

MARQUETTE AREA WASTEWATER TREATMENT FACILITY ADVISORY BOARD MEETING MINUTES September 15, 2022

A regular meeting of the Marquette Area Wastewater Treatment Facility Advisory Board was held at 9:57 a.m., September 15, 2022, at the Marquette Area Wastewater Treatment Facility.

ROLL CALL

PRESENT Brad Johnson, Chocolay Township (Chair)
Leonard Bodenus, Marquette Township
Margaret Brumm, City of Marquette
Harold Hayse, City of Marquette
Mary Schlicht, City of Marquette

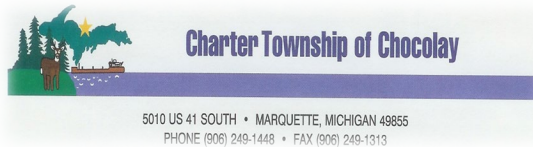
ABSENT None

OTHERS Mark O'Neill, City of Marquette
Dan Johnston, City of Marquette
Melissa Erkkila, City of Marquette
Dr. Lesley Putman, Northern Michigan University

AGENDA It was moved by M. Brumm, supported by H. Hayes to amend the Agenda to move Public Comment to item number 1. Approved 5-0.

PUBLIC COMMENT

- Dr. Lesley Putman introduced herself as a professor at Northern Michigan University in the Chemistry Department. She is currently working on a PFAS research project. After meeting Margaret Brumm and learning of an abundance of PFAS waste at KI Sawyer, they gathered two five-gallon buckets of biosolids from the Sawyer Wastewater Treatment Plant. She has been working on growing hemp and studying the impact of phytoremediation with PFAS. Phytoremediation uses plants to clean up contaminated environments. In sewage sludge there is known mixture of PFAS, mainly PFOS. She initially conducted her studies with perfluorobutanoic acid (PFBA) and grew hemp hydroponically in solutions of PFBA. It was able to pull the PFBA into the hemp roots, stems, flowers, leaves effectively. She also did a greenhouse study where she grew hemp in pots and watered them with water containing PFBA. The same results occurred with the hemp pulling the PFBA from the soil into the plant and mainly the leaves. She began PFOS research by making her own PFOS and using it with hydroponic hemp plants. These plants will be analyzed next week to see if they take that up. Once she is sure of that, she will take the Sawyer sludge, mix it with soil and plant hemp plants to see if it can pull the PFOS from the sludge. During her study of PFBA, she was only able to recover 30% of what she had put in there. This means that perhaps some had been degraded, broken down, by either the plant itself or microorganisms associated with it. It has been shown recently that



fungus can degrade PFAS. The idea is to grow industrial or fiber hemp, which does grow in this area, on grounds that contain PFAS to pull it out of the soil then harvest the hemp and dispose. If fiber hemp is grown, it can be locked in the fiber and be used accordingly, industrial hemp can be used for other purposes such as concrete or both can be incinerated. Harvesting occurs at three to five weeks depending upon if it is grown in the greenhouse or hydroponic. M. O'Neill stated industrial PFAS that has been land applied is showing that the PFAS is staying in the root layer of the grass. There is hope that growing a crop such as this has potential of cleaning these areas up.

MINUTES It was moved by L. Bodenus, supported by M. Brumm to approve the July 21, 2022, meeting minutes as written. Approved 5-0.

FINANCIAL REPORT

Mary Schlicht, City of Marquette, presented the Financial Report. Please see Treasurer's Notes for a detailed explanation.

- Balance Sheet: Numbers are as expected.
- Revenue Sheet: Revenue are as expected. Statement does not reflect July's revenue.
- Expenditures: Expenditures are as expected except the increase in power and natural gas.

BUDGET PRESENTATION

Mary Schlicht, City of Marquette, presented the FY23 Budget.

- Expenditures for the next fiscal year have been adjusted accordingly. Total expenditures are at \$4.6 million and includes the \$300,000 placed in the reserve budget for equipment maintenance replacements. Flow related expenditures are calculated which creates the per unit rate based on the estimated flows. FY22 per unit rate was 1.84, FY23 is increased to 2.2. It was moved by M. Brumm, supported by L. Bodenus to approve the Fiscal Year 2023 Budget. Approved 5-0.

CHEMICAL BIDS

Mark O'Neill, City of Marquette, presented the Chemical Bids.

- Chemical bids came in very high. The historical trend shows a steady increase in recent years. Staff is working diligently to keep chemical usage at a minimum.

OPERATIONS REPORT

Dan Johnston, City of Marquette, presented the Operations Report.

