

WVOA Regional Meeting Archive
Northwest Region – April 7, 2006/Rice Lake, Wisconsin
Turtleback Golf & Conference Center

Chairman Mike LaRose opened the meeting. Mike went over some house keeping items and then introduced the general manager of the Rice Lake Utilities, Scott Reimer. Scott welcomed the group to Rice Lake and went on to tell the group that as wastewater operators, we are major impact players in the economic development of our communities. Without good wastewater treatment in any community development would either be slower down or maybe not even happen. This could mean a loss of potential jobs and tax base, so be proud of what you do and keep up the good work.

Chairman LaRose introduced the first presenter of the day, Gary Wesselschmidt from Huber Technologies. Gary discussed the importance of optimizing the headworks of your treatment facility. Gary's main focus will be on the pros and con's of screening and grit washing. Some problems with screening are odor and esthetics. Due to the nature of the operation, this will always be an area of concern. Screen has evolved over the years to a point where the openings are as small as a ¼ inch. This down sizing of screen openings has allowed the removal of more unsuitable material but still allow the organic to pass through. Finer screening has allowed some plants to do away with primary clarifiers, grinders, and comminutors. The screening portion of the treatment plant is only 5 % of the total plant cost but does 25 % of the treatment. Gary said his company welcomed competitive technology because it helps everyone stay current with the changing technology and aids in research and development of new trends. Gary briefly discussed the several different types of screens and how they operate along with the best application for the screen. Some screen types Gary touched on were bar screens, Perforated plate screen, step screen, drum screen, membrane screen, micro strainers and vertical screen. Gary showed photos of all these different screen installations in Wisconsin. It was mentioned that a drum screen works very well in a septage basin. Finally Gary briefly discussed grit washing. Grit washing will remove organic material back into the flow, reduce odor and reduce volume in the Dumpster. Volume reduction means lower tipping fees at the local landfill. Grit washing and compacting will pay for it self quickly in reduced cost at the landfill

Chairman LaRose introduced the next presenter, Randy Chan from EDI along with Harlen Mueller from Energenecs who helped Randy with the demonstration. Randy's topic was on aeration and he started by making this statement, "In order for the bio-logical process to work there needs to be aeration. The type of aeration will determine the oxygen transfer and the cost to power the blowers. Randy said the cost of aeration could range from 65-90 % of a wastewater budget so operating efficiency is critical. To demonstrate the differences in aeration bubble patterns and the power to produce the aeration, Randy had Harlen hold several different types of diffusers in an aquarium so the group could see the transfer difference in

bubble patters and see the air pressure needed to produce the bubble. It appeared the finer the bubble the better the air transfer and the less energy needed to maintain a residual O2 level. Randy discussed the maintenance issues with the different types of diffusers and the horsepower needed to operate each. The technology of diffusers has come along way with the disc style, tube style, membrane style along with the mechanisms to remove the diffusers from tanks for cleaning or for cleaning directly in the tanks which will involve draining the tank. Disc material could be made of air stone, ceramic, and/or bio-cide impregnated. The type of waste will determine the type of diffuser needed. Did I mention that Harlen got a wet sleeve playing in the aquarium? That must be why Randy chose to narrate rather than demonstrate.

Chairman LaRose introduced the next presenter, Rocco Raymond of S.E.H. who took us on a narrative ride and power point presentation through the process of building the new Frederick WWTP. Going unsaid the old plant was not meeting the discharge limits and was worn out. The new plant needed a new road to the facility so blasting the rock out of the way was necessary. However blasting the rock 100 feet in the air was a little much. No serious damage so on with the project. The blasted rock was crushed and used a riprap around the lagoons. This project involved directional drilling and incorporated dual discharge. The most interesting challenge was incorporating nitrogen removal. The project was mostly funded by a rural development Grant but due to the experimental treatment concept they would not fund the project unless the village certified to cover the cost if things did not work out. The project was completed and went on line 8-31-05. For further updates on how things are working with the new plant, call Ken Hackett at Frederick or call Rocco Raymond, Rocco is not shy so ask away.

