

CENTRAL SECTION MEETING

APRIL 10, 2001

BLUE HERON SUPPER CLUB

COLD SPRING, MINNESOTA

The April 10, 2001 meeting was held at the Blue Heron Supper Club in Cold Spring. Paul Hoeschen, supervisor of the Cold Spring Wastewater Treatment facility, gave the welcome and opening remarks.

The morning's first speaker was Colleen Thompson from the Willmar Wastewater Treatment Facility. Colleen discussed their problem and solution to the collapse of their trickling filter media and the switch from Gravity Actuated Rotary Distribution (GARD) to Mechanical Actuated Rotary Distribution (MARD). Slides were also viewed during this presentation demonstrating the contributing factors to the media collapse. Colleen explained the advantages of the MARD system over the GARD system and how they are now able to better control the speed of the distribution arms giving them more flexibility to control the growth on the media and aid in the prevention of overloading the media. Thank you Colleen for sharing your community's experiences!

Our second speaker of the morning session was Dan Johnson of Northern Dewatering. Dan started by reviewing the importance of reading and understanding pump curves and choosing the right pump for the right application. As in most of Dan's presentations, he provided us with the visual aid of an actual pump curve and demonstrated on screen how to read the pump curve to ensure that we all understood how a hydraulic pump would perform under given conditions. Hopefully everyone was paying attention as it was indicated that all too often pump curves are misinterpreted and the wrong pump is chosen to perform to the operator's expectations. Dan showed a video of several pumping applications that also demonstrated how Northern Dewatering has used Hydraulic pumps. It was noted that Northern Dewatering uses only welded joint High Density Polyethylene (HDPE) pipe and has yet to lose any wastewater through leaks in the pipe. As usual, Dan made another very informative and enlightening presentation. Thank You Dan for your continued commitment to our Association and our industry!

After a brief but refreshing break in the morning session, we returned to listen to Cindy McComas representing the Minnesota Technical Assistance Program (Mn TAP). Cindy's topic was on Industrial Planning for Best Management Practices. The discussions direction went towards City's working together with industry to prevent undesirable wastes from ever entering the collection system. This is accomplished by working, on a case-by-case basis, with industrial contributors of pollutants, such as wastes high in organic or solids content, metals and other constituents that may adversely affect the operation and maintenance of a Wastewater Treatment Facility. It was expressed that it is often just education and general housekeeping at industrial sites that is needed to have a positive impact at the treatment plant loadings. Cindy also described some of their programs and interns who have been involved in past that provided assistance to industrial sites and communities that aided in resolving problems of undesirable discharges to the local POTW. Thank You Cindy for the insight as to how Mn TAP operates and provides assistance to local communities and industrial waste management!

The fourth speaker of the morning was Ted Field from Bonestroo/Rosene/Anderlik and Associates. Ted is an engineer working on the Cold Spring Water and Wastewater improvement plan involving several communities surrounding the Cold Spring area. The topic started with an overview of the major communities that would be affected by this project and the vast undertaking that it will take to make this project a success. Ted provided an onscreen visual aid to assist us with the demographics of the project as well as what is being proposed to expand the current Wastewater Treatment Facility to accommodate the additional loading to their plant. Cold Spring currently employs preliminary treatment, two primary treatment tanks, a single Trickling Filter with synthetic media (G.A.R.D.), a solids contact tank to promote settling in the final clarifiers, two final clarifiers, Chlorine for disinfection, Sulfur Dioxide for

dechlorination, and anaerobic digestion. They also have two synthetic lined retention basins, open to the atmosphere (lucky stiffs). It is proposed to convert the final clarifiers to primary clarifiers in addition to the two existing clarifiers, add two more trickling filters, build additional solids contact tanks, build two new and larger final clarifiers and convert the existing Chlorine contact tanks to Ultra Violet Light Disinfection. Additional digestion tanks would also be required. The retention tanks (a luxury by most of our standards) would remain in tact as is and no additional tanks are to be built. The construction of the new facility would not start for approximately 1 year. The whole project appears to be quite an undertaking and will be an adventure for all involved. Good luck Paul and staff and thanks Ted for sharing with us your current progress with this project. We know these projects can be trying at times but I'm sure you're up to the task!

