

50TH ANNIVERSARY 1955-2005

Clarifier

WISCONSIN WASTEWATER OPERATORS' ASSOCIATION, INC.

Volume 161, June 2005



Leo Templeton, Honorary WWOA Member

***39th Annual W.W.O.A. Conference
October 4-7, 2005
Regency Suites/KI Convention Center, Green Bay***

**HOST:
Green Bay Metropolitan Sewerage District**



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President's Message

Fellow WWOA Members:

Has it been a really busy first 4-5 months of 2005; or is it just me trying to convince myself that I truly am that busy?

Take for instance here at the Utilities in Grafton. We are attempting to wrap-up an ongoing WWTP upgrade project, have just kicked off the construction phase of a lift station/force main replacement project and are in the planning stages of an extensive well pump pull and rehab project. Not to mention my spaciouly challenged office being overrun with a half-dozen 48-qt. coolers filled with compliance sampling containers waiting to be filled. Throw in the tasks of the two dozen other "hats" most of us wear and things can get a bit chaotic to say the least!

I have had the distinct opportunity to attend meetings in 4 of 6 WWOA Regions so far in 2005; the North Central (January), Southeast (February), Northwest (April) and the West Central (May). Looking forward to attend meetings yet this summer in the Lake Michigan and Southern Regions.

One of the most rewarding and memorable parts of my presidency to date has been the opportunity to travel about the state to the various Regions and meet with the WWOA membership. My sincere appreciation goes out to all the

Regions and the host communities for the many jobs well done, planning and successfully completing some outstanding regional meetings.

Have to put a plug in for the WWOA's web site Historical Section and some great changes that have recently occurred there. My sincere gratitude goes out to fellow members: Tom Asmus (Historical Committee Chair), Leo Templeton, Ron Altmann, Scott Thompson (WWOA Web Master) and others who have spent a great deal of time and effort assembling some very interesting and informative postings. Be sure to check out this fantastic new section at wwoa.org.

That brings me to the Annual Conference. Your WWOA Board of Directors have had several visits to Green Bay and the Regency Suites/KI Center; site of this year's event. We are excited about the change in scenery and are well on our way to another successful Conference. Tech Program Chair Kay Marshall continues to put the finishing touches on a fantastic technical program for the membership. Carol Strackbein and the Exhibit Committee are busy with their exhibit hall plans and preparations. We have been oh-so-close the past two years with that 1000 attendee mark; will this be the year?

Hoping everyone has a summer to remember with family and friends. May your tee shots fly far and straight. May your stringers always be heavy and full. May your outdoor family picnics avoid rainy skies. May your softball bat always make contact with the ball. May your prop never find a rock pile. Sure is nice to know the warm weather is right around the corner. Seems like a long time in coming this year!

In your service,

Timothy A. Nennig
WWOA President

Leo Templeton, Honorary WWOA Member



Leo and some of his old buds

The first time I met Leo Templeton was, at all places, a golf outing.

Tim Pokorsky has asked me to help him with registration at the golf outing in Port Washington in the mid eighties. I had not met too many people in the organization so I was a little shy and uncomfortable when the morning of the golf outing arrived.

Then, I had the pleasure of meeting my three favorite people, Leo, Al Winter and Pete Albers. With this group on my side it did not take me too long to feel comfortable with the group. I seem to remember that after the outing, Leo, Al and Tom did a tour of all the Port Washington bars along with a tour of the fire station.

Leo has always been there for me ever since that time, greeting me with a big smile and a hug. What more could one ask?

Leo, you are a very special and dear person to me and others in our organization. Keep smiling and stay happy.

Carol Strackbein

"When I first started going to WWOA conferences, I always spotted a small man toting a Polaroid camera. I wondered who he was. Well it wasn't long (probably about 2 seconds) after I was elected to the Board that I was introduced to Leo.

Leo was and is one of the nicest guys you'll ever meet. Whenever the subject of pictures came up during our Board meetings, everyone knew that Leo would take charge and get them taken. That very fact made our jobs easier because we didn't have to worry about it. Leo was doing it.

Every year one of the very first people I meet at the Conference, even before the Meet and Greet, is Leo. His smiling face and greeting is always a great way to start the conference. He may be small in stature, but his heart is humongous! Thanks Leo for your dedication to our organization, but most of all for being you!"

Judy Tholen

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As one of the many adopted uncles I have acquired over the years, I always looked for guidance for so many important daily decisions made. I remember a time in the early 80's when Leo was providing directions back to the Hotel in Racine after a night out, we noticed the sign that read South Milwaukee one mile ahead and turned around. He was also nice enough to stop at a local information center (broken down gas station) and let me ask for directions. The World wouldn't be the same without you, we love ya Leo.

LaMont Albers

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I have always had good times with Leo. Mostly out on the golf course. We play a game called "Bingo Bango Bungo" or "First ON, Closest to the Hole, and First IN". We would play for dimes per point. Leo usually won. I usually won at golf, but lost the money game. After a couple of costly years, I figured out he was not playing the golf game to win, but was playing the money game. He would always say you "can't drink your score."

Ken Sedmak

Leo Templeton is someone who shaped my career in his own unique way.

When I started working for the DNR, I was an idealistic young whippersnapper fresh out of college. The DNR at that time operated in much more of a "command-and-control" mode than it does today. And Manitowoc like many cities was faced with an array of new regulations regarding the operation of their wastewater treatment system. So it was not unusual that we had occasion to butt heads over a few things.

But Leo, in his classic low-key style, would always invite me in to sit down and talk things through – to make sure that we both understood whatever problem needed tackling. Thinking back, there are two key concepts in that approach: mutual understanding and problem-solving.

Maybe it's not just my career that Leo helped shape, but the DNR as a whole.

Jeff Haack - DNR

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Leo Templeton, Honorary WWOA Member

As the WWOA historical committee chairperson and author of several historically based articles for our organization, Leo Templeton has been an invaluable wealth of information. The information obtained from Leo in our commutes to and from historical committee meetings has been invaluable in composing these articles. Though some of the finer details elude him, he does an excellent job in "painting a picture" and giving a feel of what it was like at a certain place in time in our history.

Tom Asmus

WWOA Historical Committee Chair

When I started out in the industry, Leo Templeton, Al Winters, Pete Albers, and Bill Stubbe were active in WWOA and into having a "good time". I never knew how far back in the organization they went, but they definitely had history. It seemed like where there was one, there were the others. The other thing was that they realized that a major factor in the success to WWOA was to work hard and have FUN! Actually, their involvement and enjoyment was doing that. Whether it was serving on the Historical Committee or the annual golf outing, it was work to do it...but Leo made sure there was fun in doing it too!

Dean Falkner

Historical Perspective

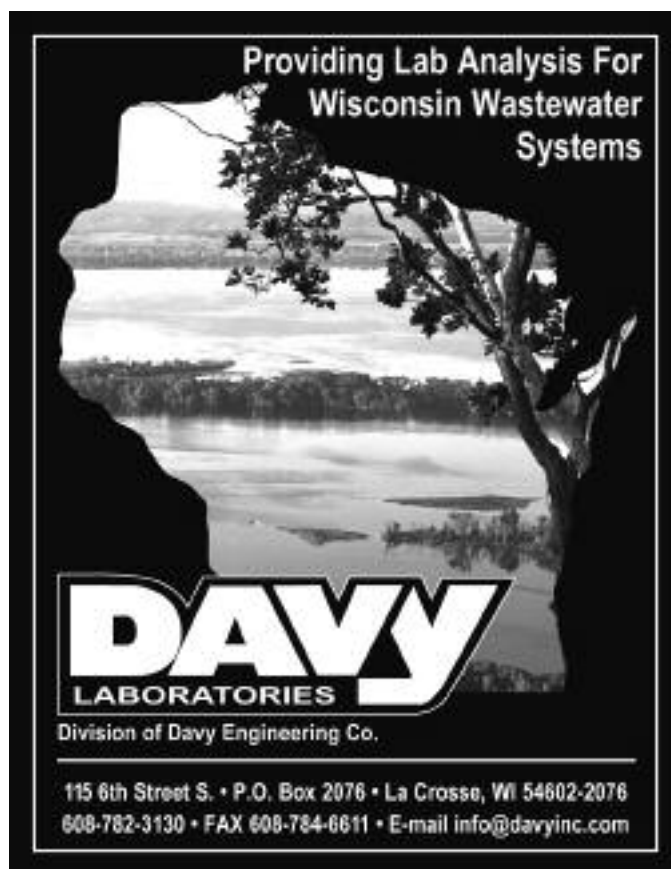
Dan Busch, Clarifier Editor

We wanted to put together a chronological schedule of Leo's long time association with WWOC and WWOA, but found we didn't have much to start with because a while back, someone dropped the stone tablets that had captured Leo's membership legacy and of course they shattered on impact. That's just a clue as to how long Leo's been around.

Leo became a member in 1963 and was recognized with the Bernauer Award in 1976. This was the same year he became a member of the Historical Committee and has served on this committee ever since. Leo was elected as Vice President in 1978 and served under Bill Stubbe, Stan Budrys and Pete

Albers before serving as President of WWOC for the 1980 – 81 term. No wonder he smiles a lot!! His first official act as President in November 1980 was to deal with the resignation of Ward Holtz from the Secretary / Treasurer position. Paul Nehm served from 1980 – 1985 and then Ward returned to the position. Leo also promoted and supported the present concept of Regions affiliating with WWOC. He was also recognized in 1992 with the WWOA Service Award.

I remember meeting Leo at the 1978 Annual Conference at Red Carpet Inn, Milwaukee. I was only one of many young upshots who over the years were welcomed with open arms by Leo. My first thought was, here is a man I can follow, emulate and respect. Why? Because he was the same height as I was!! To this day there is probably not a better ambassador for WWOA than Leo Templeton!! He undoubtedly deserves recognition as Honorary Member in an organization that he has, and still continues to, support with all his heart and soul.



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Northwest Wastewater Operators Association Meeting

April 8, 2005

Barron, Wisconsin

Mike LaRose, District Chairperson, opened the meeting with a few announcements and took a moment of silence for deceased operators Ruby Staub and Rod Peterson. Both will be truly missed.

The "By Golly You Done It" award was next presented to Bruce Degerman of Barron. Bruce mentioned how honored he was to receive the award.

Next Mike LaRose introduced the Mayor of Barron, Sylvia Olson, who welcomed the group to Barron. She emphasized the importance of our jobs as operators and how valuable we as employees are to our cities. She also mentioned with the passing of Rod Peterson, how numerous cities had called and asked if they could do anything to help. She offered her thanks to the group.

Our next speaker was Alan Frahm, Cummins NPower, and LLC. His talk stressed the importance of preventable maintenance on generator sets. The three most preventable failures are block heaters, batteries and fuel. The five-year replacement items should include coolant, thermostats, belts and hoses. He also talked about the importance of running your diesel generator on load periodically to burn out all residues in the motor, which over time will reduce engine power.

Next we heard a presentation by Don Grove from Energy Conservation Consultants, Inc. His talk focused on Infrared Surveys and how they can save lives, protect facilities, equipment, maintain productivity, save money, and help with certification and insurance. Infrared shows temperature change through a visible image, which is helpful in finding bad or potential connection problems in all electrical equipment. Another use would be to identify potential bearing failures in equipment and also roof surveys.

Next on the agenda Dave Braun of Braun Pump & Controls gave a very informative presentation on pump maintenance in lift station applications. He

covered all key points from seal oil inspection to troubleshooting electrical problems.

After an excellent lunch our afternoon speaker was Clint Nesseth, President of NTH Hydraulic Systems. He gave an excellent talk on hydraulic pumps and the advantages of using hydraulics for powering equipment. He also described some of the equipment we would see on our tour of the Turkey Store Wastewater Plant, as they were the supplier of the agitators used for mixing biosolids at the plant.

