that work. Mr. Ragland questioned if this should have been brought to the board; Mr. Haque explained that the proposed work was within the District's budget and has previously been authorized. A new Influent Flowmeter has been ordered along with a replacement for one of our older Raw Sewage Pumps; the District is in the process of getting the piping, mechanical, concrete and electrical work quoted and planned. The District has ordered the new control panel for the Hale Lane Lift Station and more orders are to follow. Mr. Haque brought to the Board's attention more details in the Operations report concerning the Floodproofing and Generator Modifications for the Control Building progress. He reported that the District has been having good results with the Hyper+Ion used for Phosphorus removal; the District is now moving toward installing permanent bulk storage tanks for the Hyper+ion. President Michaels asked if we are near the new level of Phosphorus removal soon to be required by the IEPA and Mr. Haque assured the Board that we are already below the permit requirements and have been consistently meeting the new permit requirement for several weeks. Mr. Haque informed the Board that some additional issues arose with the Headworks/Screening project in that the Influent Grinder ordered does not fit and will have to be swapped with one of less depth. This is being done through the manufacturer, JWC Environmental. Mr. Haque reported that the self-cleaning filters have been ordered and will soon be installed. He stated that the District has received several generator quotes for use in Prairie Woods, and will be ordering that generator from Cummins.

Mr. Haque informed the Board that proposals went out to several audit firms and are due on March 20th, to be discussed at the April board meeting. He stated that three additional bids are out for Generator Maintenance Services, Polymer for Sludge Dewatering, and Hypochlorite/Bisulfite for Chlorination of Effluent. Because the bids were not published by the Northwest Herald in time, the bid opening date has been changed to March 20th, and decisions will be made at the April board meeting. He reported that the Maintenance Garage design is being done by ADG Design Services, and he is working closely with them on this design. Mr. Haque informed the Board that September 14, 2019 has been chosen for the District's 50th Anniversary Celebration; more details will follow. Mr. Haque reported that he is going to Springfield tomorrow, March 13, 2019, to deliver the new Resolution for the District's Capital Improvements; he will also hand deliver the letters of recommendation for the Trustee appointments to our state representatives.

7. TRUSTEE REPORTS - none

8. LEGAL BUSINESS - none

9. OLD BUSINESS:

a. Trustee Appointments for May 1, 2019 through April 30, 2022

Manager Haque informed the Board that the only applications received for the positions of Trustees were from our current Trustees, Mr. Brunn and Mr. Ragland. Mr. Haque reminded the board of the next step in having them reappointed as Trustees.

Motion by President Michaels to recommend re-appointment of John Ragland as Trustee for the Northern Moraine Wastewater Reclamation District for the period of May 1, 2019 through April 30, 2022.
2nd by Mrs. Battaglia
3 ayes 0 nays 1 abstain (John Ragland) **MOTION CARRIED**

Motion by Mr. Ragland to recommend re-appointment of Tim Brunn as trustee for the Northern Moraine Wastewater Reclamation District for the period of May 1, 2019 through April 30, 2022.
2nd by Mrs. Battaglia
3 ayes 0 nays 1 abstain (Tim Brunn) **MOTION CARRIED**

10. NEW BUSINESS

a. Adoption of Resolution 19-C - Capital Improvements Plan with Local Contribution

District Manager Haque reported to the Board that he met with Illinois representatives last week in Springfield, who were receptive to the District's Capital Improvements Plan, but would like to see the District's intent to obtain local contributions in the amount of 20%. Resolution 19-C does list local contribution amounts for the three main capital improvement plans: The Darrell Road Interim Interceptor, the District's Treatment Plant upgrades, and the District's Lift Station Controls modernization. Mr. Haque reminded the Board that he will be traveling to Springfield tomorrow, March 13, 2019, and would like to be able to hand the adopted Resolution to our Illinois representatives.

Manager Haque also reported that he will ask the Village of Island Lake and the Village of Lakemoor to adopt a resolution in support of the District's Capital Improvement Plan.

Motion by Mr. Ragland to adopt Resolution 19-C, approving a Local Contributions portion of the District's Capital Improvements Plan as presented.
2nd by Mrs. Battaglia

Roll Call Vote: Dena Battaglia - Aye
Timothy Brunn - Aye
John Ragland - Aye
Lydia Ryberg - Absent
Ken Michaels - Aye

4 ayes 0 nays 0 abstain **MOTION CARRIED**

b. Adoption of Resolution 19-D, Designating Surplus Equipment and Authorizing Disposal

District Manager Haque explained to the Board that as part of the Operations Control Building Floodproofing and Generator Modification project, staff have decommissioned the 1978 Cummins Diesel Generator. There has not been any interest from companies who purchase used generators in this older generator.