PERMIT COMPLIANCE FOR THE MONTH:



- PERMIT COMPLIANCE: No violations occurred during the months of July or August.

PLANT NOTES:

- Staff continues weekly COVID-19 tracing sampling for NMU from the WWTP's influent, our four major lift stations, and from the sewer leaving the Marquette Branch Prison. M. Brumm asked if other diseases can be tested in wastewater, such as Polio. M. O'Neill confirmed that is possible along with many other items if deemed necessary by the State of Michigan.
- Staff diagnosed, ordered and replaced the actuator linkage assembly for the three-way valve that controls the heat to the Digester Heat Exchangers. Maintaining the proper temperature range of the sludge in the Digesters is critical, and the failure of this component made that nearly impossible.
- Annual calibration of our influent flow meter and the plant's combustible gas alarms was completed by B & M Technical Services.
- An order of bulk sodium hypochlorite was delivered.
- Staff from Eaton was on site to finally perform programming changes to the Anti-Islanding Relay that protects the power grid from our CoGen units.
- Kraft Power staff were on site to repair oil pressure sending unit and voltage control issues with both CoGen units. They also replaced the turbocharger on Unit #1. WWTP staff reviewed and recorded all 545 setpoints/parameters for future reference.
- Staff participated in a MIOSHA seminar at the NMPSA training room at Lakeview Arena. MIOSHA performed an invited walk through of the plant to detect any possible violations. This allows our staff to correct these issues proactively.
- VanDamme Trucking completed the haul out of 852 cubic yards of pressed biosolids to the Kemper farms in Trenary. Hauling of liquid biosolids to the tailings basins for the Cliffs Mines is expected to complete by the end of this week.
- A bulk load of sodium bisulfite was delivered. It is used to remove any chlorine residual that may remain in the plant's effluent after the chlorination process.
- Staff from MM Industrial Sales were on site to assist in diagnosing issues with two of our high-pressure air compressors.
- Staff diagnosed a bad water solenoid valve on our Belt Filter Press. Parts are on order.
- Staff repaired another broken shear pin in the drive unit for our #2 Secondary Clarifier. Draining and inspection of both clarifiers and all three of the Aeration Basins is being planned for completion ASAP.

INDUSTRIAL WASTEWATER ACCEPTANCE ACTIVITY FOR JULY 2022

Source	Volume (gallons)	Total
Fabick/CAT	1,800	\$250.00
Wisconsin Electric	54,000	\$1,620.00
Tunnel Vision	6 yd ³	\$810.00
Grand Totals	55,800	\$2,680.00

INDUSTRIAL WASTEWATER ACCEPTANCE ACTIVITY FOR AUGUST 2022



Charter Township of Chocolay

5010 US 41 SOUTH • MARQUETTE, MICHIGAN 49855
PHONE (800) 243-1448 • FAX (800) 243-1513



INDUSTRIAL WASTEWATER ACCEPTANCE ACTIVITY FOR AUGUST 2022

Source	Volume (gallons)	Total
Fabick/CAT	1,800	\$250.00
UPS	8,000	\$1,040.00
Wisconsin Electric	63,500	\$1,905.00
Grand Totals	73,300	\$3,195.00

MAINTENANCE MANAGEMENT

Preventive Maintenance Work Orders: staff continues to perform routine maintenance tasks. Whenever time permits, I continue to create the work orders that have not been created since we began using Lucy.

OLD BUSINESS

- Solids Handling Update: M. O'Neill stated the draft list came out and was emailed to the Board. We are #27 on the list. He attended the public hearing virtually. There are some communities contesting it which created a cause for concern that we would be bumped. However, the State scored us incorrectly at 220 points, but we did not receive points for a septage receiving facility which scores us another 100 points. That will move us to #14 on the list. We have been approved for a low interest loan up to \$11,715,000 which includes 50% forgiveness up to \$5,857,500. The requested amount was the highest bid received a year and a half ago plus 15%. EGLE confirmed we received this loan because we are a disadvantaged community. This is based on the median household income, our debt, number of customers connected to the sewer system, etc. One of the requirements for this money is a "Build America, Buy America" condition. Any piece of equipment installed during this project must be at least 55% built in America.

NEW BUSINESS

- No new business.

BOARD COMMENT

- M. Brumm thanked the board for listening to Dr. Putman. She also offered an educational art exhibit that shows the Marquette area and poor dumping that has occurred in the area to anyone that may wish to use it.

ADJOURNMENT

The meeting was adjourned at 11:04 a.m.



Reviewed by:

Mark O'Neill

Director of Municipal Utilities

Prepared by:

Melissa Erkkila