A brief intermission was provided to allow us all to contribute to Paul's job security and refresh our drinks. Our next speaker was none other than **THE JOEL SCHMIDT**, of Bonestroo/Rosene/Anderlik and Associates. Joel spoke to us on the Biological versus Chemical Phosphorus Removal. We were informed why Phosphorus needs to be removed from the discharge from wastewater treatment plants and it's potential affect on a receiving body of water. Joel also explained that many NPDES permit holders currently have limits on Phosphorus and that most communities will experience a limit when their permits are renewed. After briefly explaining how we can chemically remove phosphorus (Aluminum Sulfate, Ferric Chloride) from a facilities effluent, we were treated to what it takes to remove the phosphorus Biologically. An explanation of the different forms that Phosphorus can be found in was provided prior to the discussion of phosphorus removal. Joel identified the soluble form of phosphorus that will give us most trouble and described how the microorganisms take in the phosphorus to their biomass. A brief explanation was provided as to what "luxury uptake" of phosphorus is and where in the process this takes place. As Joel stated, if the BOD-to-Phosphorus ratio is not at least 20:1, biological phosphorus removal is not possible. It was implied, at least as interpreted by this listener, that we can only expect to remove Phosphorus to a level that is in proportion to the BOD and the BOD needs to be evaluated as it enters the secondary process not the head of the treatment facility. For high levels of phosphorus (20 mg/L +) it is unlikely that biological phosphorus removal will be sufficient to meet the requirements as stated in the NPDES permits (1 mg/L or less). It was noted by Joel that there are several USEPA guidance documents available to assist operators in identifying significant contributors of phosphorus to a POTW and looking to the source for removal of the nutrient phosphorus may be one of the best methods for controlling the amount of Phosphorus in the discharge from a Wastewater Treatment Plant. We surly will be hearing more on phosphorus removal in the near future and I hope this presentation was helpful to all in attendance. Thanks Joel for another fantastic job of educating and informing industry, students and public employees!

The last speaker of the morning was none other than yours truly, Keith Redmond from the St. Cloud Technical College. The topic of this session was Mercury Monitoring – Will it affect YOU? A very brief rendition of this topic was provided as lunch was being served in less than ten minutes and the audience was starting to drool and snarl as tummy's were growling from the grueling and intense morning sessions. Anyway, an introduction as to what forms Mercury can exist as, was presented followed by the most likely sources of Mercury entering into our systems. It was explained that Mercury could have very detrimental health effects on the human body and to the environment in high enough concentrations. What those concentration levels are seems to be an area of disagreement by "the experts" and I was unable to get any qualification as to what those levels might be. The routes of entry of mercury into the body were also provided as inhalation and ingestion being the most common. It was stated that the proposal for the new mercury limit (6.9×10^{-12} in Minnesota other than the lake superior basin, that's 6.9 nanograms per liter or parts per trillion!) would affect most of us with a monitoring requirement for existing facilities and likely treatment requirements for facilities expanding or building a new facility. The cost of the Mercury proposal was discussed and not many answers were provided. It appears at this time no one is sure of the impact of the new rule proposal but one thing is for sure, it will not come without a price tag! The sampling and handling of samples for Mercury monitoring is another area that will affect utilities in the pocket book and once again we are unable to provide any answers as to the cost of such monitoring as few, if not only 1, lab(s) in the nation are capable of providing the analysis for Mercury at this level. It is not likely that any utility will be doing their own sampling, as the procedure is quite complex and will require much skill and experience to prevent contamination of the sample. This speaker attempted to make it very

clear, his apprehension to support this new rule as there still remains too many unanswered questions to whether the benefits of monitoring and treating for Mercury at these levels is the best way to spend our available dollars and provide the most protection to the environment and public health.

At this time we broke for a well-deserved buffet lunch. Gold-N-Plump provided the chicken for our meal cooked by the staff of the Blue Heron supper club. As you may well imagine it was quite a meal and no complaints from this attendee. Thank You Clay Watson for all your efforts in making this an enjoyable meal!

After we ate more than a person has a right to at one sitting, we reconvened our session. Brad Matuska of Mississippi Topsoils spoke on Biosolids composting. They are located in Cold Spring adjacent to Gold-N-Plump Inc. Brad took us through the process of taking woodchips and biosolids and converting them to soil. He provided us with a slide show on the steps taken from the beginning of the process to the final product. The high organic content in their product makes the soil amendment an attractive product to consumers with sparse ground cover. We were shown before and after pictures where the product had been applied with a visual improvement of grass grown once the product was applied. Brad answered several questions from the audience at the end of the presentation and we were all invited to tour their facility following the conclusion of the business meeting. Thanks Brad for sharing with us your company's procedure in making a safe usable product compatible with the environment and public use.