Motion by Mrs. Battaglia to adopt Resolution 19-D, designating the 1978 Cummins generator as surplus equipment to be scrapped.
2nd by Mr. Brunn
District Attorney Filippini encouraged the Board to make all resolutions a roll call vote.

Roll Call Vote: Dena Battaglia - Aye
Timothy Brunn - Aye
John Ragland - Aye
Lydia Ryberg - Absent
Ken Michaels - Aye

4 ayes 0 nays 0 abstain **MOTION CARRIED**

c. Date Change for the September Board Meeting

Due to scheduling conflict with the Illinois Association of Wastewater Agency's Annual Meeting, Director Haque requested changing the District's regular September Board meeting from Tuesday, September 10, 2019 to Monday, September 9, 2019. This would allow Director Haque and other Board members to attend the IAWA's Trustee Roundtable, scheduled for September 10, 2019.

Motion by Mr. Brunn to authorize staff to change the September Board meeting to Monday, September 9, 2019 and to publish the appropriate Public Notice.
2nd by Mr. Ragland
4 ayes 0 nays 0 abstain **MOTION CARRIED**

d. Presentation of FY 2019-2020 Proposed Operating Budget

Manager Haque presented the Board with a presentation that covered budget highlights, along with explaining fluctuations in the prior year's spending plan and increases and decreases in the funding requests for the next fiscal year. Manager Haque reported that the proposed budget would be on display to ensure that the required thirty-day review period is provided prior to final Board action at the April 16th regular board meeting. He also reported that the required Public Notice of the proposed budget and a pending Public Hearing has been sent for publication. No Board action is required at this time.

11. MISCELLANEOUS CORRESPONDENCE

a. MCCG Dinner Meeting – March 20, 2019 at Port Edwards in Algonquin. Interested parties should let District Clerk Debi Martin know so that she may RSVP.

12. APPROVAL OF BILLS

Motion by Mr. Brunn to approve payment of bills on the March 12, 2019 bill list as presented, in the amount of $515,639.33.
2nd by Mr. Ragland
Roll Call Vote: Dena Battaglia - Aye for all but, Centegra, as this is her employer
Timothy Brunn - Aye
John Ragland - Aye
Lydia Ryberg - Absent
Ken Michaels - Aye
5 ayes 0 nays 0 abstain **MOTION CARRIED**

13. OTHER BUSINESS - none

ADJOURNMENT

Motion by President Michaels to adjourn at 8:26 p.m.
2nd by Mr. Brunn
4 ayes 0 nays 0 abstain **MOTION CARRIED**

April 15, 2019

To: NMWRD Board of Trustees
From: Mohammed Haque, District Manager
Subject: Manager's Report

Deer Grove North Unit 2 [Gravity Sewer Extension for 11 lots]
Nothing new to report. We hope to close out this project this spring.

Savannahs of Lakemoor [Gravity Sewer Extension for Subdivision]
Nothing new to report. We hope to close out this project this spring.

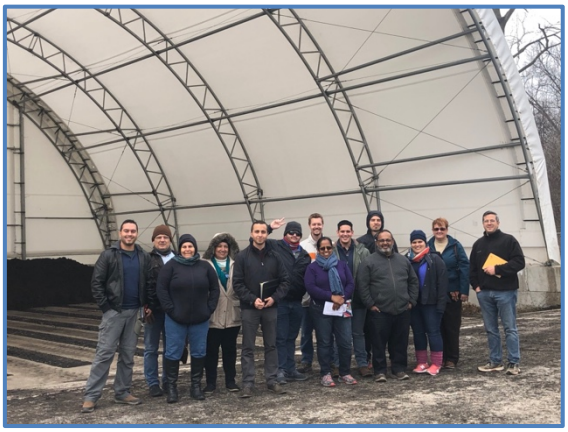
Woodmans [Force Main + Gravity Sewer Extension + Lift Station]
Submittals were received for the generator, pumps and controls for the lift station at Woodman's and we have approved the pumps and generator. The controls are having some final modifications per our review and we expect to approve them in the next day or two. The original change order request in the amount of $23,556 has been reduced to $9,460 through a combination of value engineering and back and forth regarding interpretation of the original design specifications and requirements. The end product is something that the District is happy with and will provide us with a good solid solution for the lift station for the long term. Woodman's is pushing for

SCADA(Supervisory Control and Data Acquisition) and Automation
ASD has completed phase 1 of their design work and we have purchased the fiber cables and network components to finish the backbone of the SCADA at the plant. We have also put out the control panels for quotes for the SCADA and those quotes are coming in now. We are moving on to phase 2 of the work, which includes providing schematic design drawings for the Control Building, Chemical Building and Oxidation Ditch. Three new control panels are planned for this and that work is underway. ASD has been quick to work on the SCADA and has provided good quality work at a reasonable price and met all of our scheduling requirements.