Ken Sedmak of Donohue and Associates gave an overview of the Turkey Store Wastewater Plant design. This plant treats the slaughterhouse and meatpacking wastewater from the Turkey Store, which processes 27,000 turkeys per day, 5 days a week. As an operator of a treatment plant one can only imagine the challenges this poses to the

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operational staff at the Turkey Store. We then took a tour of the Turkey Store Wastewater Plant, which utilizes an orbital oxidation ditch process for treatment. The plant treats a flow of 1.4 MGD with BOD loadings of 15,000 lbs/day.

Marty Rognlien with Intellisys filled the group in on XML files and EDMR reporting to DNR, which is on the near horizon for all plants.

Pete Prusak from the DNR discussed how the ECMAR is being implemented and some of the steps needed to successfully complete the ECMAR.

Kay Marshall, Vice President WWOA, talked about the scholarships the WWOA offers annually to its members and also the upcoming state conference in Green Bay.

Tim Nenning, President WWOA, who made the trip up north to be with us. He discussed the New Directory and some of the new sections on the WWOA web site.

Mike LaRose, District Chairperson, opened the business meeting. A motion and second was made to approve the minutes of the Fall 2005 meeting in Turtle Lake. Mike talked on updating the mailing list and the importance of pre-registering for future meetings. Also, members should give input as to what speakers they would like to hear at future meetings. Mike Romsos, District Treasurer, gave the treasurers report to the group. A motion and second was made to accept the treasurers report. Upcoming Meetings are set for June 24 at Medford and September 30 in Cumberland. A motion was made and seconded to end the meeting.

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History of The Clarifier

The Clarifier made its debut in July of 1955 as a bi-monthly newsletter from the Conference of Wisconsin Sewerage Works Operators (COWSWO – a.k.a., The Conference). The first issue began by welcoming readers to the newsletter, then asking them to provide information concerning plant operation or anything that would interest operators. All state operators were mailed the first issue and then readers were invited to join for \$1.50 annual dues.

For many years the Clarifier was a one-page newsletter hand typed on letterhead with brief announcements, only 2 to 3 lines for each item reported on. Below are some interesting examples from the first few years:

Excerpts from Early Clarifier's (html)

View PDF scans of the first two issues of the Clarifier as published by COWSWO. The September issue also contains the fall conference agenda. (Take special notice of the day of the week the conference was held—a Saturday.) The letterhead also details the organizational structure of COWSWO; Officers, committees, and area chairman of the time. To the lower left, under legislative is G. Bernauer after whom the prestigious Bernauer award is named after.

July 1955 Issue (3.6Mb PDF)

September 1955 Issue (7.2Mb PDF)

July 1955 Issue (0.39Mb jpg)

Though it is believed that the early COWSWO organization mailed occasional newsletters, the Clarifier was the first attempt to provide timely news to members on a regular basis.

Without ads, membership dues were needed to pay for printing and distribution. As funds dwindled, attempts were made to have a manufacturer sponsor an issue. The Clarifier requested \$25.00 to cover costs of distribution for what basically amounted to an ad in the publication. In 1961, the Clarifier was in danger of not being able to publish issues bi-monthly and may have had to skip issues. However,

to keep the Clarifier going, Jerry Dohohue Engineering of Sheboygan added unspecified funds to the treasury to keep the Clarifier solvent. Later that same year, Lew Allen & Son, Dick Allen sponsored the June issue in what was probably the first ad for the Clarifier (see “Excerpts from Early Clarifiers” above).

Browsing through early Clarifiers, four news items stand out:

1. Pay your dues! Dues were a constant battle with members. In fact, when the organization changed its name in 1967, one of the first issues tackled was delinquent dues published in the Clarifier.
2. Finding a recipient for the Bernauer award. Historically, the Bernauer award is the most prized award given by the organization.
3. Conference and Short Course activities. Of course, as with today's Clarifier, the conference

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is still one of the most important activities of the organization.

4. Send in your news. The early Clarifiers always asked for new items.

Other activities reported include job transfers, an untimely death, broken leg of an operator, and occasionally there was a good fishing story thrown in.


The Clarifier documented an important turning point in the organization, the unpopular decision to cancel the 1967 spring Short Course. Though the organization had discussed changing its name in past years, it was this event that initiated the change. No longer would there be a spring and fall conference, but efforts would be concentrated on one fall conference. These details can be read in scans of the 1967 January and March Clarifiers.

January, 1967 Clarifier (3.1Mb PDF) – Discusses the postponement of the Short Course and the new direction the organization could take. Included is a competition for a name change. (BTW, the winner received a \$25.00 savings bond)

March, 1967 Clarifier (4.9Mb PDF) – Notifies members of a letter sent to the director of the Department of Resource Development describing their disappointment over the Short Course cancellation. The bottom of this issue is torn off because members had to vote on changing the COWSWO Constitution that switched elections from the spring to the fall conference. (The Wisconsin Department of Resource Development was newly created in 1965 and took over duties of pollution control from the Wisconsin Board of Health. Obviously, this Department didn't see a need for the Short Course and this decision was not very popular with the organization. Two years later, The Department of Resource Development would be combined with the Department of Conservation forming the Department of Natural Resources in 1967.)


Clarifier Editors

Though no official editor could be found for early Clarifiers, the first newsletter does ask members to send information for publication to Frank I. Vilen of the Kenosha Sewerage Plant. Letterhead from the second Clarifier does mention R. Frazier of Oshkosh



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as head of the Clarifier, and F. Vilen as the head of the newsletter. Details on the early structure are sketchy, but these men were obviously early leaders of the publication. In October of 1957, Roger Scovil of the Madison Oscar Mayer plant served as the first guest editor. Later newsletters do mention Frank I. Vilen as the editor (April 1961), thus somewhere in that time span a decision was made to name Frank as the editor.

Clarifier Editors

1955 – Frank I. Vilen of Kenosha
 1957 – Guest editors tried—later Clarifiers name Frank I. Vilen as the editor.
 1960 – Roger Scovil temporally fills in for F. I. Vilen
 1961 – Frank I. Vilen resigns. Assistant editors, Roger Scovil & Roger Valstad assume duties.
 1963 – John Wallendall of Waupun
 1973 – Al Winter of Kaukauna
 1980 – Lynda Bentley & Robert Deering of Green Bay
 1985 – Lynda Bentley & C. J. Townsend of Green Bay
 1987 – Lynda Bentley, C. J. Townsend, & Dan Busch of Green Bay
 1992 – Dan Busch of Green Bay

This list does not include all the countless co-editors, Clarifier committee members, and contributors. The Clarifier is nothing without its members. Thanks to all of you.

The Clarifier's growth is evidenced by the number of pages published through the years. The early Clarifiers were basically one page, typed front and back, with a few inserts for special events like the conference.

1955 – 1 to 2 pages
 1972 – 4 pages
 1974 – 6 pages
 1975 – 8 pages
 1977 – 10 pages
 1978 – 12 pages
 1986 – 16 pages
 2001 – 20 pages
 2003 – 40 pages
 2005 – 55 pages

Clarifier Publishing – A Story of Progress and Growth ([html](#))

Timeline of the Clarifier's History ([Mb PDF](#))

Clarifier Letterhead Logos ([3.3Mb PDF](#))

We will probably never know what the founders of the Clarifier had in mind 50 years ago. Did they think their one page newsletter would grow into a 55+ page publication? A newsletter that was once sent to less than 200 members of the COWSWO would now be distributed to over 2,000 members of the WWOA. Through this progression, one thing has remained the same, The Clarifier is by Operators and it is for the Operators of this organization. The Clarifier—a survivor of progress and change.

2005 Clarifier Deadlines

<u>Issue</u>	<u>Submittal Due Date</u>
September 2005	August 12
December 2005	November 11

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The Clarifier

(Published Bi-monthly by the Conference of Wisconsin Sewerage Works Operators)

July, 1955

The Clarifier

(Published Bi-monthly by the Wisconsin Wastewater Works Operators Conference)

July

1968



The Clarifier
Published Bi-monthly by the Wisconsin
Wastewater Works Operators
Conference Inc.



December

Volume 9

1974

The Clarifier

Published Bi-monthly



FEBRUARY

VOLUME 52

1983

The Clarifier

**WISCONSIN WASTEWATER WORKS
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The Clarifier

WISCONSIN WASTEWATER WORKS
OPERATORS CONFERENCE, INC.

February

Volume 92

1991

The Clarifier

WISCONSIN WASTEWATER WORKS
OPERATOR'S CONFERENCE, INC.

December

VOLUME 105

1993

The Clarifier

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VOLUME 115, DECEMBER 1995

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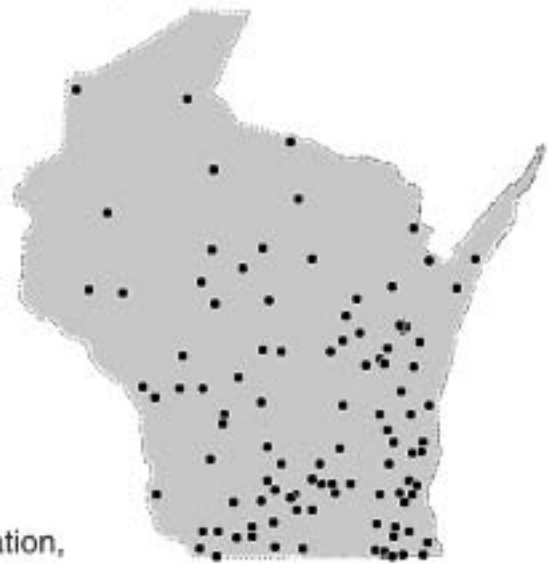
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The Clarifier

(Published Bi-monthly by the Conference of Wisconsin Sewerage Works Operators)

July, 1955

This is the first issue of a newsletter for and about Sewerage works operators in Wisconsin. We hope to make this truly a newsletter which will be of interest to all operators.

A hearty welcome to all new members of the Conference. We hope you will enjoy this association with your fellow-operators and profit from the exchange of information at our meetings.

The success of this newsletter depends on you. We hope to publish items concerning plant operation and news about operators; so if you have anything of interest about your plant; about new developments; or problems; or happenings in your work send them on to me. Just mail to Frank I. Vilen, City Hall, Kenosha, Wisconsin.

The following have agreed to help in gathering material for the Clarifier: Otto Rimmele, Janesville; Dave Hanley, Waukesha; Miles Bedker, Beaver Dam; James Richgruber, Sparta; Milton Westfall, Sturgeon Bay; L. H. Schafer, New London; Ralph L. Hansen, Antigo; Lloyd V. Owens, Eau Claire; Clarence Robertson, Luck; and Merle Baldwin, Stevens Point.

Did you know ours is an ancient and honorable occupation? Sewers have been found in India which date back 3000 years before the birth of Christ.

Progress is being made in the plans to certify treatment plant operators. This will be voluntary, of course, but, once in effect, it should do much to raise the standards in our field and to bring public recognition for our work. Representing the Conference on the certification board will be Wahlstrom, LaCrosse; Martin, Green Bay; and Vilen, Kenosha.

Twenty-one Wisconsinites attended the recent Central States meeting in Rochester, Minnesota. Congratulations to Bob Frazier who was elected third Central States vice-president.

Racine's Tom Hay gave a paper on the work he and Chain-Belt did on a flotation process. This is the "upside-down" deal where, instead of settling out the sludge, you float it to the surface with the aid of air and skim it off. On the basis of the work he has done, Tom says it looks pretty good.

We're looking for a location for our Fall meeting. Anybody know of a Chamber of Commerce which would like us to visit their town for a day?