The last speaker of the day was Mike Kniep, Brewmaster, Gluek Brewing Company. Mention beer and put the presentation at the end of the day and see how many people stick it out to the end! Mike decided to run through the beer making process very quickly and let the tour of their facility do most of the talking. As one might guess, Gluek Brewing Company had quite an audience this day. Unfortunately I was unable to attend, but in retrospect, that may have been a good thing. I would like to thank Mike and Gluek Brewing for their willingness to share with us their brew making process and taking the time out of their busy schedule to provide a memorable experience for those of us able to attend the guide tour.

One final thanks to all the speakers and to Paul Hoeschen and Clay Watson for putting together and informational and memorable meeting. A special thanks to the local industries and personnel for attending and sharing their production processes and the potential impacts on our industry. I would encourage all to make the effort to work closer with the businesses in your communities and to open lines of communication between users of the wastewater system and operators of the treatment facilities. Your Time and efforts do make a difference.

BUSINESS MEETING

The business meeting was called to order by president Tanya Schmidt. The minutes from the December meeting were read and approved.

There were 60 members in attendance for the days conference. President Schmidt announced the next meeting date for June in Montivideo. She also asked for volunteers for the September meeting and stated the December meeting will again be held in St. Cloud at the St. Cloud Technical College. The City of Montrose volunteered to host the September meeting.

Due to the absence of Director Byron Hayunga, Ron Hagemeyer gave a report on the Annual technical conference to be held in late July at the Sunwood Inn in St. Cloud. Ron explained he was in charge of the technical program and everything was going fine at this point. He informed us that an outline would be printed in the next issue of the wastewatcher. Ken Robinson was in attendance and gave a report on local arrangements. The quote of the day, "the golf courses are not open yet!". Ron also shared that we will have a live 3-piece band for entertainment the night of the banquet; we hope to see you there! Ron also gave a report on the last MWOA board meeting. He informed us that the main topic was training and who will be doing or providing the training we need in the future. At this point, MPCA is unsure if they will

continue to provide the training but over the next two year should remain in place and provide their training as they have in the past with the exception of biosolids training.

It was announced that Kurt Burtilson has resigned as editor of the MWOA web page. Dan Johnson, Northern Dewatering, will assume the duties of editor and Curt has confirmed he will remain on to help Dan with the transition over the course of the next year.

Jim Miller, S.E.H., informed us of the changes on the MWOA web page (www.mwoa.net) and the improvements that are expected over the next year. All are encouraged to visit the site and comment on how we can improve the site, what you like, and what you dislike. Applications for scholarships need to be in within the next 3-4 weeks and can be found on the web site. Job postings can also be found on the site and communities are encouraged to post their openings on the web page. There is a message board on the web page for all of us to use. If you have something to say or need help with a problem, put it on the message board, you never know who can help you solve your problem or maybe someone else has had a similar problem and can point you in the right direction. I look forward to talking to you at the web page in the future.

President Schmidt announced shirts are available for sale through the MWOA. Shirts are either denim or polo. I am unsure of the price but I think \$20.00 for the polo shirt and \$30.00 for the denim shirts. Contact Jim Miller for current and accurate pricing.

A discussion took place on conflicting meeting dates with other organizations. It was pointed out that Rural Water Association also had a training session on April 10, 2001. We need to check schedules more closely so as not to double up on meeting dates. Jim Miller said he will be posting training calendars on the web page as soon as he gets them.

Keith Redmond gave a report on the formation of a new student chapter of the MWOA/AWWA at the St. Cloud Technical College. They are just getting underway and have elected officers at the April 4 meeting. Look to the web for more information soon on the progress of the club.

A drawing for door prizes took place at the end of the meeting. A big thanks to SEH, Mississippi Topsoil, Gold-N-Plump and the Central Section MWOA for their donations.

Being no further business to discuss, the meeting adjourned at 2:35 PM.

Respectfully Submitted,

Keith Redmond

Secretary, MWOA Central Section