Circle K
We met with Circle K representatives on April 9. The group is really hoping to start construction this late summer, but they have considerable coordination that needs to be done with IDOT and they have not started the process. We informed them that we will expedite our reviews and coordination once final plans are ready. We outlined our requirements and will memorialize them once we receive plan documents from them.

Skipper Bud's
On Wednesday, April 10, I met with the Village of Lakemoor about the potential to connect Skipper Bud's to our system. I explained to the group that we signed a 5-party agreement a few years back that obligates this property to be severed by Lake County / Lakes Region Sanitary District. Skipper Bud's prefers to be connected via NMWRD and will be pursuing that route with Lake County representatives.

Costa Rica Delegation Visit



On Thursday, April 11th, we welcomed a group of 10 Costa Ricans who were touring the Midwest as part of a delegation that was looking at wastewater technology and facilities for their country. Trustee Ryberg was with us and we were very grateful for her company. Joe and Luke conducted the tour with presentations of our systems and processes and all of the hard work that they have put in the last year at the District. I was quite proud of both of them. The group visited the plant and looked at our solids handling and was also able to visit our Deer Grove lift station. Their trip was part of the work that Joe and I are involved with for Global Water Stewardship. We anticipate that this will be a yearly tour featuring other Costa Rican professionals that want to learn about our industry.

Influent Flowmeter and Raw Pump #1

Per our 2014 Facility Plan, Trotter & Associates recommended that we replace our existing influent 18" flowmeter with a 12" flowmeter at a cost of approximately $100,000 and Raw Pumps for $250,000 ($62,500 per pump). TAI estimated that the total cost, with engineering and contingencies, of replacing one pump and the 12" flowmeter would be $265,160. We are under way to replace it for approximately $104,000 per below. We have ordered a flowmeter for $4,800 as well as an immersible pump for $14,000 as part of this project. I anticipate that this project will start to take place in the next 2-4 weeks.

Influent Flowmter and Raw Pump # 1	**TAI Facility Plan Cost**	**Project w/ 1 pump and Flowmeter Standard Method**	**Project w/ 1 pump and Flowmeter NMWRD as GC**	**Balance of Work in Future**	Comments
General Conditions	$ 93,750.00	$ 21,959.46	$ -	$ -	
Raw Sewage Pump Replacement (4 pumps)	$ 250,000.00	$ 62,500.00	$ 20,000.00	$ 60,000.00	1 pump now; 3 later
Influent Force Main and Meter Replacement	$ 100,000.00	$ 100,000.00	$ 70,000.00	$ -	
Fine Screen Replacement	$ 250,000.00	$ -	$ -	$ 200,000.00	Replace Fine Screen in separate project
Subtotal Construction	**$ 693,750.00**	**$ 184,459.46**	$ 90,000.00	$ 260,000.00	
Contingency @ 25%	$ 173,437.50	$ 46,114.87	$ 9,000.00	$ 26,000.00	Contingency @ 10% for NMWRD as GC
Construction Total	**$ 867,187.50**	**$ 230,574.33**	$ 99,000.00	$ 286,000.00	
Engineering @ 15%	$ 130,078.13	$ 34,586.15	$ 5,000.00	$ 5,000.00	As-Builts Only
Porbable Capital Cost - Treatment Facility Rehabilitaiton	**$ 997,265.63**	**$ 265,160.47**	$ 104,000.00	$ 291,000.00	
			TOTAL COST	$ 395,000.00	

Lift Station Controls

The Hale control panel is anticipated to be delivered later this month and we will be working with Newcastle Electric and Kresmerey Construction on the installation. In conjunction with this, we are now working on designing and procuring the power panel. Panels at additional locations will be ordered in the next month.

Floodproofing of Control Building and Generator Modifications

Work on this project is nearing completion. Conduit penetrations were floodproofed in the last month and work has started on removing the mansard above the headworks. We are working on getting quotes for miscellaneous work related to the building. Additional items such as floodproofing stoplogs on the doors, roofing and masonry revisions are pending. Since we have had considerable savings on this project, we are considering replacing the weathered and rusting doors on this building with extruded aluminum doors.