The next presenter was Todd Schultz from Energenecs. Mr. Electrical safety himself. Todd's topic was getting the most out of your service rep. When Todd or any other electrical troubleshooter is called to a facility to do electrical troubleshooting or installation, it would be a good idea for the operator have a to do list for him and prioritize the issues. Also as the service tech is doing his thing, pay attention what he is doing so that in the future this same event will not occur again. Learn how to use your voltmeter and use it safely. The number one thing to remember said Todd, if you are uncomfortable working in electrical panels, than leave it to the trained tech. Todd showed how to use your vole meter to check Amps, Check fuses, and voltage. Todd also gave a few useful hints on removing inline check valves at lift stations and valve pits. Todd also went through 5 different senerios to troubleshoot a lift station control system.

The next presentation was on SCADA which was presented by Brian Akason and GIS presented by Jon Sshwichtenberg. Brian discussed the past control system at the City of Chetek and then went into detail on the new SCADA system that was installed on the water system in Chetek. As part of the new

system, the city also changed out the well meters with magnetic flow meters for better accuracy. Jon implemented a GIS system for the City of Chetek. When doing a GIS mapping system it is imperative to meet with all department heads to see what kind of information is needed or would be nice to have. That will allow a broader base in which to spread the cost over. A current aerial photo of the city is a big plus and the county typically does it every 5 years. Dan Knapp City of Chetek DPW superintendent made a cameo appearance to show how all the information is used in the city of Chetek. The sewer televising information is also incorporated in the mapping system and all the information is used to plan Future City project or identify areas of concern.

The next presenter was none other than Don Voigt from Energenecs whose presentation was on international technology coming to town. Don's observation is that W & WW equipment originated from Europe where as SCADA and computer technology comes from the United States. In the engineering field today, Don said that China will graduate 250,000 students, US will graduate 50,000 students and India will graduate 125,000 students. It appears we are missing the boat. Over in Europe the thought pattern is very different about everything. Some examples are.

- There is more attention focused to detail in design
- They take extreme pride in their design
- Due to space, everything is smaller and designed to fit and work in a smaller foot print
- Because of the cost of energy, the designs are very energy efficient
- They believe in quick and better not cheaper
- They think life cycle cost
- Companies think long term, tradition- employee retention
- Non risk takers-solid design
- If nutrient removal is needed, they do not think of chemical addition for fear of adding to the environmental degradation
- Grit washing is big in Europe and all equipment is made of stainless steel for longevity
- In activated sludge plant to move RAS or WAS they use progressive cavity, and screw type pumps to minimize flock shear.
- For the health of the operators, all equipment that generates a mist is enclosed
- And finally, there is no land application of sludges, it is all landfilled or incinerated
- And finally again, all operators wear a jump suit to protect them, which Don had one of those on for show and tell.

The next presenter was Kay Marshall, president elect of the WWOA. Kay gave an update on the state of WWOA and when the next WWOA conference is. It will be at the Kalahari in Wisconsin during the first week of October. All awards nominations are due August 1, for the conference presentations.

The next presenter was Pete Prusak of the Cumberland area DNR. Pete had a few points of information to pass along.

- Looking for operators to participate in a group to develop guidelines to handle hazardous waste contamination
- Any bi-passed require a permit-request them if needed-hopefully you will not need any
- Sludge sites, undated soil test, you can use farmers date if current
- Electronic DMR reporting by doing the report this way it will save big dollars for the DNR, get on board with this
- CMAR is required by all permittees
- Ammonia limits will be implemented on Ponds and lagoons now.

Chairman LaRose called the business meeting to order. LaRose discussed the mailing list and the importance of the address updates. LaRose thanked Energenecs and S.E.H for sponsoring the meeting. LaRose talked about the importance of Preregistration for the meetings. The treasure report was presented by Mike Romsos NWWOA has \$3113.43 in the checking account and \$1096 in Escrow. The secretary's report was accepted as printed in the clarifier. No old business or new business, the meeting was adjourned.

Respectful submitted by
Wally H. Thom



Don Voigt showing off his European Blues as only Don could do.



Harlan Mueller and Randy Chan smiling, but Randy already knows who will be narrating the presentation and who will be getting wet.



Gary Wesselschmidt from Huber screens traveled from Lees Summit, MO just to dazzle us with brilliance, and he did.



Kay Marshall- President elect for WWOA addressing the group and promoting the WWOA.



Harlan Mueller admiring the clarity of the Rice Lake area water.



Harlan trying to keep dry as a diffuser bubble breaks the surface.