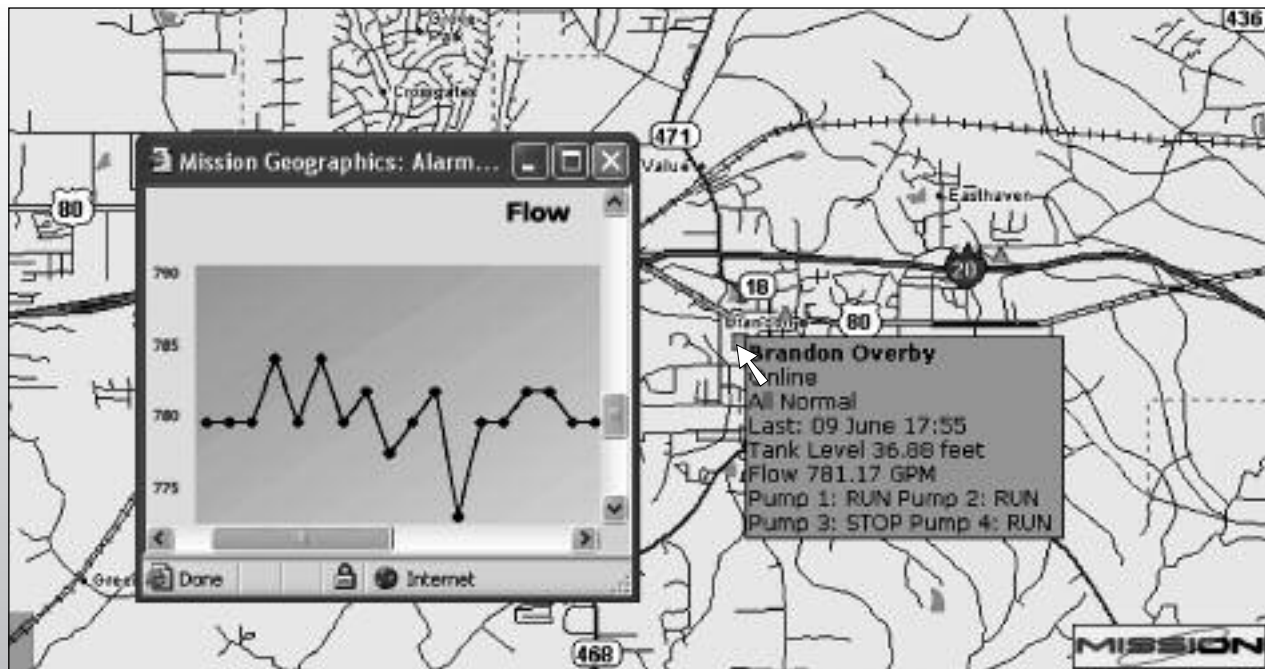
Sanitation is not a new idea. Read your Bible, Deuteronomy, Chapter 23.

This newsletter is being sent to all operators including those who are not now Conference members. The dues are a mere \$1.50 per year. All operators are welcome to join. If you like this newsletter, your dues will make it possible to continue, and perhaps allow us to publish once a month. Write to Secretary C. A. Kelley, Elkhorn, or President C. W. Bogenhagen at Fond du Lac.

O. K. you guys. Let's everybody get into the act. Send in the material so that we can report on what we operators are doing everywhere in the State.



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Clarifier Publishing — A Story of Progress and Growth



Hand Typed on Letterhead

Early Clarifiers were typed on letterhead, most on one side of an 8 1/2 x 11" page. The photo shows the August 1961 issue, which is unusually large, typed on 8 1/2 x 14" paper. As can be seen by the crease in the photo, the paper was folded and then placed in an addressed envelope for mailing.

This method of publishing was used until the mid 1970's.



Cut-and-Paste Method

As the Clarifier became more popular, more information was sent to the editor. Photos and captions, some hand written, would appear in select issues, especially after the conference. The photo shows an editor's copy of the cut-and-paste method of Clarifier publishing. Each hand-typed page would be taped together in book form. You can see tape on the edges, and notice the tape in the middle forming a binding. Photos would be taped in as well, as can be seen in the lower right. This original copy was sent to the printers for publishing and distribution.



The cut-and-paste method of publishing was used from the mid 1970's until the mid 1990's.

The photo to the left shows one technique used to insert quality ads into the Clarifier. Mylar sheets would be taped in that provided a negative for the printer.



Electronic Desktop Publishing

Today's Clarifier is published electronically with Quark Express. The photo shows our present editor, Dan Busch looking over an issue just completed by Jean Van Sistine.

Excerpts from Early Clarifier's

Inaugural issue, July 1955...

Twenty-one Wisconsinites attended the recent Central States meeting in Rochester, Minnesota. Congratulations to Bob Frazier who was elected third Central States vice-president.

Racine's Tom Hay gave a paper on the work he and Chain-Belt did on a floatation process. This is the "upside-down" deal where, instead of settling out the

sludge, you float it to the surface with the aid of air and skim it off. On the basis of the work he has done, Tom says it looks pretty good.

From the February, 1956 issue...

Time for another issue of the NEWSLETTER and very little to write about.

Incidentally, Miles' letter tells us that he is the proud



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father of a baby girl. Our congratulations and our best wishes to the other little girl who is bravely fighting off a long and serious illness.

The Committee for Voluntary Certification of Operators has been meeting regularly. To date, plant classification, operator qualification, and rules of procedure are just about completed. Some work remains, but the whole business should be all wrapped up in four or five months. As soon as the plan is complete, copies will be mailed to every plant in the state. Soon this Conference dream will become a reality.

1. How about an Operator-Of-The-Year award? In the past issues, we mentioned one of our members who has successfully solved a milk waste problem. Would not recognition by the Conference mean a lot to him and to the community which has benefited from his efforts?

From the April, 1956 issue...

A letter also from Al Schafer at New London who reports that the Walleyes are running in the Wolf River. They are busy landscaping the grounds at their new plant and have gone into hauling liquid sludge by the tank truck. Al sent along a news item and picture of John Kafka running some mild tests. Our boy John is real photogenic.

How would some of you equipment fellows like to sponsor an issue of this newsletter? The cost is about \$25.00 per mailing; it reaches about 300 operators in Wisconsin. We will be glad to give you a by-line and publish a short item about your products. How else can you get your message across to so many for so little?

From the October, 1957 issue...

MANITOWOC HOTEL (Manitowoc – about 6 miles from Two Rivers) - good accommodations; single room (no bath) \$3.75, single; \$5.50 for two with double bed. Single, with bath, \$4.75 and double, with bath, \$8.00. Rate for twin beds with bath is \$9.50.



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Liquid Ferric Chloride
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"Clean Water is Our Life"

From the December, 1959 issue...

THE NAME OF THIS publication of ours is THE CLARIFIER. Well, we wish we had something to 'Clarify'. We would like to use our space to report on happenings in our Wisconsin treatment world, and to have you fellows write to us occasionally. What we need in NEWS! It need not be in English – among our personnel we have Poles, Swedes, Germans, Finns, Italians, so that translations is no problem.

From the June, 1961 issue...

First ad found. Notice the postal zone and phone number. Before 5 digit zip codes, large cities used postal zones. Early phone numbers had exchanges which used the first two letters of a word that corresponded to numbers on the dialer. Thus, somewhere in Madison there is still a 249 exchange.

LEW ALLEN & SON, DICK ALLEN – of Pumps and Equipment Inc. 817 Mayfair Ave., Madison 4, Wis. Are prepared and equipped to service all makes of sewage pumps and related accessories. If you are in a pinch you can get ONE DAY SERVICE by calling Lew at Madison telephone exchange CHerry 9-2186. The Allens are well known to the Conference members, Lew Allen was speaker at the 15th Sewage Works Operators Short Course, 1957, his subject being "Pump Maintenance". The major equipment handled by Pumps & Equipment Inc. includes Fairbanks-Morse; Marlow; Smith & Loveless; and Myers Water Systems, however, they are equipped to handle all makes.

From the February, 1974 issue...

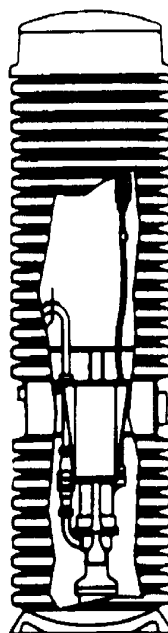
The Clarifier editor Al Winter of Kaukauna commenting (venting) on the initiation of the Wisconsin Pollution Discharge Elimination system permit program that will cause more stringent limits and higher operator skills.

As Editor I would like to comment on the above. Having started some 27 yrs. ago in a small plant, I wish to say this. It can not be done, unless the DNR gets off their doff and hits the Towns, Villages and smaller Cities with fines and make them provide the plant operator with people to run the plants. Also there is no one man who can do the lab. work which

DNR plans to have, take care of his mechanical work and cleaning with one man operation. As the man says its hard to remember your objective was to drain the swamp, when you are up to your ass in Alligators, so lets have a few comments from you One man Plants. I could go on, but all I will finish with is to say don't tell the operators, God knows they have been trying, talk to the heads of the Cities, Towns, Villages and your consulting Engineers. (Sorry this has been a sad story of mine for years). Also pay them what their worth.

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Clarifier History

[illegible]

The Short Course was the main means for operators to get together. It was a full week of courses and COWSWO meetings. Later, when certification began in 1958, Friday was exam day.

1. The year of 1927 is based on dated photos, such as 10th Short Course in 1947 and 15th Short Course in 1957. The Short Course was held in April or May of odd numbered years at the UW Madison Hydraulics Lab. Additionally in 1927, the Committee on Water Pollution was created under the Wisconsin Board of Health.

2. Unhappy about the sudden cancellation of the 1967 Short Course, COWSWO decided to make a break from the past and re-name the organization. Though the name change did not occur until 1968, the meeting in 1967 is considered to be the beginning of the WWWO and the year of the first conference. The first annual meeting was held at Biggars Motel in Appleton (fall of 1967). In 1969, the WWWO would re-write the Constitution and By-laws.

3. After incorporation, each issue is a numbered volume, beginning with the July 1973 issue.



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The Clarifier

(Published Bi-monthly by the Conference of Wisconsin Sewerage Works Operators)

This issue of the newsletter was held up for a couple of weeks so that we could publish all the details of the Fall meeting at Eau Claire on November 5th.

The meeting promises to be a fine one -- with a varied and interesting program. (See reverse side for the program.) All operators are invited -- whether or not they are Conference members. Wives are invited also and a wonderful program has been planned for them.

A reservation card is enclosed and we ask that you mail it not later than October 20th so that our hosts will know how many to expect. The fellows in Eau Claire are working hard to see that we have an enjoyable time, so let's get up there -- all of us -- for the meeting. Fill in the card and get it in the mail whether or not you plan to attend.

Let's go -- you area chairmen! We need material for this newsletter. Anything will do -- births, weddings, news about your operations. Remember, we all are interested in reading about what is going on in our business.

Received an interest letter from Wolkowski at Baraboo. He just completed cleaning his digester after 18 years of service. Space will not permit a detailed account of this operation, but we can say that the Baraboo crew did a very workmanlike job. Any operator, who is faced with this difficult and nasty chore, would do well to talk to Wolkowski and find out how he emptied this digester and got it back into service with the least amount of trouble.

We are just about ready to go on the voluntary certification of operators. All members of the board have accepted their appointments and we hear they will meet soon.

Did you read Lloyd Owens' fine article on Work Assignments in the Sewage Works Journal? Congratulations, Lloyd, for a well-written and informative paper.

Have you joined the Conference? We need you -- you need us.

