



**Wisconsin Wastewater
Operators' Association**

The Clarifier

WISCONSIN WASTEWATER OPERATORS' ASSOCIATION, INC.



Aerial view of Richland Center Wastewater Treatment Facility

51st Annual W.W.O.A. Conference

October 17-20, 2017

Madison Marriott West, Middleton

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The Clarifier is the publication of the Wisconsin Wastewater Operators' Association and is intended to inform and educate the membership on issues related to the treatment and control of wastewater. The Clarifier is produced five (5) times each year: February, April, June, September, and December. All members are encouraged to contribute to the mission of the Clarifier.

The Wisconsin Wastewater Operators' Association is a non-profit organization dedicated to educating, informing, and advancing the wastewater profession. WWOA has approximately 2,000 members divided throughout six regions: Southeast, Southern, Lake Michigan, North Central, Northwest, and West Central.

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Presidents Message: Recovering Resources

The Sheboygan Regional Wastewater Treatment Facility (WWTF) celebrated Public Works Week by opening its facility to the public on May 20. The Sheboygan team was impressed with the turn out and the comments received by the public. It is easy for us in the industry to take our work for granted and not give the credit and acknowledgement we deserve for the complex and technical work we do each day as we recover and preserve our most valuable resource, WATER. I was reminded of how amazing our work really is when the public toured and were in awe of what actually



happens to the water and waste that is flushed down the drain. It simply doesn't go down the drain and disappear. The wastewater is collected, pumped, screened, settled, treated by microscopic organisms, filtered, disinfected, and returned to the local body of water cleaner than the existing stream or lake. Nutrients are recovered from the waste and returned to the land to enrich crops which provide food for our tables. Not only are we preserving our WATER, we are reclaiming the nutrients necessary for human and plant growth.

The Sheboygan Regional WWTF provides a good example of such nutrient reuse right on the facility grounds. One section of lawn which has received several applications of dried biosolids is much more lush and rich than the control side that has received no biosolids. These nutrient collection and recovery processes take a community of dedicated professionals who come from diverse backgrounds and incorporate multiple disciplines and skills including collection system specialists, operations, maintenance, metal fabrication, electrical, process controls, computer programming, watershed managers, soil scientists, haulers and land applicators, biogas specialists, natural

science, engineering, manufacturing, regulatory, and administration.

In my President's Message in the April 2017 Clarifier edition, I proposed that the Wisconsin Wastewater Operator's Association thinks about adopting a new name which reflects the evolution of the wastewater industry. Those of us in the industry all understand treating wastewater and discharging cleaner water to the receiving body. We have been treating wastewater to secondary treatment standards for over 45 years. We have also been recovering energy and nutrients and returning the nutrients to the farm fields for over a hundred years. Today we are treating the wastewater, recovering the nutrients, harnessing the energy, and producing environmentally beneficial products better and in a more efficient and sustainable manner than ever before. The Wisconsin Wastewater Operator's Association is composed of members who are involved in different aspects of collecting and treating wastewater, recovering resources, and reclaiming water. It is important that the name of an organization encompasses all of its members and adequately represents the entire field to continue to attract new members and to grow.

To celebrate our members' work, the theme for the Wisconsin Wastewater Operators' Association's 51st Annual Conference is Recovery Resources. The Board of Director's purple shirts this year are displaying the Resource Recovery theme. In April, the WWOA Board of Directors voted to introduce a new tag line, Wisconsin Resource Recovery Specialists (WRRS), to celebrate the theme. Any change to WWOA's name will require membership approval at an Annual Business Meeting and the appropriate revision to the Articles of Incorporation.

Registration is now open for the 51st WWOA Annual Conference. Vice President, Jeff (Juice) Simpson, and the Technical Committee have worked hard to organize a successful conference. The conference lineup is packed with technical presentations and workshops, fun social events, the Operator's Competition, and the Annual Business Meeting and Awards Banquet. Please check out the WWOA website for registration and lodging information.

This year's Keynote Speaker is LeRoy Butler, the star strong safety for our beloved Green Bay Packers and originator of the Lambeau Leap. The Farewell Breakfast will feature a presentation by one of our own WWOA Members, Greg

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Paul. You definitely will not want to miss Greg's talk on The Gut Bug Connection which will highlight the similarities between our human digestive system and wastewater treatment.

This spring has been packed with educational WWOA Regional meetings, seminars, and educational opportunities. Hopefully you were able to attend one of the meetings and will be able to attend one or more of the upcoming events. The sunshine and blue skies of spring get me energized to bicycle and play volleyball. I will miss my annual bicycle trek across Kansas this year but my young nephews will keep me active with all their sports and will make sure I do not miss taking them for bicycle rides. They are already asking when they can do a 100 mile bike ride!