Phosphorus Removal
We have removed the old and unused belt filter press in the sludge dewatering building and are in the process of installing permanent fiberglass tanks for bulk storing Hyper+ion. Luke and his staff are working on selecting the pumps for this project.

Headworks / Screening Issues
The screenings conveyor has been delivered and we are in the process of bidding out a new bar screen. The replacement Influent Grinder is in the process of being shipped to us.

Non-Potable Water Improvements
We have also ordered a self-cleaning filter for our Non-potable water (plant effluent) system and are working with a contractor to get it installed. This will involve changing piping in the NPW room and it is anticipated that we can also replace a malfunctioning pump (1 of 3 pumps) in the process.

Operations Building Remodeling
This project is near completion. We just need to order a couple of file cabinets.

Office Remodeling
The only remaining item is to purchase some updated furniture. That will be done in the next wee.

Prairie Woods Generator
A replacement generator by Cummins was ordered and shop drawing submittals have been reviewed and approved. We are waiting for shipment.

Maintenance Garage
I continue to work with ADG Design Services on the design of the new maintenance garage, with the expectation that will construct it for approximately $450,000 (or 50% of the amount anticipated in the Facility Plan). I have included some funds for this as part of the budget proposal.

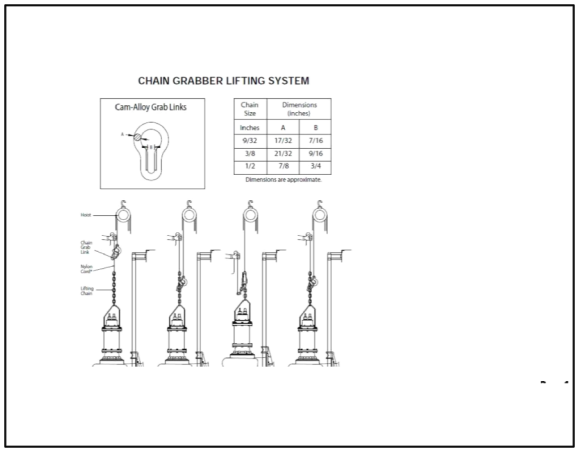
Save the Date!
NMWRD'S
50TH ANNIVERSARY
Northern Moraine
Wastewater Reclamation District
Saturday, September 14, 2019
Island Lake, Illinois

NMWRD March 2019 Operations Report
As of April 11th, 2019
Prepared by: Luke Markko, Superintendent

- **Automatic Greaser –** An automatic greasing system is being tested on the aerator bearings located on the Oxidation Ditch. The greaser consists of a cylinder that is loaded with grease and installed at the bearing's greasing point. It is then equipped with a small capsule that can be set to start a chemical reaction at a fixed rate that will generate gas and create pressure within the cylinder. As the pressure increases at a fixed rate, the grease is then pushed into the bearing at a rate that is determined appropriate for that bearing under the conditions it operates in. So far, the feed rate seems to be a bit slower than anticipated. However, the bearing temperature is remaining consistent. Once an appropriate system has been chosen, a significant amount of manhours will be saved. There are 16 bearings that require regular greasing on the Oxidation Ditch, and each bearing takes a significant amount of time and grease to lubricate.

Automatic Greaser Installed on Aerator Bearing

- **Lift Station Maintenance & Pump Chain Grab Systems –** With the weather beginning to break, work has begun to inspect all of the lift station pumps, change the oil, and clean the stations with the vac truck. In addition, staff have been installing "Chain Grab Systems" to allow pumps to be removed with greater ease. When lifting the pumps out of a lift station, in many cases, staff need to try and use a hook that has been lowered with the crane truck and swing it into a position where it can be pulled up and catch the lifting point of the pump. The lifting point of the pump is usually a piece of steel attached to the pump and it resembles an upside-down U or V. This can prove extremely difficult in colder weather conditions when the warm water in the wet well meets the cold air and creates a vapor that makes seeing down into the well impossible at times. The "Chain Grab Systems" consist of a short section of chain connected to the lifting point of the pump where a length of rope is then tied to the end of the chain and ascends to the top of the wet well. A "grab" device is then attached to the crane hook with the rope passing through and acting as a guide as the mechanism descends into the wet well. It is designed to slide down over the chain and then grab the chain links as it is lifted. This allows the pumps to be lifted with greater ease, and save time trying to "fish" a pump out.