Fond du Lac has recently installed a 100KW generator powered with sludge gas. Bogenhagen reports daily gas production figures up around 80,000 cu. ft. This is fantastic -- population around 30,000.

Do you still call yours a "disposal" plant? We think "treatment" is a better and more accurate word. Remember that little building over the hole in the back yard? That's a disposal plant. Let's use the right word to describe what we do.

Rimmele (Janesville) reported a sour digester with a pH of 5.5. We hope Otto has it back in normal operation by now.

Enclosed with this newsletter is an open letter to your municipal administrator. It is designed to show him how you, your work, and your community will benefit from Conference membership and attendance at meetings of operators. If your municipal officials have not been sold on your association with other men in your field, we suggest you take the letter to them -- ask them to read it -- perhaps it will help.

Ralph (Antigo) Hansen is having trouble drying sludge. The thought is that greases and fats from milk wastes slow down water separation and retard drainage. Ralph is trying out the addition of alum and will report later on its effectiveness.

Over

1955 FALL CONFERENCE

Conference of Wisconsin Sewerage Works Operators
Hotel Eau Claire, Wisconsin

Saturday, November 5, 1955

PROGRAM

Morning Session — President, C. W. Bogenhagen, President

- 9:30 to 10:45 Registration
- 10:45 to 11:00 Address of Welcome - Hon. David Rowlands, City Manager
Response - President Bogenhagen
- 11:00 to 11:20 Business meeting
- 11:20 to 12:00 Responsibility of the Municipality and Industry in Joint
Treatment of Waste - Earl Probst, Mishicot, Wisconsin

Afternoon Session

- 12:00 to 1:30 Luncheon (with the Ladies)
Film - Sewers, Guardian of Community Health
- 1:30 to 3:30 Panel Discussions
- a) Grounds and Plant Maintenance - Leland Shaw, Baraboo
 - b) Public Relations - Frank I. Vilen, Kenosha
 - c) Winter Operation - Ralph Hansen, Antigo
- 3:30 to 5:00 Inspection Tour of Eau Claire Plant
led by Lloyd Owens, Superintendent

ADJOURNMENT

- | | | |
|----------------|---------------|-----------------------------|
| Ladies Program | 9:30 to 11:45 | Shopping |
| | 12:00 to 1:30 | Luncheon and Film |
| | 1:30 to 3:30 | Tour of City and Industries |
| | 3:30 to 5:30 | Tour of Plant |

#####

IF YOU PLAN TO STAY OVERNIGHT, PLEASE MAKE YOUR OWN HOTEL OR MOTEL RESERVATIONS
SEND IN YOUR RESERVATION CARD EARLY! WE HOPE TO SEE ALL OF YOU IN EAU CLAIRE ON
NOVEMBER 5th

C. BOGENHAGEN
Fond Du Lac
President

G. BERNAUER
Madison
1st Vice-President

F. VILEN
Kenosha
2nd Vice-President

D. DUTCHER
Tomah
Past President

Conference of Wisconsin Sewerage Works Operators

C. KELLEY, Secretary-Treasurer—Elkhorn

September 26, 1955

CLARIFIER

R. Frazier, Oshkosh

NEWS LETTER

F. Vilen, Kenosha

AREA CHAIRMEN

Area No. 1
O. Rimmels, Janesville
D. Hanley, Waukesha

Area No. 2
M. Bedker, Beaver Dam

Area No. 3
J. Richgruber, Sparta

Area No. 4
M. Westfall, Sturgeon Bay
L. Schafer, New London

Area No. 5
R. Hansen, Antigo
M. Baldwin, Stevens Point

Area No. 6
L. Owens, Eau Claire
C. Robertson, Luck

TO THE MUNICIPAL ADMINISTRATIVE OFFICER:

Dear Sir:

As the administrative officer of your community, you are naturally interested in the economical and efficient operation of your services and utilities. One of the most important of these to the health and welfare of your citizens is the Sewage Treatment Plant. The plant represents a considerable investment of public funds and we know you wish to get the maximum return for your money and benefit from such savings as result from good operation practices.

How well do you know your plant? Are your operators doing the best possible job? Are you giving them an opportunity to learn more about plant operation - to keep abreast of latest information - to participate in discussions of mutual problems with other men in the field?

It is a truism in the sewage treatment business that the problems and difficulties encountered are much the same whether the plant is large or small. We believe your plant operator needs an occasional contact with men doing like work to help him with his operation problems, to keep him informed about new developments, to convey

to him ideas resulting in efficiency and economy, and, just as important, to give him the inspiration to do a good job which comes from association with men who have common interests.

The Conference of Wisconsin Sewerage Works Operators stand ready to help your operator do a better job for your community. Conference membership is composed of men who operate plants like yours. Some of them are big plants and some are small, but the interests of these men are mutual. Meetings are held twice each year at which all phases of plant operation are discussed. The purpose of the Conference is to provide better sewage treatment in Wisconsin through education and the exchange of information.

Conference dues are nominal at \$1.50 per year payable in two-year installments. A bi-monthly newsletter is published. The Conference has the whole-hearted support of the State Board of Health and the Engineering Department of the University of Wisconsin.

We urge you to enroll your plant operator as a member of the Conference. We suggest that your council or board pay the operator's dues and appropriate monies to make it possible for him to attend Conference meetings. We feel sure that the benefits you and your community will receive will more than offset the small cost.

Very truly yours,

(Signed) C. W. Bogenhagen
President

COMMITTEE CHAIRMEN

LEGISLATIVE
G. Bernauer
Madison

PUBLICITY
F. Clapper
Delavan

RESOLUTIONS
L. Mantzfel
Wausau

GADGET
J. Richgruber
Sparta

CONSTITUTION & BY-LAWS
M. Westfall
Sturgeon Bay

The Clarifier

(Published Bi-monthly by the Conference of Wisconsin Sewage Works Operators)

January

RECEIVED
FEB 1 - 1967 1967

PUBLIC WORKS DEPT.

EDITORIAL

The past year has again been a year of progress for the Conference. We have seen the Voluntary Certification plan become a Mandatory Certification, that will take effect on January 1, 1969.

The Spring Sewage Works Short Course has been postponed. This will make it necessary for changes to our Annual Meeting that normally was held at this time. Your Board of Directors will meet and you will be notified of their decision on this.

The Conference now foresees a challenge and a change in the Conference activities must come. I am asking for help. If you find the time to read this newsletter please find the time to write to me and give me your thoughts on what roll the Conference should play in the new policies for Waste Water Treatment Plant Operators in the State of Wisconsin.

Clyde F. Lehman, President
City Building
Chippewa Falls, Wisconsin

May I wish all of you the best of every thing this coming year. Things are going good for me so far this year. Even Santa found his way to my house.

There will not be a short course this spring. The officers will have a meeting soon to plan a meeting for this spring. So if any of you have any ideas let me know immediately and I will take it to the meeting of the officers.

Chippewa Falls - A new concept will be tried in Chippewa Falls in the treatment of Combined Wastes. We have received approval of a \$289,685.00 Demonstration Grant from the Federal Water Pollution Control Administration for a project called "Alternate to Storm Water Separation". I am sure this will be of great interest to many communities.

We also have plans approved for the construction of Secondary Waste Water Treatment facilities. Approximate cost - \$900,000.00. This plant will be Step Aeration Modification of the activated sludge process.

Shawano - Mr. Martin Zoglmann retired. He operated the plant for 24 years. Mr. Harry Utke is to take his place. Mr. Winter has been in the business for twenty years. He says that he is getting old. Aren't we all.

The mandatory certification law passed last year by the Iowa Legislature has made a strong impact in its first year. As of June 1966, 701 water plant operators, 253 water distributing system operators, and 572 wastewater treatment plant operators had been issued certificates.

In the past couple of years we talked of a new name for our group. The Board of Directors wants you the members to bring in a new name, or a new name and emblem. The first prize will be a bond, a U. S. Government bond that is.

I like to receive letters. Three of the fellows wrote to me this past month. I know that more of you can write, so how about it. Send me some news.

Yours truly

John Wallendal
223 South Watertown Street
Waupun, Wisconsin 53963

The Clarifier

(Published Bi-monthly by the Conference of Wisconsin Sewage Works Operators)

March

1967

Minutes of Board of Directors Meeting, C.O.W.S.W.O., Madison, Wisconsin 2/17/67.

Members present: President, Clyde Lehman; Vice-Pres., Lyle Landvatter; Sec'y-Treas., Gary Coates; Directors, Dave Martin, Karl Zuelke, John Wallendal; Past Pres., Charles Kelly; Member, Len Montie.

It was moved by Dave Martin and seconded by John Wallendal that a letter be sent to Mr. Freeman Holmer, Director of the Department of Resource Development, expressing the feeling of the Executive Board of the C.O.W.S.W.O. in regards to the cancellation of the Sewage Operators Short Course. The Board of Directors were dissatisfied with the postponement of the short course without any indication of a future training program for sewage treatment plant operators. The C.O.W.S.W.O. is a co-sponsor of the short course and therefore should have been involved in any decision on the postponing of the short course. The C.O.W.S.W.O. will go on record as being in favor of an extended and more comprehensive short course or training program for the sewage treatment plant operators in the State of Wisconsin. The C.O.W.S.W.O. will also give any help or assistance that may be required by the Department of Resource Development in establishing a training program for sewage treatment plant operators. All members of the Executive Board voted in favor of sending a letter to Mr. Freeman Holmer containing the above mentioned statement. A copy of this letter is to be sent to Len Montie, Jerry Rohlich, Mr. Potter and Ted Wisniewski.

It was moved and seconded that Gary K. Coates be appointed Secretary-Treasurer of the C.O.W.S.W.O. retroactive from 1966 to 1968. Motion carried.

It was moved by Dave Martin and seconded by Karl Zuelke that the Spring Meeting of the C.O.W.S.W.O. be postponed until such time as it coincides with the meeting dates of the Fall Meeting of the Conference. Motion carried.

President Clyde Lehman appointed the nomination committee for the next election of officers to be held at the postponed Spring Meeting. The nominating committee members are: Charles Kelley, Chairman, Roger Scovill, Grant Heugstad.

President Lehman appointed Dave Martin and Vern Zingsheim as members of the audit committee.

There being no further business it was moved and seconded that the meeting be adjourned. Motion carried.

Respectfully submitted,

Gary K. Coates, Sec'y-Treas.

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all members fillout and send the attached dues statement and their C.O.W.S.W.O. DUES for 1967 to him before April 30, 1967. The dues are TWO dollars a year. Gary's address is 1907 N. 26th St., Sheboygan, Wisconsin.

At the October 29, 1966 meeting of the C.O.W.S.W.O. it was decided by the membership that the Conference hold one longer meeting per year in lieu of the two short meetings that were previously held. Because of the change in meeting dates it is necessary that the Constitution of the Conference be changed in regards to the time of the election meeting. All members of the Conference are to fill out and mail the enclosed ballot.

Because of the necessary postponement of the Spring 1967 meeting of the C.O.W.S.W.O., the approval of the Constitution change will mean that the present officers of the C.O.W.S.W.O. will hold office until the Fall meeting of the C.O.W.S.W.O.

Shall Article 6 of the Constitution of the Conference of Wisconsin Sewage Works Operators be changed...

From "The Spring meeting of the Conference in each off numbered year is designated to be the Election Meeting."

To "The Fall Meeting of the Conference in each off numbered year is designated to be the Election Meeting."

Send enclosed ballot to Gary before April 30, 1967.

There will be a Central States meeting in June. Activated Sludge will be one of the big topics for discussion at the meeting.

The Federation meeting will be in New York on Oct. 8-13. The reconvened meeting, Oct. 15-18 in Puerto Rico.