I also want to take this time to give a special thank you to the Sheboygan Regional WWTF staff for their support and continued efforts to optimize operations. The Sheboygan team is composed of incredibly talented, skilled, and dedicated individuals who work daily to preserve water and recover resources in the most efficient manner possible. It has been a true honor to work with them. I will miss the

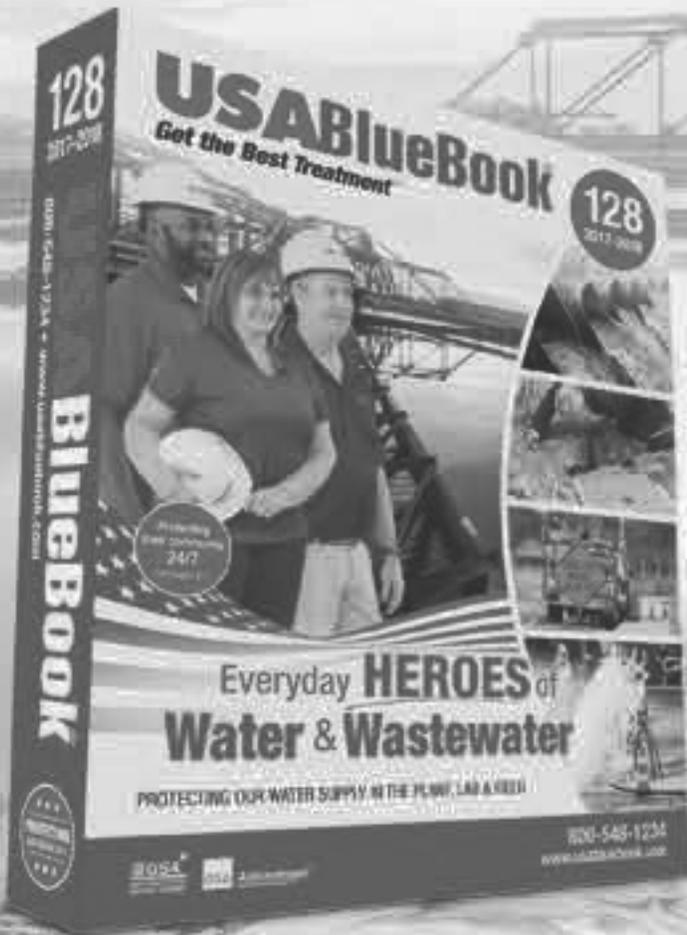
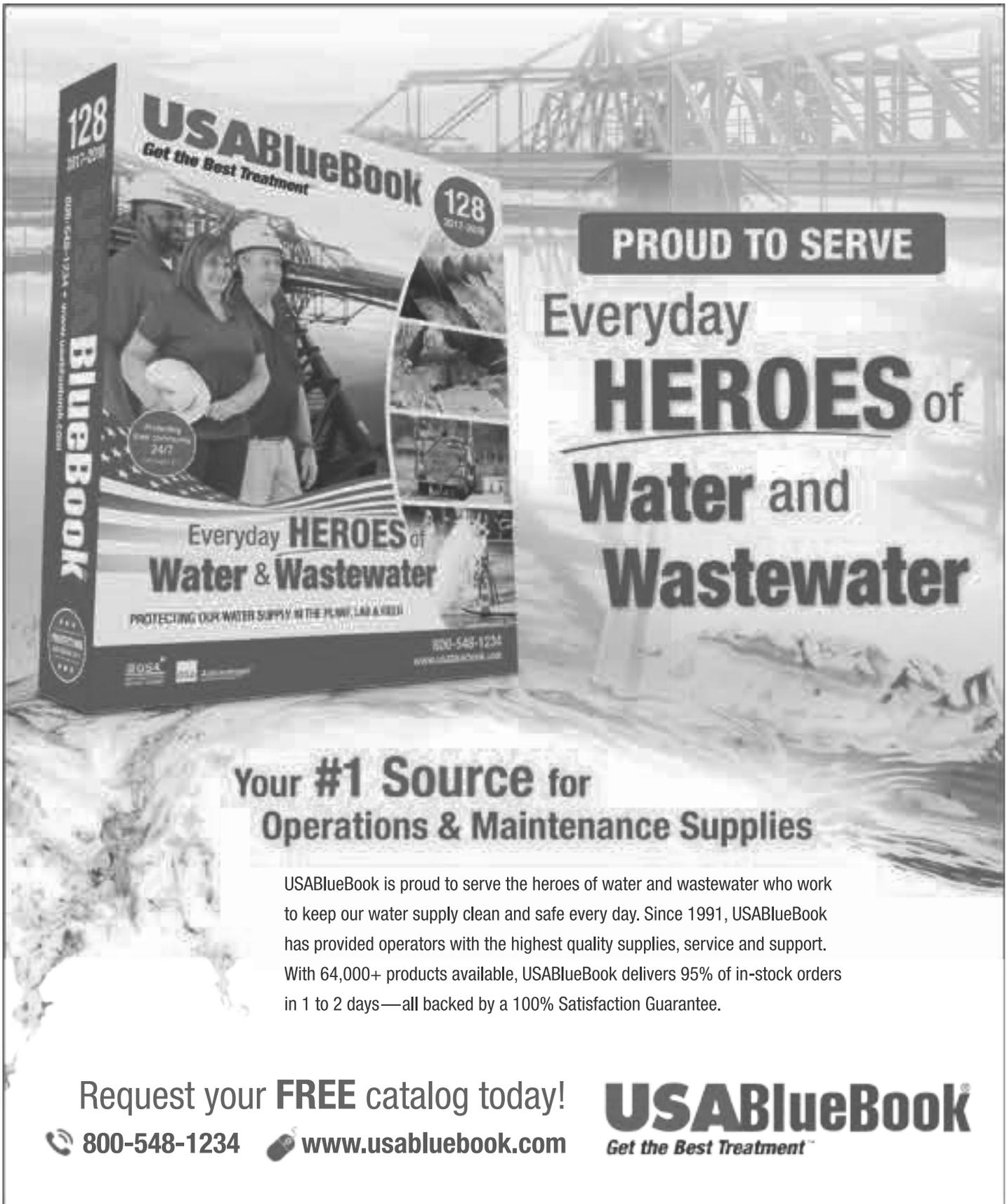


staff at Sheboygan as I look forward to new opportunities and joining the NEW Water team this summer.