Chain Grabber Lifting System

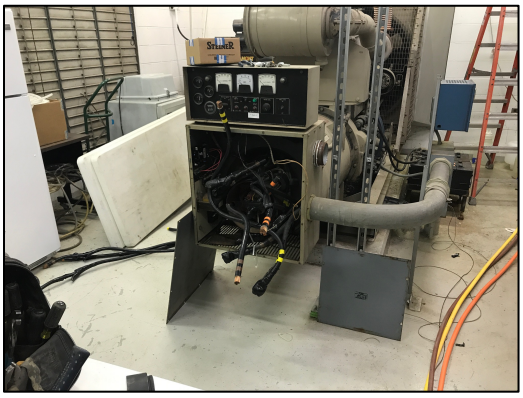
- **Guide Rail at Lift Station #3 –** One of the guide rails for the pumps at Lift Station #3 became disconnected at the bottom support. This rail serves as a guide to position the pump as it is being lowered into the wet well. If the pump is not seated (positioned properly) on the discharge piping, it may not operate properly. Marc Kresmery Construction was contacted to assist in repairing the railing connection. Their staff were able to have the rail reattached in a matter of hours.

The rail to the right had fallen out of alignment. Here it is after the repair.

- **Phosphorous Removal Update –** Final Effluent Total Phosphorous concentrations remain below the 1.0 mg/L limit that will go into effect in the near future. Recent results have been averaging between 0.80 mg/L and 0.94 mg/L. This is a little higher than the target concentration of 0.75mg/L. We are gradually zeroing in on a consistent feed rate that will achieve our target concentration with minimal adjustment. Seasonal changes may be playing a factor as well. As temperatures rise algae growth can contribute to higher phosphorous levels. Since starting the feed in December at 70 gal/day, reductions in the feed rate have been made incrementally to 34.74 gal/day.

- **Security Camera Upgrades & Exterior Wi-Fi Repeater –** Staff replaced the three security cameras that were located on the Control Building roofline, while adding an additional camera on the storage garage. The old cameras were beginning to fall behind in what software would support them. The new NEST cameras offer an easy installation and setup. They are also widely supported on a number of devices. The new cameras transmit their signal over Wi-Fi, so a weatherproof Wi--Fi repeater was installed on the roof of the Control Building to expand the range of the Wi-Fi signal at the treatment plant. Now while outside, staff can access the District's network over a large range of the plant site. Additional cameras will be added in the near future to allow for remote monitoring of system processes.

- **Old Generator & Belt Filter Press –** In last month's report, staff were planning for the removal of the Old Treatment Plant Generator and Belt Filter Press (BFP). At the time after struggling to find anybody interested in buying the equipment it was determined that they had zero value. A rigging company was contracted for the removal of the heavy equipment. Fortunately, at the last minute we found a buyer for both. Dahm Enterprises, the company that is contracted for the District's sludge hauling, has agreed to purchase the two pieces of equipment for $3,000 and repurpose them. This will help offset the cost of the rigging company's services for removal. Plans are to house chemical storage tanks in the pit that was located below the BFP. The pit structure will provide spill containment, and the chemical storage tanks will allow for receiving bulk deliveries of the Hyper + Ion chemical that is currently being used for phosphorous removal. We are currently using 250 gallon totes that need to be driven up the side of the Oxidation Ditch hillside on a regular basis.



The old 1978 generator was disconnected from the plant power systems.

Installed in 1999, the Belt Filter Press has been replaced by the Centrifuge.

Northern Moraine
WASTEWATER RECLAMATION DISTRICT

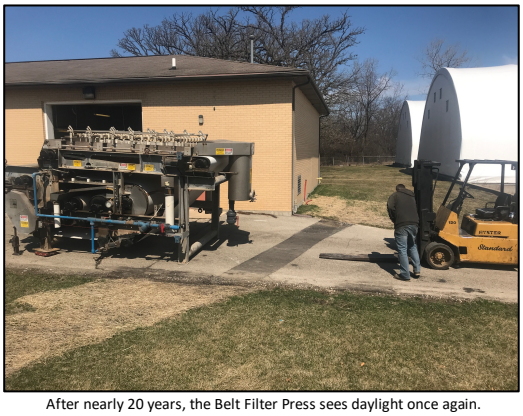
Rigging staff assessing the generator.

District staff removing sludge feed line from Belt Filter Press.

Inch-by-inch the generator was navigated out the door.

The Belt Filter Press weighed nearly 18,000 lbs.

It was a tight fit, but the Generator is out the door.



After nearly 20 years, the Belt Filter Press sees daylight once again.

Generator loaded up and ready to go.

After some modifications a chemical storage and feed system will move in.

