

Elkhart Lake Summary

By Nate Tillis

The WWOA Southeast District Regional Meeting on September 14th, was hosted by the **Northern Moraine Utility Commission** and held at Three Guys and a Grill East in Elkhart Lake. A warm welcome was given by Scott Randall, WWTP Superintendent, Northern Moraine Utility Commission. He spoke about the unique challenges of their plant which began with a BOD limit only WPDES permit. Northern Moraine Utility is a regional treatment facility for 4 communities: Glenbuelah, Crystal Lake, Elkhart Lake, and Greenbush.

Following the introduction to the February meeting, Southeast District Chair, Ben Huffman began the meeting. Our first speaker of the day was Cullen Braun of VPC who spoke on Blower Auditing Techniques and Efficiency Improvements. Cullen demonstrated how common variables on aeration blower instrumentation such as discharge temperature, blower speed, power consumption and discharge pressure could be used to verify blower performance and areas for improvement. The procedure also provides predictive maintenance indicators such as blower wear and blower speed concerns. Sample calculations on the increased operating costs associated with excessive pressure drop in distribution piping, inlet filter cleanliness and discharge silencers were provided. The importance of developing a baseline of blower performance was discussed when considering new technologies and how to interpret the data to determine system operating range.

The second speaker was Greg Schwartz of Aquafix to speak on Eliminating Redworms and Midge Flies in Wastewater. Greg explained the conditions favorable to midge fly propagation and the hazards associated with their presence. They often consume nutrient rich solids and can cause poor settling. Redworm are red in color due to their absorption of hemoglobin in sludge. They can be found in final clarifiers, sand filters or anywhere water is still and dormant for longer lengths of time. Greg proposes chemical inhibitors to control their populations.

After a break, Rob Jansen of Salsnes filter gave a talk on a primary settling basin alternative entitled 'Time to Re-Think Primary Treatment.' A Salsnes Filter system combines three critical processes into one compact unit – solids separation, sludge thickening and dewatering. The rotating filtermesh removes >50% TSS, and >20% BOD from effluent and produces drier sludge (20-30% dry matter). The units can be arranged in parallel to increase flow capacity and can be installed indoors or outdoors. By using about 1/10 of the footprint of traditional settling basins, it can be an ideal solution when space is at a premium. The Salsnes units also have a smaller carbon footprint and may reduce volume of total sludge

The next speaker was Alec Bartolai of Sargento Foods. Sargento Foods is a family-owned and –operated business headquartered in Plymouth, Wisconsin. Alec is an engineer in the Sustainability division of the company. He spoke on The Importance of Communicating with Local Industries. Alec emphasized the idea that both treatment facilities and industries have a common goal of reducing wastewater and loadings. Communication with industry is critical to manage slug loads that might cause treatment plant

upsets. Many industries partner with treatment facilities to broker deals with high-strength waste, solid wastes or disposal. Often, industries have outreach campaigns and programs that may be able to reach customers in a more efficient fashion.

The DNR update was given by Curt Nickles who spoke about the operator certification exams deadline and updates on the Total Nitrogen Removal subclass. There have been many staffing changes including The OpCert coordinator and the CMAR/CMOM coordinator. A new SSO form has been released. Refer to the DNR website for details.

The business meeting was called to order and Southeast Region officers introduced. There was a motion carried to adopt the May minutes and another motion carried to accept the treasury report. An award was given to Scott Randall of Northern Moraine Utilities for hosting the Fall Meeting. After a few announcements on upcoming meetings and events the floor was open for comment. A passionate argument was made opposing changing the name from Wisconsin Wastewater Operator Association to Wisconsin Resource Recovery Specialists. The meeting was then adjourned and a delicious lunch was served.

The final speaker of the day was Jessica Noegel of Aquarius Technologies to speak on an alternative secondary treatment technology: Aquarius NEBULA MultiStage Biofilm System. Treatment is achieved through spatial separation of microbial populations fixed to a media surface. Successive stages of biofilm media create separate microbial living conditions and food sources within the process resulting in a highly effective food chain. High food to microorganism (F/M) ratios create feast conditions in the first stages encouraging rapid growth of lower life forms. Low F/M ratios and famine conditions in later stages promote higher life forms that consume the lower life forms. This process can yield less biosolids, tolerate flow fluctuations and reduce or eliminate the amount of return activated sludge volume.