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Remaining Clarifier Deadlines

September issue – August 11 deadline
 December issue – November 10 deadline



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City of Richland Center Wastewater Treatment Facility

Project History:

The City of Richland Center's original wastewater treatment facility was located between State Highway 14 and the Pine River, near the downtown. This facility dated back to the 1970's with improvements in 1992, 1993, and 2001. After this last upgrade the wastewater facility included preliminary treatment with screening and grit removal, primary treatment by a high rate dissolved air flotation device, activated sludge secondary treatment, anaerobic digestion, and liquid sludge storage.

In 2004 the City began planning for this most recent upgrade. The existing facility had reached its design capacity with much of the equipment and structures reaching the end of their useful life. The planning process considered upgrading infrastructure on the existing site close to the City center and relocating the facility to a remote site more than six miles to the east of the City. The resulting plan recommended relocating the facility which would provide the Richland Center Utilities more room for future expansion and better able to serve nearby communities and rural residents should they wish to contract with the City's Utilities, which would offset operational costs.

Project Description:

Construction of the new wastewater treatment facility began in 2014 and was substantially completed in the winter of 2015.

It's been designed and constructed to produce a high-quality effluent for discharge to the Pine River, and to maximize operational flexibility and energy conservation. The new facility is located off of Country Highway TB straddling the townships of Buena Vista and Orion.

Facility treatment processes include wastewater transmission through a seven mile long force-main, preliminary treatment including fine screening and grit removal, primary settling, secondary biological treatment including enhanced biological phosphorus removal, ultraviolet (UV) disinfection, anaerobic digestion, and biosolids dewatering and natural drying to produce a spreadable fertilizer/soil additive.

Influent Pumping and Force-Main:

The new main pumping station is located on the site of the original Richland Center wastewater treatment facility

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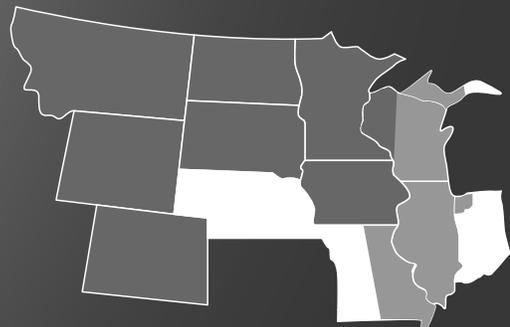
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and includes five (5) submersible pumps equipped with variable frequency drives used to regulate flow to the new wastewater treatment facility. Influent pumps direct raw wastewater from the City through the seven mile long pipeline terminating at the new site.

In order to reduce fouling of the pipeline and reduce odor issues associated with the long detention time, the pumping system is provided with flushing and "pigging" capabilities. Periodic flushing is achieved through automatic controls which allow the wet well to surcharge and then activating multiple pumps to develop high flows and velocities in the pipeline. "Pigging" involves the insertion of an 18-inch diameter foam swab, or "pig", into the pipeline to aid in scouring the inside of the pipe. The pig is



Influent pumping



Pump piping with pig launcher

retrieved at the Hauled Waste Receiving station at the new WWTF site.

Liquid Treatment:

Preliminary Treatment

Preliminary treatment is a mechanical process that removes plastics and rags by means of screening, and sand through use of a grit separator and washer. This process protects downstream equipment from unnecessary wear and

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damage and reduces the buildup of heavy deposits in tanks. Preliminary treatment is located in the Headworks building and includes a mechanical fine screen using a stair-style bar screen, and grit removal using a vortex grit chamber and conical grit washer.



Influent stair screen



Grit washer

Influent flow metering and sampling are also accomplished at the Headworks building. Wastewater samples are

tested in the on-site laboratory to determine the amount of pollutants flowing to the facility.

Odor issues were expected at the Headworks building due to the length of the pipeline extending to the site and discharging at this structure. To combat odors and corrosion in the Headworks building an odor control system was installed to evacuate and treat process air from the influent channels.



Odor control system

Hauled Waste Receiving

A receiving station was constructed at the new site to accept hauled wastes from the surrounding rural community as well as local industries. The station includes a rock trap for

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large debris, flow meter, discrete sampler, and mechanical screen. Two underground tanks are provided to allow for temporary storage and segregation of liquid wastes. The facility's SCADA (Supervisory Control and Data Acquisition) system allows for logging of haulers' information and generates billing information for resulting fees.



Hauled waste receiving bldg



Hauled waste receiving screen

Primary Clarification

Primary treatment is performed with two activated primary clarifiers that provide settling of heavier organic material and inert solids in the raw wastewater prior to secondary



Primary clarifier



Primary sludge pumping

treatment. This heavier organic material and solids settle to the floor of the clarifiers and are drawn to a center sump in the bottom of the tank. From the sump the solids are pumped by double disk pumps to the anaerobic digestion process to become stabilized.

Allowing heavy organic matter to sit in the clarifiers without oxygen and to be recycled around the clarifiers promote a fermentation process in which volatile fatty acids are produced to aid in the removal of phosphorus in the secondary treatment process.

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How healthy is your wastewater?



Nutrient Facts	
Serving Size:	5 mg
Servings Per Container:	Varies
Amount Per Serving	
BOD	250 mg/L
	Avg Daily Value
Total Solids	700 mg/L
Dissolved	500 mg/L
Suspended	200 mg/L
Nutrients	50 mg/L
Nitrogen	40 mg/L
Phosphorus	10 mg/L
Chloride	50 mg/L
Ingredients: Wastewater (domestic, industrial, commercial, agricultural), runoff, stormwater, sewer l/l.	