- **Supervisory Control and Data Acquisition (SCADA) Update -** District staff continue to work towards developing a SCADA system for the treatment plant. Some additional conduits have been run to provide power and data to valve actuators that will be installed to provide automatic control of valves involved in wasting sludge to the digesters. Fiber optic cable and fiber optic equipment has been purchased to provide the "backbone" of the communication network. Review of control panel designs is also just beginning.

Power and data conduits for future SCADA control panel.

Power and data conduits for future valve actuator.

- **Drying Bed Modifications –** The dividing wall was removed between the two drying beds closest to the Dewatering Building. This was done in preparation for Turfstone installation in the runners, and to have the two beds covered with a Clearspan cover in a similar fashion to several other bed that were covered. The goal here is to have the dried sludge being produced by the centrifuge conveyed directly to the stockpile storage. Currently sludge is deposited onto the floor of a garage bay adjoining the dewatering room. Staff then use a front-end loader to scoop up the sludge and then drive it over to the covered beds used to store our sludge stockpile. This is a time consuming and messy affair that results in sludge being tracked down a large portion of the driveway.

Concrete dividing wall removed with metal supports remaining.

Metal supports removed.

- **Sludge Hauling –** The District's sludge stockpile that had accumulated over the winter was hauled off for land application the first week of April by Dahm Enterprises. The sludge was hauled to farm fields located in Lakemoor to be utilized as fertilizer. Sludge hauling typically occurs twice each year, once in the spring, and once in the fall. The timing for land application in the spring must be once the ground has thawed sufficiently for the sludge to be tilled into the field, and prior to crops being planted. In the fall, the application needs to occur once crops have been harvested, and prior to freeze up. In either season excessively wet weather will delay or prevent land application at a particular field.

- **Treatment Plant Generator –** As Driesilker Electric, the contractor awarded the 2018 bid for generator service, was performing annual service on the treatment plant generator the generator controller was shorted out. This rendered the treatment plant generator useless and required an emergency trailer-mounted unit to be brought in by Driesilker so that the treatment plant would have a backup source of power in the event of a power failure. It turns out the controller was shorted out because the Driesilker technicians working on it failed to disconnect the battery charger prior to disconnecting the leads from the battery terminals for cleaning. With the batteries disconnected, the battery charger operating as it should, saw a drop in voltage and began attempting to charge. When the terminals were reconnected arcing occurred and a surge went to the controller and shorted it out. A separate contractor, Alternate Power, was called in because of their familiarity with the type of controller that the generator is equipped with. They determined that the controller was indeed faulty and began sourcing a new one. A new controller was obtained several days later and installed. All was thought to be well until the generator was tested "under load", meaning that it was actively powering the entire treatment plant. During this test the voltage was unsteady and went up and down significantly. Driesilker then had to reconnect the portable generator until the issue with the voltage could be sorted out. The source of this problem was found to be with the Automatic Voltage Regulator (AVR). A wire connecting rail had come loose and tipped over onto the AVR causing a short on this component. Again, Alternate Power was contacted for their familiarity with the controlling components on this particular generator. The AVR was replaced, and after some adjustments to the controller with the new AVR in place, the generator has finally bee successfully tested while powering the treatment plant. Driesilker Electric was placed on notice that the District would be holding them accountable for the expenses incurred in correcting the problem their staff created. They have agreed to do so.

Portable 400 kW generator being delivered to plant site.

Portable generator connected and ready to provide emergency power if needed.

NMWRD Engineering Report
Date: April 12th, 2019
Prepared by: Joe Lapastora, Junior Engineer

Woodman's Lift Station and Sanitary Sewer Additions:
[Project Update] – Mancini completed the entire sanitary sewer main along Ring Road last week. A total of 16 structures are set which include 15 manholes and the wet well. The only remaining underground sanitary to be completed are the services for the gas station and car wash to the North of Woodman's. Lake County Grading is planning on wrapping up the services for these businesses by the end of the week, at which time all underground construction will be completed. Looking forward, testing will need to be completed for both the main line and the service lines (Air pressure test, manhole vacuum test, mandrel deflection test, cleaning and televising). Before any service connections to the mainline, Lake County Grading Company will need to submit their maintenance bond to the District. Finally, as underground construction wraps up, we will be shifting our focus to the control panel and generator side of the Woodman's project. The District is waiting for Gasvoda to send us the submittal revisions regarding the control panel and generator, but we expect to finalize and green light all items very soon. The anticipated opening date for the Woodman's grocery store is tentatively set for late June.

Picture of the last manhole set along Ring Road.