The fall meeting of our Conference will be in Neenah-Menasha in October. They have a new activated sludge plant there. All the newest ideas were installed. So make plans to see me there.

Dave Martin told me that his Mother passed away on January 23, 1967.

There will be a Water Pollution Control Management Institute on March 19 to 23, 1967. The University of Illinois is the sponsor. The meeting will be at the Allerton House. The cost will be \$95.00. This includes lodging and most of your meals. Make your check payable to University of Illinois
Address --- Institute Supervisor
116e Illini Hall
Champaign, Illinois 61820

The letters were not very plentiful this past month. So not much news. I went fox hunting but the fox is still running around. I did not go ice fishing for the ice was too thick for me to cut holes in it. Sturgeon fishing was good this winter.

Yours truly,

John Wallenda
223 South Watertown St.
Waupun, Wisconsin 53963

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A Bit of History

Did you know that 2005 marks the centennial of water and wastewater plan review in Wisconsin?

In 1905 the State Board of Health was successful in obtaining a number of legislative acts that expanded its authority to prevent water pollution, including Chapter 433, Section 3, which reads as follows.

“Water and Sewerage Systems Before any city or village shall institute a water system, or system for water supply for the domestic use of its inhabitants, or a system of sewerage for the disposition of its sewage, such city or village shall submit to the State Board of Health the plans and specifications for such system, and both of the water system and the sewerage system if a sewerage system exists or is proposed and the State Board of Health shall examine such plans and specifications for the proposed system and the sanitary and hygienic features thereof; and no such system shall be installed or put in operation until the State Board of Health shall issue its certificate that such proposed system will not be in any respect unsanitary or dangerous to the public health”

Approved June 19, 1905 – Published June 23, 1905

From its creation in 1876 the Board had recognized the connection between polluted water and public health. However, the Board was largely frustrated in its attempts to encourage municipalities and industries to provide clean drinking water and adequate sewage disposal by public apathy, ignorance, economics and politics. (Does this sound familiar?) In 1895 the Board proposed “A Bill to provide for the Control of Water Supplies and Sewerage in the State of Wisconsin, and calling for an Appropriation.” Repeated requests by the Board for changes in the law were unheeded until an increase in cases of typhoid fever prompted the legislature to act.

Although it passed the act the legislature provided no funds to carry out this mandate! Board Secretary Dr. Cornelius Harper arranged for W. G. Kirchoffer, a Madison sanitary engineer, to review plans for no charge. In the year following approval of the Chapter 433, 15 sets of plans were presented to the Board for approval.

Although there were various state efforts to address pollution and “nuisances” before 1905 this act represents the beginning of systematic environmental regulation in Wisconsin.

HAPPY 100th ANNIVERSARY!

WWOA Conference Schedule

2005 Conference	--	October 4 - 7 Regency Suites & KI Conference Center Green Bay, WI
2006 Conference	-	October 3 - 6 Kalahari Resort Wisconsin Dells, WI
2007 Conference	-	October 23 - 26 La Crosse Civic Center & Radisson Hotel La Crosse, WI

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For the past couple of years the number of applications has been very limited. That being the case, qualified applicants have a very good chance of being selected to receive scholarships. So take some time to look over the information and get those applications in! What student can't use \$500 or \$1000 for books and fees?

Tuition aid is also available for WWOA members who attend advanced seminars and credit courses taken at an accredited technical school or college while working

towards a degree related to the water/wastewater industry. This is another program that is underutilized. It is designed to help pick up some of the slack between what your employer contributes to your education and what might come out of your own pocket.

Tuition aid information and forms are also available on the WWOA website. Requests for tuition aid must be made prior to the start of any seminar or course and proof of successful completion of any seminar or course must be shown before payment.

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Peter M. Conine
WWOA Scholarship Chair

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*Dyckesville Sanitary District President Dick Charles (left)
with Foth & Van Dyke's Dennis Steigenberger*



WASTEWATER SECURITY UPDATES

By Julia Riley, Wastewater Specialist, Department of Natural Resources

Government Accountability Office Findings on Wastewater System Vulnerabilities and Funding Recommendations for Security Improvements

The federal Senate Environment Committee asked the Government Accountability Office (GAO) to identify potential vulnerabilities of wastewater treatment systems and recommend how security improvements should be funded. The final report was issued in January 2005. A summary of the findings are:

Vulnerable Assets:

- Collection system network
- Storage and transportation of chemicals
- Key (critical) components of the system
- SCADA systems
- Pumping Stations
- Headworks



Outdoor Chemical Storage



Headworks

Other Vulnerabilities:

- Lack of security awareness by facility staff
- Interdependence of facilities with other infrastructure

Critical WWTP Facilities:

- Provide service to public health centers, governmental, commercial and industrial centers, power plants, airports



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Key Actions for Funding:

- Replace chlorine gas with less hazardous alternatives (ozone, ultraviolet light, hypochlorite)
- Complete Vulnerability Assessments for each facility and train staff
- Improve local, state and regional responses to emergencies

Other Priorities for Funding:

- Train employees on how to conduct vulnerability assessments and improve security

- Improve national communication between utilities and key homeland security agencies
- Install early warning systems (Lower Explosive Level (LEL) meters) in the collection system to detect possible sabotage
- Secure physical assets of the system with fencing, locks, alarms, cameras, etc.
- Strengthen personnel procedures to include employee background checks and better control of keys and important documents
- Increase research to improve detection and emergency response procedures
- Develop voluntary security standards and guidance
- Strengthen cyber and SCADA system security

Funding Recommendations:

- Direct federal grants are the most effective way to encourage security improvements
- Grants may require municipality monetary match in some instances
- Revolving Loan programs are not effective in encouraging security improvements



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The GAO conducted a Web-based survey of 50 nationally recognized experts to develop the recommendations contained in the report. You can review the full report at:

<http://www.gao.gov/cgi-bin/getrpt?GAO-05-165>

Vulnerability Assessment Workshops

The DNR and the Wisconsin Rural Water Association are partnering to bring you two more opportunities to take a free full-day Vulnerability Assessment Workshop during the summer of 2005! Dates and locations are to be announced. For more information contact: Dan Alldridge at (608) 264-9244 or e-mail at Daniel.Alldridge@dnr.state.wi.us.

Security Needs Survey for Wastewater Treatment Systems

The Office of Justice Assistance (OJA) administers federal Homeland Security Grant money. The OJA is proposing to set aside money for security improvements for water and wastewater treatment systems. The DNR developed a survey to identify security needs for wastewater treatment facilities. The survey will be mailed to major wastewater treatment facilities in June 2005. Filling out the survey could result in more Homeland Security grant money being set aside in the future for wastewater security improvements. We hope you will all cooperate and complete the survey so we can provide this information to OJA and obtain grant funding for your security improvements!

Proposed Legislation on Chemical Security Requires Vulnerability Assessments

Proposed legislation may require some larger wastewater treatment facilities to conduct a Vulnerability Assessment. The legislation identifies high priority facilities as the 15,000 facilities that are regulated under EPA's Risk Management Plan. These high priority facilities have significant quantities of at least one of 140 listed toxic or flammable chemicals. Of particular concern are facilities that are located near population centers or critical infrastructure. For more information, see:

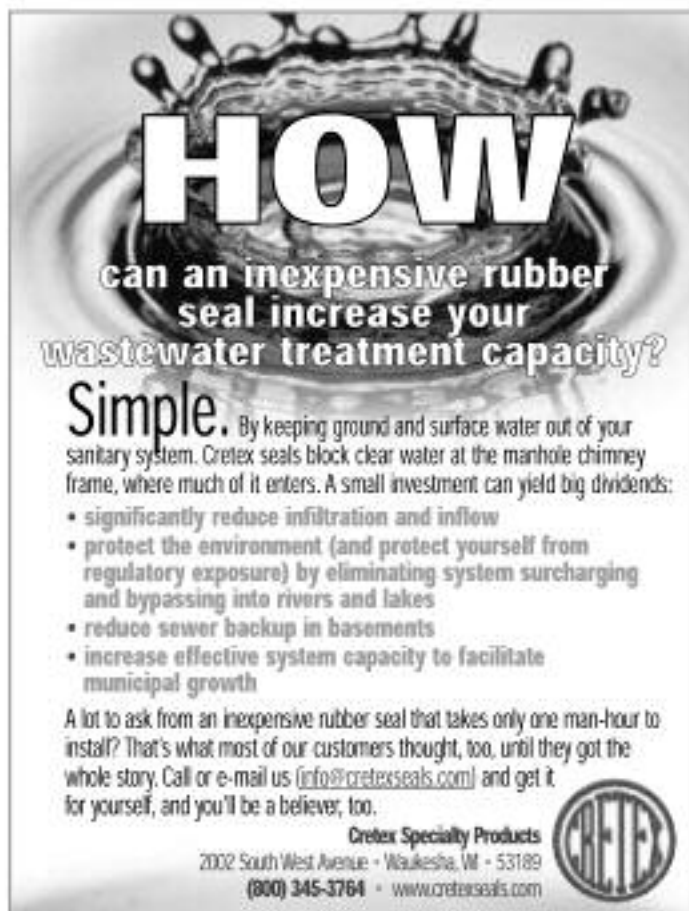
http://corzine.senate.gov/priorities/chem_sec.html

Emergency Response Plan Guidance of Wastewater Systems

The Water Environment Research Foundation (WERF) received funding from U.S. EPA for a new document entitled: Emergency Response Plan Guidance for Wastewater Systems. Core elements of the plan include: System specific information; roles and responsibilities; communication procedures; personnel safety; emergency storage and provisions for contaminated wastewater and biosolids; interconnects and agreements with other wastewater systems; equipment and chemical supplies; property protection; response capabilities; and sampling and monitoring. Future plans call for the development of an ERP software module for wastewater as an enhancement to the AMSA-developed Vulnerability Self Assessment Tool (VSAT™). (73 pages).

This document can be downloaded free at:

<http://www.nacwa.org/pubs/2004-10wastewaterERP.pdf>.




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Board of Directors Meeting

Monday, March 14, 2005

Country Springs Hotel, Stevens Point, WI

President Nennig called the meeting to order at 10:00 AM Monday, March 14, 2005. All Board members were present except John Bond, who was excused absent.

Also present were Jeff Deitsch-Southeast Region, Ron Austreng-Lake Michigan Region, Kevin Skogman-Lake Michigan Region, Mike LaRose-Northwest Region, Wally Thom-Northwest Region, Ron Dickrell-North Central Region and Harry Mathos-Southern Region.

President Nennig welcomed the Regional Officers in attendance.

The minutes of the December 2 and 3, 2004 Board meeting were reviewed. Herwig made a motion to approve the minutes as presented. Carlson seconded the motion. Motion carried.

McKee presented the Financial Statement for Board

approval. McKee stated as of February 15, 2005, we have \$119,642.91 in revenues and \$100,735.09 in expenditures with excess revenues over expenditures totaling \$18,907.82.

McKee presented vouchers 75 – 129 for Board approval. After a brief discussion, Herwig made a motion to approve the Financial Statement and vouchers as presented. Kruzick seconded the motion. Motion carried.

COMMITTEE REPORTS

PERMANENT ARRANGEMENTS - McKee informed the Board the Committee will be meeting with Green Bay very shortly to negotiate food and drink prices. We need some numbers for the budget. McKee also explained he is having a difficult time again with the Kalahari in obtaining the updated contracts with the revisions. No one returns his calls. The Committee will be meeting with the Kalahari to express their concerns.

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and sludge storage/mixing. Suitable for total system applications, Aquastore tanks are used in Sequential Batch Reactor (SBR) systems, package treatment plants, anaerobic sludge digestion systems and conventional large volume treatment.