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Secondary Treatment

The secondary treatment process consists of selector basins, aeration basins and final clarifiers and provides biological treatment of wastewater where most of the BOD (biochemical oxygen demand) is removed, ammonia is converted to a less toxic nitrate form, and phosphorus is taken up biologically.

The liquid discharge from the primary clarifiers blends with the return activated sludge (RAS) in the selector basins. The



Selector basins

selector basins are operated to maintain anoxic and anaerobic conditions that promote an environment to remove the phosphorus biologically rather than via chemical addition.

The aeration basins receive flow from the selector basins and are used to reduce BOD, convert ammonia to nitrate, and further promote biological phosphorus uptake. Two

basins are provided with fine bubble diffusers to provide air to promote the growth of aerobic microbes to consume the



Aeration basin



Aeration blowers

biological waste. Instrumentation is provided to monitor the dissolved oxygen concentration in the basins and to provide a means to automatically control air flow to the basins.

High efficiency blowers, located in the Process Control Building, are automatically controlled to maintain an adequate air flow to the basins. Control is achieved through the facility's SCADA system using "most open valve" control strategy. This provides an adequate balance of air between the basins and helps to maintain an adequate dissolved oxygen concentration in the aeration basins.

Effluent from the aeration basins flows to the final clarifiers which provide the final settling of solids and treatment microbiology. Microbial floc or activated sludge settles to the bottom of the clarifier and the clear liquid is allowed

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to overflow the perimeter weirs to continue on to the disinfection process. The settled sludge is pumped back to the selector basin as RAS, since this material contains the aerobic microbes that are used in the secondary treatment process. A smaller portion of this sludge is wasted by pumping it to the waste activated sludge (WAS) thickener and eventually on to the anaerobic digester for final stabilization.



Left: final clarifier
Above: RAS pumps and piping

Ultraviolet Disinfection

Clear water from the final clarifiers then flows to the ultraviolet disinfection process where UV light is used to reduce the disease causing bacteria, or pathogens, in the



UV disinfection

water discharged to the Pine River. The effluent wastewater is again sampled to verify that adequate treatment is being provided and meets the limits established by the WDNR and EPA before being discharged to the river.

Biosolids Treatment: Waste Activated Sludge Thickening

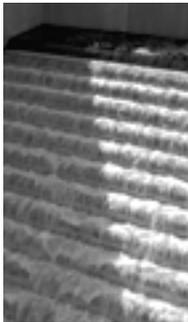
Waste activated sludge from the final clarifiers is pumped to the rotary drum thickener (RDT), located in the Sludge Processing Building where polymer is added to improve thickening characteristics. Sludge thickening increases the sludge concentration to between 4% and 5% solids before being pumped to the anaerobic digester.



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Following thickening, waste activated sludge is combined with primary sludge from the activated primary clarifiers,



Combo boiler/heat exchanger Anaerobic digester and flare which typically has a solids concentration between 3.5% and 4.5%. Combined primary sludge and thickened WAS are fed to the anaerobic digester, where the sludge is held

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for up to 40 days at 98°F and in the absence of oxygen. The anaerobic digestion process stabilizes the sludge and produces methane gas. Digester temperature is maintained by recirculating sludge through a combination boiler/heat exchanger. Methane gas from the anaerobic digestion process is used as a fuel in the boiler system to provide heat for the process and could be used to supply building heat in the future.

Sludge Dewatering

After digestion, liquid biosolids are pumped to a sludge dewatering centrifuge where it is combined with polymer



Biosolids dewatering centrifuge

and dewatered to a solids concentration of near 20%. The product is then called biosolids cake. Cake solids are further concentrated by natural drying on an asphalt pad, and then stored inside of the covered Cake Solids Storage Building until they are able to be land applied on surrounding farm fields in the spring and fall. Land application of biosolids provides a soil supplement that is rich in organic matter and nutrients.



Biosolids cake storage building

SCADA Controls

Supervisory control and data acquisition (SCADA) is a computer-based system for gathering and analyzing real time data. A SCADA system is used to monitor and control processes and equipment at the Richland Center wastewater treatment plant which includes both hardware and software. The hardware at the facilities includes main servers, SCADA computers, and programmable logic controllers (PLC) at the main process locations, all connected by a fiber optic cabling network.

Process data is collected by instruments located throughout the main and remote facilities and sent back to the SCADA system over this fiber optic network. Programmed logic on the computers and controllers analyze the data and make process changes as necessary by controlling the operation of related equipment. This data is also used to compile reports and historical trend lines, permit access to facilities, and provide remote surveillance of facilities. Graphical displays on the computers and PLCs allow facility staff to easily navigate among the various process screens.

Administration and Maintenance Facilities

Existing Administration Building

The construction project included renovations to the City's existing administration building to remove process equipment and expand garage facilities. This building

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Existing administration building

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now provides a home base for the City's collection system maintenance fleet.

New Administration Building and Maintenance Facility

The new facility was constructed with many new features that improved the work environment for the utility staff. A new administration building and maintenance building was



New administration building and maintenance facility

constructed which includes offices, process control space, conference room and a state of the art laboratory. The laboratory is used to analyze influent and effluent samples as well as samples from other facilities and industries.

The maintenance garage provides increased storage for vehicles and equipment, work bay area for maintenance and



Laboratory



Conference Room



Maintenance Bay

equipment repairs and a vehicle wash bay. The improved work space areas provide a significant improvement to the tools available to the operators to maintain and fix equipment.