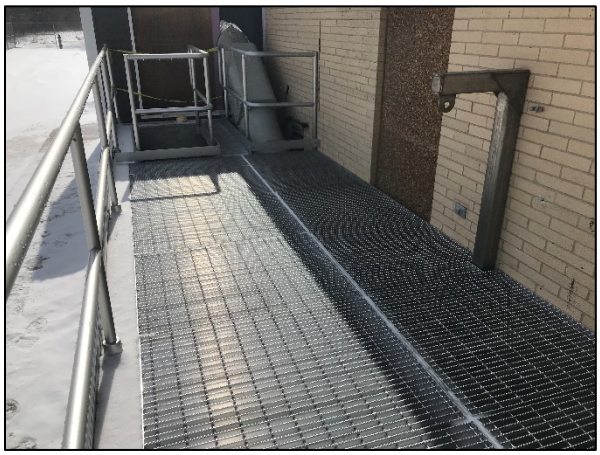
Construction of the services for the Car Wash and Gas Station.

Lake County Grading setting the base for a manhole.

LCGC capped the service line 5 feet short of the main line.

Right turn lane at the intersection of Route 176 and Roberts:
[Project Update] – ComeEd is currently relocating power lines to prepare for the additional turn lane. With this work being completed, I assume that roadwork and associated underground work will commence soon. Note that it is the District's intention to ensure all manholes that lie within the project extents are at grade and uncovered when the project is completed. We anticipate working with the construction crew to reveal two buried manhole covers.

NMWRD Floodproofing:
[Project Update] – Completed aspects of this project include; a new concrete curb, step ladder, railing, kick plates, temporary steps, conveyor removal, grating, control panel relocation and dumpster enclosure. We still intend for Morse Electric to perform electrical work while Dahme would perform mechanical work. Door measurements have been sent to Cross Aluminum Products while we are also working with Floodbarrier American for the floodproofing barriers. Finally, the decision has been made to wait on the permanent stairs until the concrete is poured for the new sidewalk.


Picture of the new grating above the headworks wet well.

Open area for the new conveyor.

In addition to the work relating to these projects, the following engineering related work is also being performed;

- Luke and I recorded wet well measurements to aid Eric Lecuyer while the District considers replacing one of the drum screens with a bar screen at the headworks of the plant. The District hopes to construct a septage receiving station and the bar screen would play an integral part in the treatment process as it would have a highly effective removal efficiency of unfavorable solids that may harm other treatment processes.

- Old electronics have been identified and organized. It is the District's intent to keep at least one backup for such items as desktop towers, monitors, printers and battery backups while any additional items will be sent to auction as surplus items. Furthermore, we came across multiple items that are no longer in working condition. For these items, we have contacted Wauconda Recycling Center and they have agreed to take in all electronic waste and will pay the District an amount equal to the scrap material of the item.

- The District has successfully removed the Belt Filter Press from the dewatering building while also removing the 30+ year old generator from the control building. The removal of these items has cleared up significant space in their respective buildings and the District is looking to retrofit these areas for storage. Manusos will be pouring a concrete divider in the pit directly below the old belt filter press and this space will be utilized to store the HyperIon chemical that treats our wastewater for Phosphorous removal.

- I will be submitting a "Pre-Approval" Application for the ComEd Energy Efficiency Program later this week. The district has identified the plant control building as the building with the most potential for energy reduction if all lighting fixtures were converted to LED. If selected, this program will handle all costs associated with a complete LED conversion. I performed a preliminary "Life Cycle Assessment" for the control building under current conditions vs future conditions (all LED bulbs). I am currently waiting for Dynegy energy services to send some information pertaining to the plant control building.

- Luke Markko and Joe Lapastora attended the CSWEA Education Seminar on April 2nd. The seminar focused on innovative and emerging technologies for wastewater treatment. Luke and I met a handful of connections/vendors who have reached out for site visits. Ultimately, the seminar proved to be a valuable learning experience and we look forward to seeing what ideas we can implement at NMWRD.

- The District is reevaluating the chemical building and the plant intends to reconfigure the chemical room (Easternmost room) so that each chemical will have its own spill containment. Furthermore, we hope to upgrade to larger tanks so that the same tank used for chemical delivery will also be the discharge tank where the feed comes from. This will free up operator time as they currently fill an intermediary tank before injecting the chemicals in the wastewater.

- Mohammed and I attended a short meeting with representatives from Circle K to discuss the anticipated project at the corner of Route 176 and River Road. We informed the developers that they would need to extend the sanitary sewer to the furthest extent of their property as written in NMWRD Ordinances. We expect this project to break ground in late summer or early Fall.