TECHNICAL PROGRAM - Marshall provided the Board and Regional Officers with a tentative schedule of the Technical Program.

Marshall commented she is passing around a sign-up sheet for moderators at the Conference.

Marshall stated the Technical Committee met on February 3, 2005 at Green Bay MSD to discuss the technical agenda for the conference. Thirty-six presentations were chosen from a total of 68.

Tom Zalaski attended the meeting. He will be the keynote speaker. Tom Burgoon, represented by Five-Star Productions, has been contracted for the banquet entertainment. Paul Kent has agreed to be the speaker for the Farewell Breakfast.

McKee reminded the Board everything needs to be print ready by May 15.

LOCAL ARRANGEMENTS - Bartel informed the Board and Regional Officers the training center at Green Bay MSD will be available all day on October 4 for the Pre-Conference Workshop. Donohue and

Associates have offered to help out in any way with the electrical workshop.

The Green Bay and De Pere WWTP's will be available for tours. Looking at two different tour options for Green Bay MSD and also De Pere. One would be geared more toward maintenance and monitoring and the other would be the general plant tour.

The Fox Energy Center is not willing to commit to tours at this time. They will be under construction during the time of the Conference. Bartel suggested possibly looking into an industrial WWTP to tour.

Bartel reported the Woods has been selected to host the golf outing. The Woods is about a 10-minute drive from the KI Center. Approximate cost will be \$37 to \$40. This would include 18 holes of golf, a cart, box lunch and prizes from the course.

SPOUSE PROGRAM - Bartel stated Jean Van Sistine is the chairperson of the Spouse Program this year. She is trying to set up a two-day program. She is checking to see if Tom Zalaski will give a presentation on women's health issues on



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Wednesday. Wednesday afternoon is planned to tour a winery in Algoma and then to a gift shop in Algoma. Thursday will include a presentation on identity theft or self-defense. Thursday afternoon Van Sistine is planning to go to a dinner and theater show in De Pere.

After a brief discussion, it was the consensus of the Board to offer a one-tier program this year.

Bartel commented busing would be made available for the plant tours and the trip to the dinner theater. The trip to Algoma and the winery is approximately 45 to 60 minutes. Bartel would recommend leasing a motor coach for this trip.

EXHIBIT COMMITTEE - President Nennig reported for Carol Strackbein. The last time the Conference was in Green Bay, we had the Exhibits in Hall C, which held a total of 110 booths.

It is very important that the Exhibit Committee and the Board have discussions regarding the final layout of the hall. It is also very important we have all the exhibits in one area.

Last year, we allowed the exhibitors to purchase up to four booths and make it an open booth concept. Strackbein believes we will have to reconsider this for Green Bay, as we do not have the space available. We can offer two booth spaces per company with the option of purchasing more space if available. Strackbein feels it is nice to give people who have long supported our organization an opportunity to be more visible. We must also remember to give our new exhibitors a chance to become a part of our organization.

Jim Shaw, Chairperson of the Manufacturers and Consultants Committee, received several complaints regarding the tours being held on Thursday morning. This does draw people away from the Exhibits. The Committee would like to have the plant tours on Thursday afternoon.

MANUFACTURERS AND CONSULTANTS - No report.

OPERATOR COMPETITION - Thalke informed the Board and Regional Officers you would see some

minor changes this year. The WEF's Operators Challenge will be changing the Mechanical Event format to incorporate a 6-inch diesel pump used in conjunction with a lift station. The Committee plans on adding the same event in its competition. The Committee is currently looking for practical, hands on segment for the Collection System Event and a sponsor for both the Mechanical and Collection System event.

The Committee hopes to get representation from all the Regions with the option of multiple teams. The \$15.00 gift certificates will be offered again. We would like to have all the teams in place by the middle of August.

OTHERS - Carlson commented he has been working with Saltes in organizing some CMAR seminars. The first seminar was held in Antigo.

Conine reported there have been no scholarship or tuition aid requests.

President Nennig commented that Tom Kruzick and

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he attended the Career Counseling Conference in Stevens Point. They made several good contacts. Many people commented they never thought of this occupation as one to offer to their students as a career.

Herwig made a motion to accept the Committee Reports as presented. Marshall seconded the motion. Motion carried.

OLD BUSINESS

WWOA BIOSOLIDS COMMITTEE - President Nennig explained to the Board and Regional Officers a number of issues that happened this past winter with the Spring Biosolids Symposium Committee. We are still trying to resolve these issues. We thought it would be in the organization and the Board's best interest to create a formal standing committee to report back to the Board on a regular basis on committee activities from the status of the symposium planning. This action was taken in December and Jim Thalke was appointed chair of that committee. The WWOA has two members on

the Biosolids Committee; Jim Thalke and Rich Boden. We need to add the new standing committee to the policy book. McKee will draft a committee description and present it at the April Board meeting.

NEW BUSINESS

President Nennig commented the Board over the last months has had several issues come up regarding interpretation of policy. One is Assistant Secretary Reimbursement. We need to clarify in the policy book exactly what is and what is not reimbursable.

Another issue is Board of Directors attending Regional meetings. The issue that was debated there is nothing formal in the policy book stating the number of WWOA officers that the organization will reimburse for attendance at Regional meetings.

The last issue was Board of Director attendance at non-business WWOA events. Should attendance be reimbursed by WWOA?

The Executive Committee met to discuss these



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issues. President Nennig provided all the Board with information from the Executive Committee regarding these issues. President Nennig would like the Board to come to the April Board meeting with some agreement and consensus to interpret policy.

Herwig presented to the Board and Regional Officers information regarding price quotes from Total Awards and Promotions. The award plaques will be necessary to replace the existing Bernauer "Past Recipient" plaque and "Past President" plaque. The current Bernauer Award has a circular profile bust. Herwig questioned if the Board should have the plaque made without the bust? The current plaques have hardwood carrying cases for their storage and transportation. Should we have a price quote made to accommodate additional cases? Should we have these custom made or should they be purchased wherever they can be found?

A discussion ensued. President Nennig directed Kruzick to bring the plaques to the April Board meeting and a decision will be made then.

OTHERS - McKee provided the Board and Regional

Officers with a price quote from Sun Printing for the new directory. A discussion ensued. McKee commented I need all the changes to the directory sent to me by the end of May. Kruzick made a motion to accept the proposal from Sun Printing for production of the new 2005/2006 Directory. Bartel seconded the motion. Motion carried.

President Nennig commented at the December 2004 Board meeting, **CLARIFIER** Editor Dan Busch inquired of the Board whether they cared to share any thoughts on updating or improving the publication. For the most part the Board seemed comfortable with the current features. After a brief discussion it was the consensus of the Board to have Dan Busch provide the Board with some costs for production of the **CLARIFIER** with glossy front and back covers for the April Board meeting

President Nennig commented last year two vendors awarded door prizes to conference attendees during the Operators' Luncheon/Business Meeting. This caught the Board and the Exhibit Committee off guard. It was the consensus of the Board the best

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time to allow for vendor door prize give-aways was during the Wednesday afternoon Exhibit Social Hour. President Nennig drafted a letter to Carol Strackbein stating the Board's position in this matter. The Committee is not going to encourage or promote door prizes from exhibitors. The Committee is willing to advise future exhibitors that door prizes will be allowed to be given away only during the Exhibit Social Hour time frame. President Nennig stressed that this is a Committee decision not the Board's decision.

President Nennig discussed with the Board and Regional Officers in January of 2005, WWOA was approached by the City of Janesville with a special request for organizational endorsement. The City was assembling nomination submittal materials for the WI DNR's annual Brogan Award. The City asked the WWOA to provide a written letter of endorsement. After considerable Board discussion, the unanimous consensus of the Board members was to deny offering a written endorsement on behalf of the organization. President Nennig drafted a letter explaining the Board's position. The Board did go on

record as saying that individuals could provide written draft letters of endorsement in support of award consideration submittals as long as those letters were on behalf of the individual and in no way referenced to the organization.

Kruzick explained an issue was raised by a contract operations firm who questioned why their employees attending the conference were required to pay a sponsor fee of \$75.00. McKee commented all Manufacturers and Consultants and Contract Operations firms are required to pay the sponsor fee; one sponsor fee per firm. This is a Manufacturers and Consultants policy.

President Nennig commented last year Herwig revised the Memorandum of Understanding for the Government Affairs Seminar and the Spring Biosolids Symposium.

In January 2005 the WWOA was made aware of an agreement already in place for the Collection Systems Seminar that was developed in 1990.

President Nennig drafted a revised understanding of

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responsibilities agreement that brought the document up-to-date without altering the original intent of the 1990 agreement.

At this point the revised agreement is in the hands of the Collection Systems Seminar Committee. We are waiting to hear back from them. The CSWEA-WI Section Board will take action on the proposed agreement revisions during meetings held at the CSWEA Annual Conference in early May 2005. The Board is wondering who is holding the escrow for the Collection System Seminar. President Nennig will offer to CSWEA that WWOA Executive Secretary would hold and track Collection System Seminar escrow. President Nennig will contact CSWEA with the offer.

McKee will provide the Board with signed copies of the two Memorandum of Understandings with an updated index to be inserted in the policy book.

President Nennig thanked the Regional Officers for attending the meeting.

There being no further business, Herwig made a motion to adjourn. Thalke seconded the motion. Motion carried.

President Nennig adjourned the meeting at 2:30 PM on March 14, 2005.

Respectfully submitted,

Richard D. McKee

Richard D. McKee
Executive Secretary

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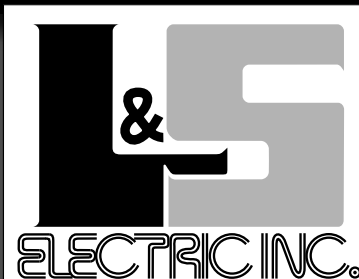
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- Physiological needs are the food, shelter and warmth needs.
- Safety and security are the motivational needs that provide job security, insurance benefits.

- Social or belonging needs are defined as the motivation to belong to a group, family, love and affection.
- Esteem or egoistic motivation factors are the needs for recognition, respect, status, and self-confidence.
- Self-actualization is defined as the need to be your best, be creative, and have inner peace or harmony.

Now many agree that these needs do overlap. But one thing I'm very sure of is that this most noble profession of wastewater treatment can deliver on all levels. Who could deny that our jobs do indeed satisfy the first two basic levels? We get paid by our communities, and are provided with, for the most part, adequate security benefits. And although we could all use more, we can assume there is a consistent roof over our heads.

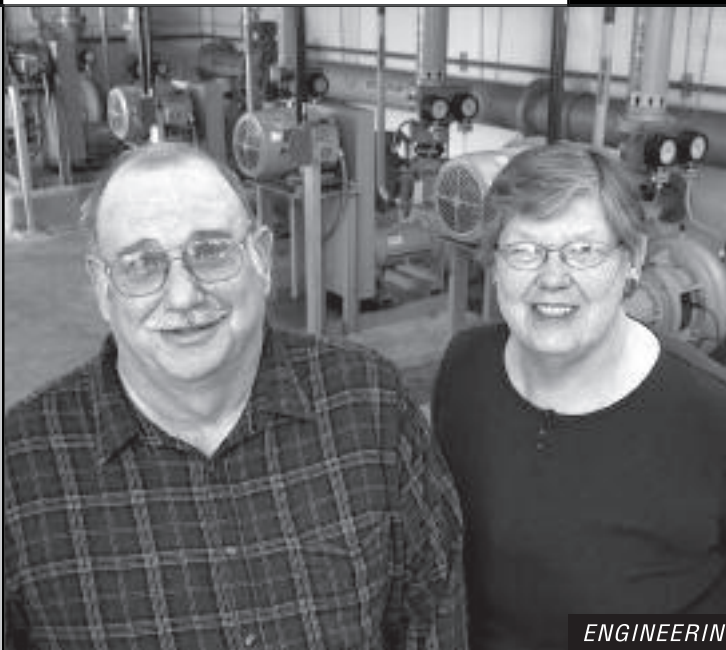
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MSA's design called for a multi-faceted sanitary sewer rehabilitation program to reduce clear water flows. A new biotower was specified for secondary treatment and ammonia removal. Existing equipment was reused to hold down costs, and MSA obtained a \$500,000 Community Development Block Grant to help pay for improvements. When you want an innovative solution, turn to MSA – your trusted partner!