Project Funding:

The project was broken up into two separate construction contracts; one for the force-main and the second for the wastewater treatment plant. The total budget for the two contracts was \$32 million. The project was funded by the City of Richland Center, USDA Rural Development, Wisconsin DNR's Clean Water Fund, and the Wisconsin DOA's Community Development Block Grants and included approximately \$7 million of grants.

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Waukesha Clean Water Plant hosts SE district May Meeting

WWOA SE District Spring Regional Meeting May 11, 2017 - Waukesha Clean Water Plant

While attendees enjoyed morning refreshments courtesy of Strand and Associates, the City of Waukesha Mayor, Shawn Reilly, welcomed the audience to the WWOA SE District Spring Regional Meeting on May 11, 2017 at the



Attendees

Tuscan Banquet Hall in the City of Waukesha. Mayor Reilly is very appreciative of the role water and wastewater professionals play in each city and he knows a thing or two about how important a good water supply is (or finding

one is), to a community. After reviewing 14 different water supply alternatives and after fourteen years of investigation and review the City of Waukesha received the unanimous support of eight governors to borrow and return Lake Michigan water.

Why does Waukesha want Lake Michigan Water? The answer was provided to the group in attendance by Dan Duchniak, who manages the Waukesha Water Utility. His presentation was titled, "How Changes in Water Supply Impact Your Wastewater Operations". Waukesha is located west of the subcontinental divide which separates the Mississippi River Basin and the Great Lakes Basin. A shale layer underneath the city prevents water from naturally percolating through the soils to recharge the aquifer. The current deep aquifer wells the city uses for its water supply cause a cone of depression in the aquifer. This cone of depression results in water quality concerns (radium) and is not sustainable for the long term. Therefore, Waukesha needs to develop a new water supply. After ample opportunity for public input, it was decided that Waukesha would obtain water from the City of Oak Creek. After the residents, business and industry have used the water it will

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- On the application indicate you are a water or wastewater facility (no additional paperwork needed)



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continued from page 20

follow a traditional path to the wastewater treatment plant, be discharged to the Root River and after 25 miles reach its ultimate destination, Lake Michigan. The flow to the Root River will benefit and improve low flow conditions and not have an impact during wet weather conditions.

How would you like to control the deep tunnel system for MMSD (Milwaukee Metropolitan Sewerage District)? Well, that is one responsibility Kevin Shafer, Executive Director for MMSD, has assumed. Even when he is on vacation in Mexico or Canada he personally manages a system 300 feet underground, 28.5 miles long and 17-32 feet wide that stores wastewater and surface water runoff until the Jones Island Wastewater Plant can catch up on incoming influent. The system according to Kevin is working “phenomenally better than envisioned” with an average of 2 overflows per year.

Kevin described the history of treating wastewater in Milwaukee as far back as 1918. Many of the original structures are still in operation at the plant which is on an island next to Lake Michigan.



Kevin Shafer

In 1968 Milwaukee added another treatment plant south of Jones Island, the South Shore Plant. Both of these facilities dry their bio solids to be used as a commercial fertilizer, Milorganite. MMSD is fully engaged with the community it serves to reduce surface runoff. Examples include: Lincoln Creek, The County Grounds, Hart Park, Green Roofs and 22,187 rain barrels that hold 1,150,000 gallons. While MMSD has reduced its energy costs by 20% with renewable energy their goal by 2055 is to meet 100% of those needs and reduce its carbon footprint by 90% from its 2005 baseline.

Kathy Bates, Science Professor at Milwaukee Area Technical College brought the group up to speed on the MATC environmental program that provides an associate degree for aspiring wastewater professionals. MATC formed the first

wastewater program in 1968 after the wastewater industry saw the need to bring individuals into the workforce that have specialized skills and knowledge to clean the water. This program continues to evolve and 50 years later the program is still producing graduates. Kathy noted that the State of Wisconsin is looking to mandate internships, paid or unpaid, as part of acquiring a wastewater license or degree. You can help the program today by volunteering to be a guest speaker, provide tours at your plant, offer internships, join the advisory committee, be a mentor or donate equipment. MATC will be hosting a 50th Anniversary Celebration in March of 2018. Contact Kathy if you have photos, stories or other items you would like to share for the celebration. batesks@matc.edu or 262-238-2264.

Bryan Viitala, Borger Pumps, guided the operators through a process that is critical for selecting the correct pump for the application to ensure long term trouble free operation. Important considerations include: flows/pressures, pump configuration, environment, routine maintenance, additional lifting devices such as cranes and ancillary pump equipment i.e. seal water, pressure switches, temperature switches,

continued on page 22

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VFDs, etc. Typically, the lifecycle cost of a rotary lobe pump fairs well for many sludge applications. These pumps can operate at high flow rates and high head conditions. The benefits of a rotary lobe pump can be characterized to include: ease of operation, minimal downtime during maintenance, low maintenance cost, small footprint and a wide variety of configurations and pumping applications.

The last speaker prior to the business meeting was Jon Schapekahn, City of Waukesha Clean Water Plant. Jon gave an overview of the CMOM implementation in Waukesha and their experience since 2009. He reviewed the goals of the plan and shared the reporting practices of Waukesha which included a manhole checklist, lift station maintenance, 20 year Master Plan and Five Year plan for upgrades to the collection system.

Amy Garbe, WDNR and Sharon Thieszen, WWOA President, updated the operators on current WWOA business prior to the business meeting.