- The Costa Rican delegation toured the plant on April 11th and the presentation and tours were great successes. Our staff thought it was a truly valuable experience and we want to thank Trustee Lydia Ryberg for joining us for the day!

- In some personal news, I have applied to sit for the Class 4 Operators exam to gain a better understanding of the daily plant operations and maintenance at NMWRD. Looking forward, I plan to obtain my Class 1 License after gaining the required experience, which will take some time. Finally, I have decided to hold off on my P.E. License until I obtain my Class 4. Mohammed has agreed to be my Professional Engineering mentor and continues to be a great leader for my career development.

DELINQUENT ACCOUNTS RECAP FOR MARCH, 2019
Revised: 4/12/19 by Debi Martin, District Clerk

$200-$300 **34 Active Accounts**
Island Lake – **25** customers
24 Water Shut Off Notices, 1 Final Water Shut off Notice
Lakemoor – **9** customers
3 Sewer Disconnection Notices, 4 Water Shut Off Notices, 1 Final Notice of Delinquency
1 payment agreement

$301-500 **22 Active Accounts**
Island Lake – **3** customers
1 Final Water Shut Off Notice, 2 Sewer Disconnection Notices
Lakemoor – **10** customers
6 Sewer Disconnection Notices, 4 Final Notices of Delinquency
Port Barrington – **9** customers
6 Sewer Disconnection Notices, 3 Final Notices of Delinquency

$501-$1000 **14 Active Accounts**
Island Lake – **7** customers
6 liens – 6 with water off, 1 Sewer Disconnection Notice
Lakemoor – **4** customers
4 liens – 1 with water off, 3 to be disconnected
Port Barrington – **3** customers
3 liens – 3 to be disconnected

$1001 and up **9 Active Accounts**
Island Lake – **4** customers
4 liens – 4 with water off
Lakemoor – **5** customers
5 liens – 2 sold for delinquent taxes, 1 to be demolished, 2 to be disconnected

Delinquent Accounts total (active and inactive customers): **$52,461.46** ($14,570.79 inactive accts)
March 2018's report: $52,597.98
March 2017's report: $50,872.42

MONTHLY ACTIVITY:

4802	Monthly Bills mailed on 4/1/19
376	Bills not mailed – customers prepaid on their accounts
18	Sewer Disconnection Notices mailed on 4/09/19
51	Notices of Delinquency mailed on 4/09/19
28	Water Shut Off Notices mailed on 4/09/19
2	Final Water Shut Off Notices mailed on 4/09/19
8	Final Notices of Delinquency mailed on 4/09/19
25	Real Estate Closings for March 2019

113 TIMBER TRAIL, PO BOX 240, ISLAND LAKE, IL 60042
PH: 847-526-3300 ● FAX: 847-526-3349
EMAIL: info@nmwrd.org ● WEBSITE: www.nmwrd.org

Northern Moraine Wastewater Reclamation District

113 Timber Trail
Island Lake IL 60042

AGENDA
REGULAR MEETING
7:30 P.M.
March 12, 2019

1. **CALL TO ORDER & ROLL CALL**

2. **PLEDGE OF ALLEGIANCE**

3. **PRESENTATION & APPROVAL OF MINUTES**
   a. Regular Meeting Minutes – February 12, 2019
   b. Executive Session Meeting Minutes – February 12, 2019

4. **TREASURER'S REPORT**

5. **PUBLIC COMMENTS**

6. **MANAGER'S REPORT**
   a. Operations Report
   b. Engineering Report
   c. Seriously Delinquent Accounts Report

7. **TRUSTEE REPORTS**

8. **LEGAL BUSINESS**

9. **OLD BUSINESS**
   a. Trustee Appointments for the term beginning May 1, 2019 and ending April 30, 2022

10. **NEW BUSINESS**
    a. Approve Resolution 19-C on Capital Improvements Projects Local Contribution
    b. Approve Resolution 19-D designating Surplus Equipment and Authorizing Disposal
    c. Approve changing the Board Meeting date for September 2019 and Authorize Public Notice
    d. Presentation on the FY 2019-20 Annual Budget Proposal with Final Action scheduled for April meeting

11. **MISCELLANEOUS CORRESPONDENCE**
    a. MCCG Membership Meeting – Wednesday, March 20, 2019 – Port Edwards, Algonquin, IL

12. **APPROVAL OF BILLS**

13. **OTHER BUSINESS**
    a. Executive Session – Personnel

Posted to www.nmwrd.org March 8, 2019