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Can we not stretch our imaginations to recognizing that membership in the WWOA can satisfy a group belonging need, and the third rung of the ladder? The WWOA exposes you to a group with a common vision and circumstance. Lord knows we're not in it for the money! You can't talk shop in social circles can you? Most folk don't want to hear about it anyway. Yes, WWOA membership can get us satisfied enough to reach for that fourth level.


How can we help one another at that fourth level? I can think of no finer way to help a fellow operator strive for recognition than to NOMINATE them for one of the many WWOA annual awards. The Bernauer Award, Regional Operator of Year Award, Service Award, or Koby Crabtree Award. Upon receiving a prestigious award such as one of these, an individual will surely see their achievement, and know they are being rewarded for their dedication, devotion, and chances are, superior intellect. Nomination forms are located under the Awards section of the WWOA web site, www.wwoa.org, or ask any of your current regional officers for a form. However you choose, mail them to me:

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WWOA President Elect
Oshkosh WWTP
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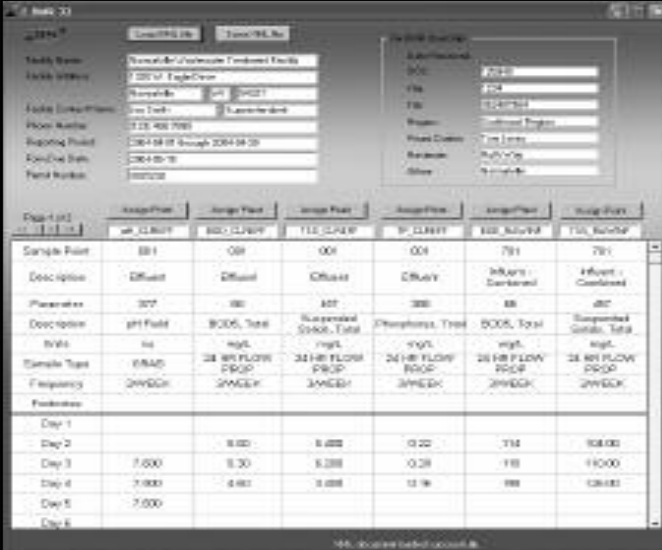
Timing is critical as the nominations have to be in by August 15. As the early days of summer approach I'm quite sure you've completed the spring cleanup both around the plant and home. What finer way to

spend a summer evening then filling out a simple, friendly, nomination form?

This leaves the highest level, self-actualization. This desire is satisfied when you know you are at your best, you are creative, and have reached your fullest potential. Inner peace and harmony are yours. I have noted that many of our membership have achieved this higher level of spiritual awareness. They have met the challenges presented by regulatory agencies, municipal governments, utility rate payers, and concerned citizens. They carry with them an inner glow. They know they have used their talents to help protect the single most important resource on this planet. Just take a close look at Wally from Rice Lake. Is this not a man who has reached a higher plane? There is a certain twinkle of wisdom in his eye that matches his virtuous good nature. He has reached this high level of self-actualization within a year of receiving the Bernauer Award in 2004. Coincidence? I think not! So help a fellow operator achieve this enlightened sense of professional of existence by getting your nomination in now.




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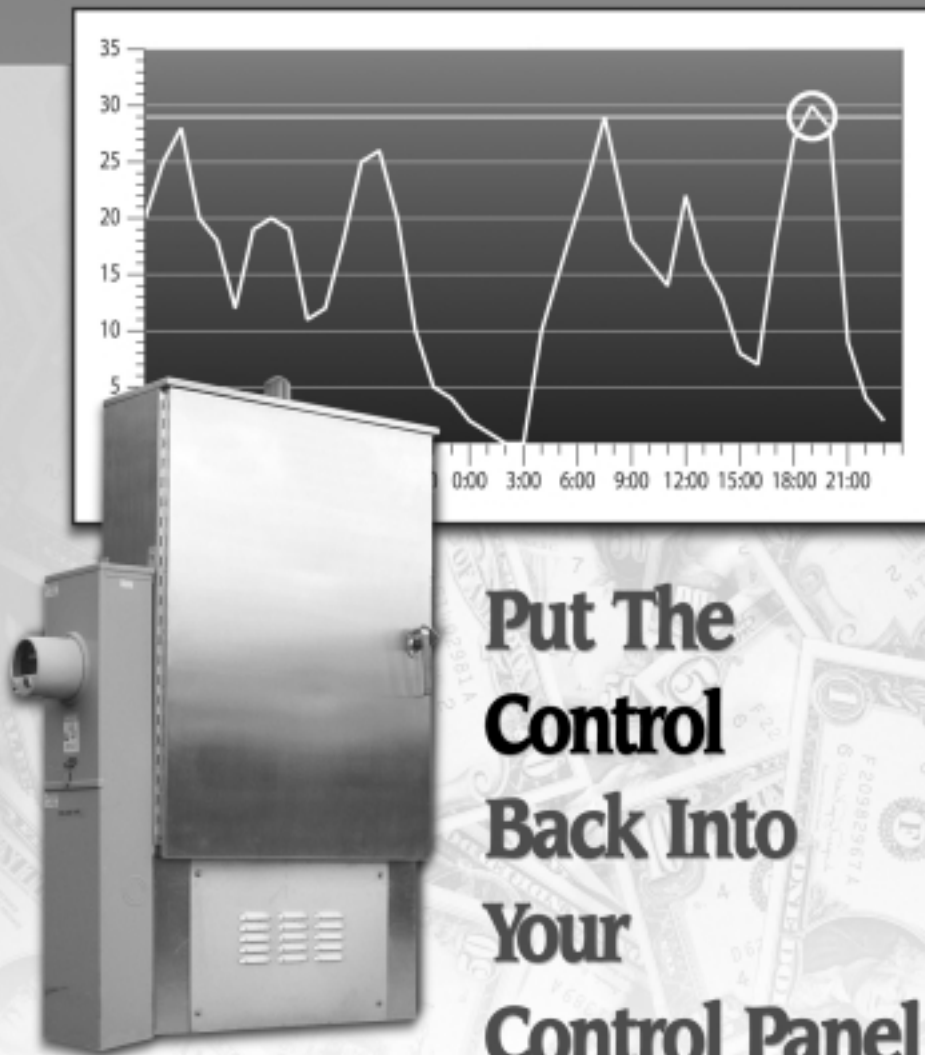
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Maximizing Secondary Treatment Wet Weather Capacity Part 3 (of 6): Optimizing Mixed Liquor Settleability – Facility Configuration and Modifications

Bill Marten, Wastewater Process/Operations Engineer

Triad Engineering Inc.

This is the third of a six-part series discussing strategies to maximize secondary treatment peak flow capacity. While the strategies are focused toward activated sludge treatment systems, many of the strategies are applicable to other systems as well. Future editions of The Clarifier will present additional parts of the series. For reference, the series will include:

Part 1: The Big Picture: Peak Wet Weather Capacity Considerations

Part 2: Optimizing Mixed Liquor Settleability – General and Operational Considerations

Part 3: Optimizing Mixed Liquor Settleability – Facility Configuration and Modifications

Part 4: Optimizing Secondary Clarifier Performance

Part 5: Minimizing Clarifier Loadings

Part 6: Putting It All Together: Integrated Strategies for Success

Part 2 of this series discussed general considerations with regard to mixed liquor (ML) settleability and the factors that affect it, and operational considerations and strategies to optimize it. This installment (Part 3) continues on the topic of optimizing ML settleability, focusing on facility issues, configurations and modifications to help you do this.

A Brief History Lesson

The first activated sludge systems were much like sequencing batch reactors (SBRs), operated in a fill/react/draw cycle. As development continued, continuous flow reactors appeared on the scene, with the early ones being configured as plug flow basins comprised of long, narrow aerated channels. These early systems did not typically experience filamentous bulking/ML settleability problems.



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As progress continued, aeration basin configurations to minimize the effect of industrial/toxic wastes were developed (this was before the days of effective pretreatment programs). These configurations were usually in the form of complete mix or step feed reactors, the idea being to distribute the incoming waste throughout the basin quickly and thereby dilute any harmful substances before they could negatively impact the microorganisms. With these new configurations filamentous bulking incidences rose dramatically, leading to a new area of wastewater treatment research – the understanding and control of filamentous bulking.

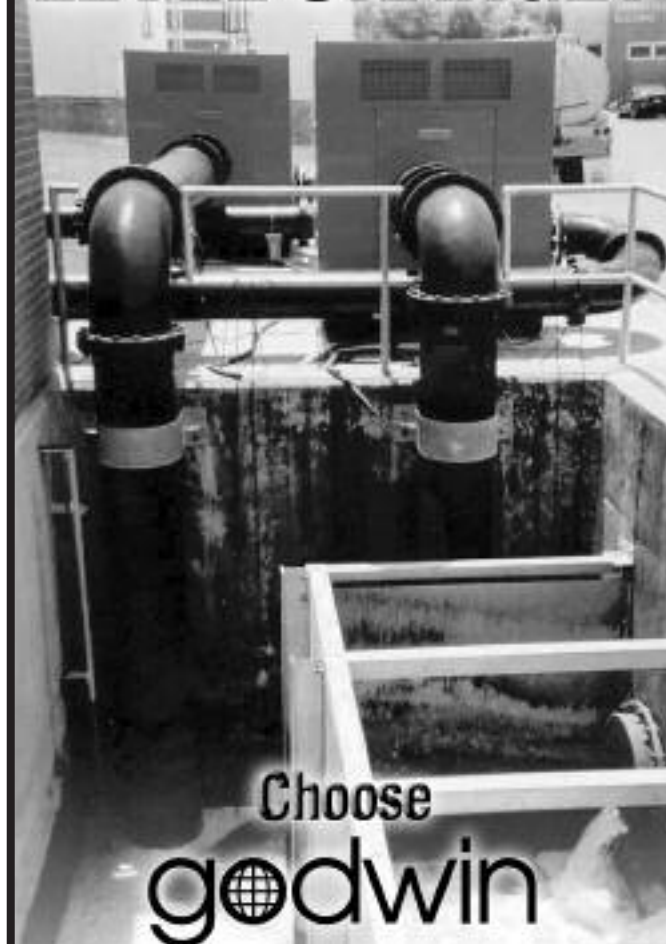
The resulting research has led to the understanding that there are many causes for outbreaks of filamentous and other types of bulking, including septic influent wastewater, one or more lacking nutrients (dissolved oxygen (D.O.), nitrogen, phosphorus), and basin configuration/influent feed pattern. Part 2 of this series discussed these causes, and operational considerations to minimize their occurrence. In this article we will discuss facility considerations to also help, starting with basic features that should be available at every facility, and then move on to aeration basin feed/flow configuration considerations.

Make Sure Your System Has the Basics

As noted above, some types of filamentous bulking are caused by influent conditions (i.e., septic wastewater) or a lacking nutrient. These causes can be countered, provided they are accurately identified and provided your facility has the means to counter them. In general, your plant should have:

- The ability to feed chlorine (or some other oxidizing agent/disinfecting chemical) or ferric chloride to the plant influent to counter a septic wastewater. Chlorine will do this by oxidizing the reduced sulfur compounds (e.g., sulfides) that may be promoting growth of filaments, while ferric chloride will chemically tie-up these compounds. Either approach will work in preventing these reduced sulfur compounds from reaching the activated sludge system and promoting the growth of filaments.