After lunch, Robert Johnston and Lauren Kucyk, Liberty Mutual Insurance Company, identified “common hazards and controls for the wastewater industry” with a slide presentation. Most of the hazards that were identified are created from a lack of accountability on behalf of management and staff. Good management and a second set of eyes never hurts to maintain a good safety program.

Key Points:

- Pre use inspection of equipment
- Review safety data sheets
- PPE
- Document corrective action
- Get rid of faulty equipment
- Audit confined spaces annually



Waukesha's "Egg-Shaped" digester

Prior to the Waukesha Clean Water Plant tour, Travis Anderson of Strand and Associates lead us through the plant improvements at that facility with the focus primarily on the “Egg-Shaped” digester that was chosen because to the foaming problems in the anaerobic process that never seem to go away.

The next WWOA SE District meeting is set for Sept 14, 2017 in Elkhart Lake. The Northern Moraine Utility Commission located at the northern edge of the district will be the host. 🌐



Jeff Harenda, Waukesha Clean Water plant manager, accepting plaque as meeting host



Mike Blazejowsky receiving his 2016 SE Region outgoing chair plaque

Announcements and Upcoming Events

Registration is now open for the Basic and Advanced Microbiological Monitoring Training

Sponsored by the WWOA and North Central Region

Monday, August 7th (Basic) and Tuesday, August 8th (Advanced)



NOTE:

Participants must bring their own microscopes and mixed liquor samples.

Instructor: Toni Glymph-Martin

Location: North Central Labs, Birnamwood, WI

Register for one or both.

To Register go to: www.wwoa.org/conference

For more information go to the August calendar on the WWOA website (www.wwoa.org/calendar/)

2017 Annual Conference exhibitor booth registration now open

Register for your booth before the cost goes up on August 1, 2017.

Early Bird Cost per Booth: \$435.00
Cost per Booth starting on August 1, 2017: \$635.00

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WWOA award nominations for 2017 needed

Each year WWOA recognizes the dedication, service, and achievements of individuals in the clean water community.

AS OF TODAY, I HAVE RECEIVED ONLY ONE NOMINATION. Please think of those around you who have gone above and beyond to improve the treatment processes at their facilities or helped to advance the clean water field. Please review the list of WWOA awards below and submit a nomination for someone you feel is deserving of recognition.

1) George F. Bernauer Award: Criteria include successful plant performance, and/or successful solution of important or complicated operational problems, and/or outstanding contributions in the field of wastewater technology in the State of Wisconsin. The nominee may be a municipal, industrial, or institutional operator, administrator, or educator in Wisconsin. It is not limited to WWOA members.

2) Koby Crabtree Award: Presented to a WWOA member for excellence in technical support provided to others in

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the field of wastewater treatment. The individual should be a recognized authority in wastewater, share knowledge through presentation, contribute to problem solving, and provide service regardless of compensation.

3) Service Award: Presented to a person who has made an outstanding contribution to the WWOA in the areas of promotion, operation, management, program participation, or education. The nominee should be an active member of WWOA for a period of ten years.

4) Newcomer of the Year Award: Recognizes an operator, support staffer, or environmental technician with less than three years of experience as of August 1st of the year nominated. The nominee should demonstrate higher than average growth in their place of employment, a willingness to learn, innovation on the job, and exceptional enthusiasm for their profession. The nominator should be a supervisor, manager, peer, co-worker, or DNR personnel familiar with the day-to-day efforts of the nominee. WWOA membership is not required, and a two year membership or renewal is included in the award.

5) Regional Operator of the Year Awards: Given out to someone who has demonstrated excellent plant performance, and/or successful solution to a problem, and/or contributions to the wastewater field. It is open to Wisconsin Certified operators of municipal, industrial, or institutional wastewater treatment facilities. The nominee should be a five year member of WWOA.

The nomination form and instructions for all the awards can be found on the WWOA website or by contacting Jeff Bratz, WWOA Award Committee Chair, at (262)-206-1323 or wracd@tds.net. Please note, the Regional Operator of the Year Award nominations should be submitted to the Regional officers listed on the nomination form by July 8, 2017. All other awards need to be submitted to Jeff Bratz by August 1, 2017 for consideration.

Feel free to contact me if you would like any further information on the awards, the nomination procedure, or if you have a question if a potential nominee meets specific award criteria. Thank you in advance for taking the time and effort to nominate individuals and allowing WWOA to recognize these deserving recipients! 🍷

Sincerely,
Jeff Bratz Award Committee Chair

New & Improved Lab Event at 2017 Operator's Competition!

As a 40+ year old virgin— to the Operator's Competition— last year, I left with a new respect for what you folks do. I also saw the need for some change in the lab event. I thought it had gotten a little stale.

More importantly, I felt that the focus on lab work was being steered more towards doing it the fastest rather than doing it most accurately. Of course somehow between expressing those sentiments and being the new guy on the Board of Directors earned me the Chair for the Operators Competition committee. So now I need your help to ensure that this critical part of the annual conference is a success!

Without giving away too much, let's just say that the Lab Event will have a completely different feel to it this year. Tired of being audited? Yearning to be on the other side of the audit table? This year, for the lab event, YOU get to be the auditor. That's right, instead of being all nervous and performing under pressure, teams will "judge" the Lab Event judges and find the deficiencies in their work. Sound like fun? Worth playing for?

There'll be plenty of time for the winning team to bone up on lab material for the national competition. For now, I say it's time to lead this event to a higher place. The other three events will remain the same for 2017.

If you are interested, don't hesitate to call a couple of buddies and enter the event. Just to stir the pot and throw down the gauntlet, I think we need the Turdles and the New Turds on the Pot to return this year. The Turdles were just slightly edged out of victory by those New Turds. Is 2017 the year the Turdles push those New Turds OFF the Pot? And I want to see teams from UWSP and the tech. schools enter and show the veterans what they have.

Entries are available on the WWOA Website at <https://www.wwoa.org/files/annualconference/2017/Competition%20Application%202017.docx>. All teams must fill out a form and pay the \$200 entry fee, except the fee is waived for student teams..

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Contact Rick Mealy at (608) 264-6006 or email me at Richard.Mealy@Wisconsin.gov and I will help get your team entered, but don't wait too long, preparation for the competition is already well under way. I would like to have



all entries for the event in by the WWOA Board of Directors meeting on August 3, 2017

C'mon! Let's have at least 5 teams this year. In fact, let's shoot for 6! 🎯

WWOA member input needed

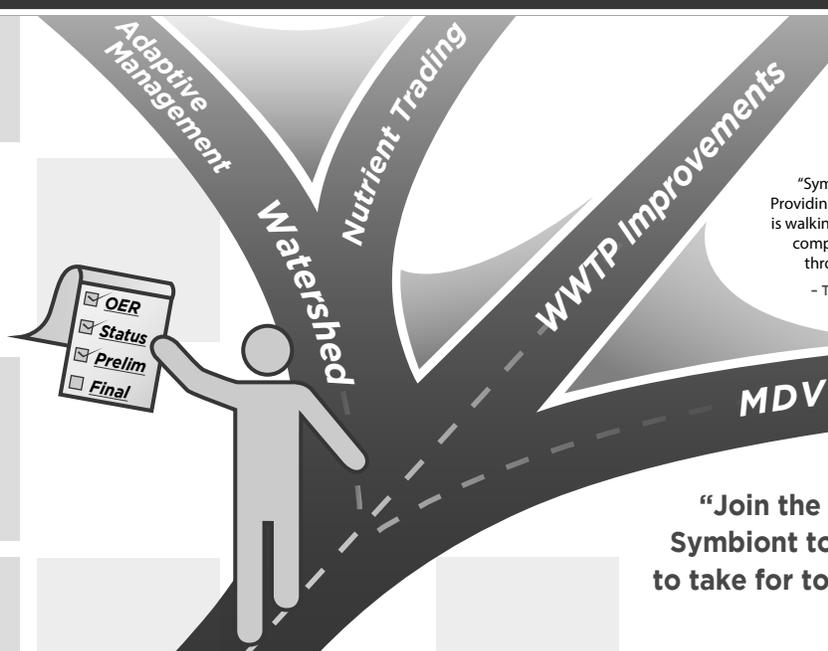
WWOA has been invited to participate in a project to understand and improve integration of distributed energy into water and wastewater utilities.

Be part of a unique opportunity for the story of energy efficiency and energy generation in wastewater treatment plants in Wisconsin.

To take part in this survey go to:
<https://remsurvey.rem.sfu.ca/DER4625/>

For more information on this project/survey go to: <https://www.wwoa.org/news/wwoa-member-input-needed/>

Do you know where you're going with phosphorus compliance?

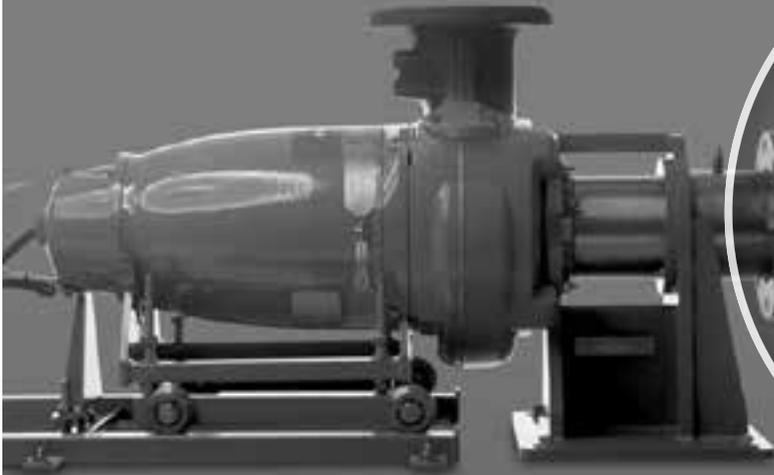


"Symbiont is a true partner with the Village of Grafton. Providing leadership, analytical support, and vision, Symbiont is walking with us through all stages of achieving Phosphorus compliance from data collection for permit preparation through compliance planning for the final solution."

- Tim Nennig, Utility Superintendent - Village of Grafton

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Membership renewal letters have been mailed for memberships ending on 9/1/17.

Please return your renewal forms along with payment as soon as possible.

If you have any questions, please contact Karen Harter, Executive Secretary.



51st Annual Conference

Oct. 20-27

Madison Marriott West Middleton

- Tuesday:** Golf, Sporting Clays & Bike Ride
Pre-Conference Workshops include
WDNR Lab Certification and Safety
Meet & Greet
- Wednesday:** Keynote speaker-
LeRoy Butler-Green Bay Packers
Exhibitors Expo/Technical Sessions/
Operators Competition/Exhibitors
Reception
- Thursday:** Exhibitors Expo/Technical Sessions/
Business Lunch/Plant Tours
Special Technical Session: Septage
Compliance & Master Operator Training
Evening Social Hour/Annual awards
Entertainment featuring Dobie Maxwell
"Mr Lucky" Comedian/Card playing
- Friday:** Farewell Breakfast with
Keynote Speaker: Greg Paul

Online registration for the conference begins June 5th at www.wwoa.org

Conference booklets were mailed out at the end of May. Conference Booklet will be on-line at www.wwoa.org if you didn't get one.

WE LOOK FORWARD TO SEEING EVERYONE AT THE 51ST ANNUAL CONFERENCE IN OCTOBER!!!!



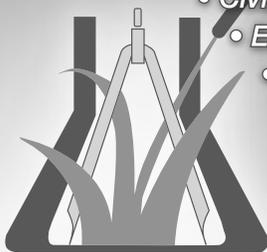
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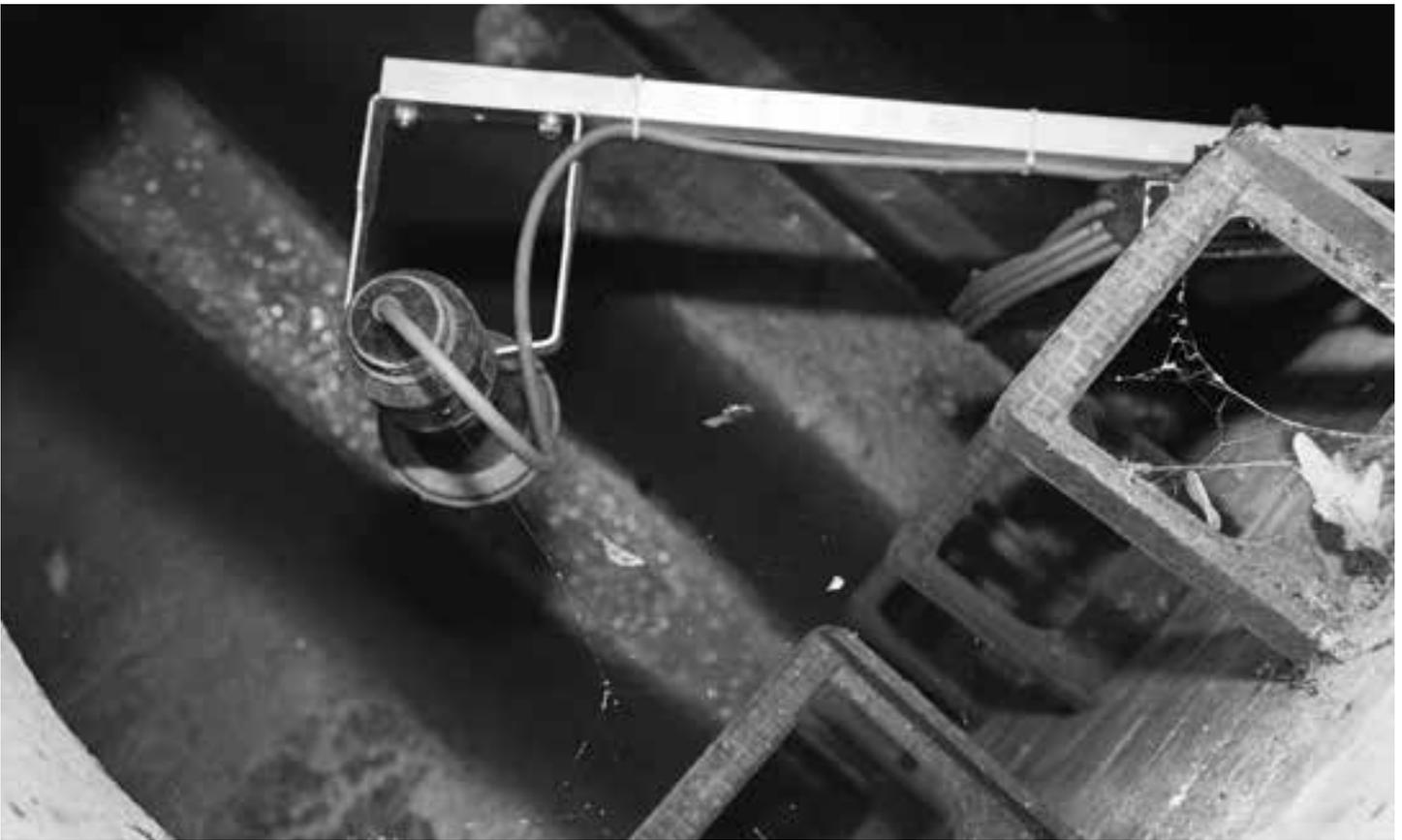
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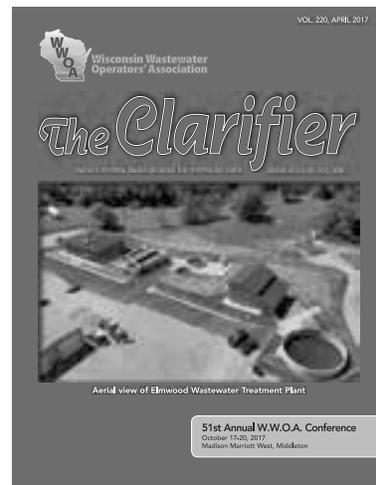
The front cover of every issue includes the following statement:

“The Clarifier is the publication of the Wisconsin Wastewater Operator’s Association and is intended to inform and educate the membership on issues related to the treatment and control of wastewater.

All members are encouraged to contribute to the mission of the Clarifier.”

Submitting an article can be as easy as mailing a letter or sending an email. Perhaps you are not a typist or do not have access to a computer? No problem, just write your thoughts down on a piece of paper and we will do the rest.

Or give me a call and we will figure something out.



Jon Butt, Clarifier Editor
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