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- The ability to also feed chlorine or another oxidizing agent, such as hydrogen peroxide, to the return activated sludge (RAS). As noted in the Part 2 segment, this practice of “selective killing” of filaments is at times necessary to get a filamentous bulking condition under control. To do this you need piping and feed equipment to add the right amounts of chlorine solution at the right place. The amount to feed each day is calculated based on the mass of ML suspended solids (MLSS) you have in the entire activated sludge system, typically ranging from a low range of 1-2 to a high range of 5-6 lb chlorine per 1,000 lb MLSS per day. Important features of RAS chlorination facilities include:
- The ability to control and measure the amount of chlorine being added. (Start at the low range and if results don’t improve within a few days (as observed under the microscope – you should see the filaments degrading), make gradual step increases to higher dosages.)
- The ability to add the chlorine on a continuous basis over the entire day, rather than in a slug load or for only part of the day.
- Addition of the chemical to the RAS at a point of high turbulence, so that the chemical is mixed into the RAS quickly and effectively.
- The ability to ensure that needed nutrients are not lacking in the activated sludge system. If your wastewater is deficient in a needed nutrient like nitrogen or phosphorus, as can occur due to industrial discharges, you should have the ability to feed supplemental nitrogen and/or phosphorus to the activated sludge feed. With larger plants this may require bulk storage and chemical feed pumping facilities. At smaller plants use of 55 gallon drums or 300 gallon totes, coupled with chemical metering pumps, may be sufficient, or you may even be able to simply manually pour in a certain amount of supplemental nutrient, in liquid or dry form, once or twice a day.

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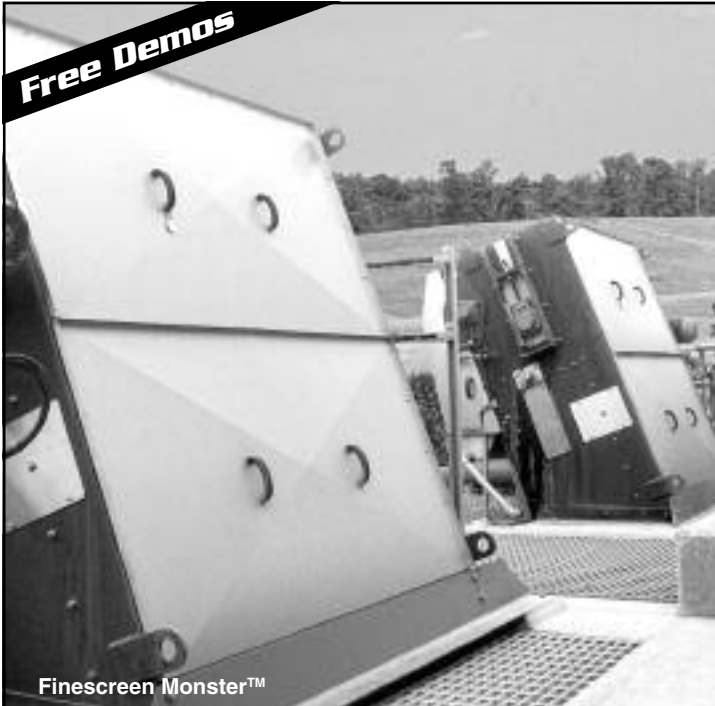
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- The ability to provide sufficient air/oxygen so that low D.O. filamentous bulking conditions are avoided. Whether your aeration system is a mechanical or a diffused air system, you need sufficient capacity to maintain adequate D.O. to meet your process objectives and to prevent low D.O. filaments from taking over.

With the proper application and practice of these “basic” capabilities, many forms of ML bulking can be avoided or overcome. If bulking persists in spite of sound process control practices (see Part 2) and the use of these “basics”, it may be a result of your basin feed/flow configuration.

Basin Configuration Issues

As noted earlier, many of the early activated sludge systems, whether batch (fill/react/draw) or continuous flow (extreme plug flow), did not experience filamentous bulking problems. With the advent of complete mix and step feed aeration basins, however, filamentous bulking became much more common. The reason for this lies in some basic differences between most filaments and good settling microorganisms, which we’ll refer to as “floc formers”.

The first difference is in size and surface area. Filaments are much larger than floc formers, and have a much greater surface area per organism (see figure below). As a result, when something is lacking, whether it be food (soluble BOD₅), oxygen, nitrogen or phosphorus, filaments have a greater likelihood of coming in contact with that lacking substance due to their greater surface area. This gives filaments an advantage that may allow them to over-populate the ML, leading to a bulking conditions. So, with complete mix and step feed systems developed to rapidly dilute the incoming wastewater, this dilution gave an advantage to filaments as they were more likely to contact the diluted nutrients they needed.

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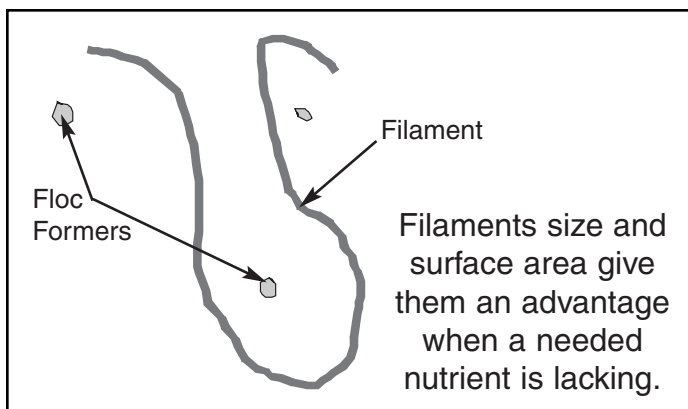
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The second difference is in the ability to take up and store food (again, soluble organic material/soluble BOD₅). Many of the “floc formers” have the ability to rapidly absorb soluble organic material and store it internally, and gradually break it down into new cells, carbon dioxide and water. On the other hand most filaments don’t have the ability to store such material, but can only “feed as they go”. Thus basin configurations that presented a high concentration of food (soluble organics) initially, followed by a reaction period where no new feed was being added, gave an advantage to organisms that could take up

and store organic material and then work on it during the non-feed period. Such feast/famine conditions, which occur in batch feed or plug flow reactors (like the first activated sludge systems), give an advantage to floc-formers over their filament counterparts, who are in essence starved out of the system.

So, if you have an SBR or aeration basins with good plug flow characteristics (generally speaking length to width ratios of 15:1 or greater), you’ve likely got a basin configuration that should help prevent filamentous bulking. But what if you have a complete mix or step feed system?

Well, the good news is that such systems can be modified to attain the desired feast/famine conditions that promote what is commonly termed the “selector effect” (selecting for good settling (i.e., floc forming) organisms).

One such modification that has been implemented within many complete mix basins is the addition of interior walls to produce a serpentine flow pattern that more closely approaches plug flow conditions. A simple illustration of this is shown on the next page.

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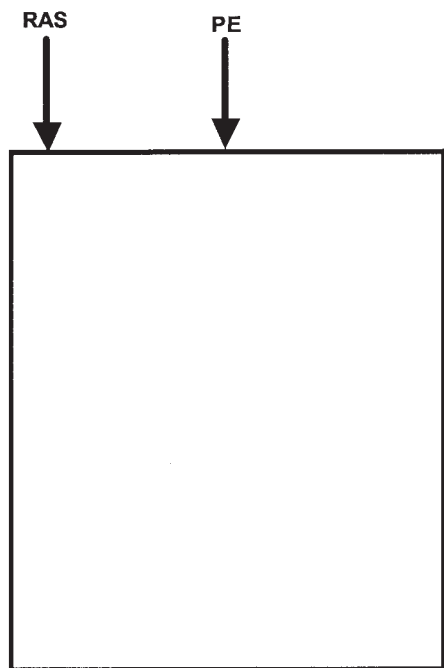
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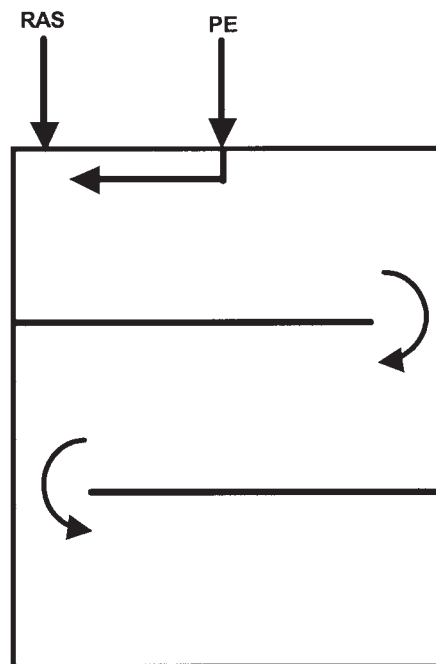
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A second commonly applied modification is the addition of "selector zones" either immediately upstream, or in the front end of aeration basins. These selector zones are small reactor zones where the RAS and influent wastewater are brought together. The result is a high concentration of food (soluble BOD₅) in a small, short detention time reactor. What happens is that within this reactor zone the good settling floc formers absorb the soluble BOD₅, and then pass into the bulk aeration basin. In the bulk aeration basin there is virtually no soluble BOD₅ left to be taken up, so the organisms (i.e., filaments) that didn't grab and store the food when it was available (in the selector zone) end up getting starved out of the system. Meanwhile those organisms who stored food (the floc formers) are happy campers and continue to thrive.

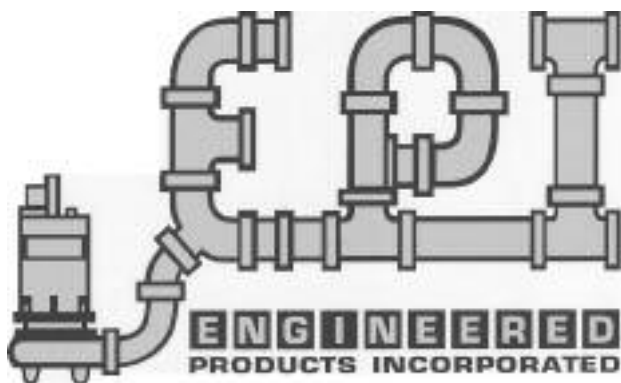
While design of good working selector zones is still evolving, there are some general guidelines to keep in mind:

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- Selectors must be properly sized so that virtually all of the soluble organic material is taken up by floc formers before leaving the selector zone. If the selector is too small some soluble BOD5 may escape into the bulk aeration basin where it will be rapidly diluted and thus give an advantage to filaments (due to their higher surface area).
- Selectors are often sized based on an F:M ratio in the selector zone itself, with values ranging from 0.6-3.0 lb BOD5/lb MLSS/day often considered. The sizing depends on whether you have a single selector zone, or whether you have several selector zones in series, and also the temperature range your ML will experience through the course of the year.
- Selectors must be mixed. Such mixing can occur through aeration (often termed aerobic selectors) or by mechanical mixers (often termed anoxic or anaerobic selectors). Anoxic and anaerobic selectors often provide added benefits both in terms of controlling filaments but also potentially achieving biological phosphorus removal.
- Selectors should be designed to prevent back mixing of the bulk aeration basin contents (i.e., backflow) into the selector zone.
- Selectors can be installed in step feed aeration basins as well, at each point of step feeding. They just need to be properly sized for each feed point.

Finally, selectors aren't a cure all for filamentous bulking conditions. They are just one part of the equation, coupled with all of the other considerations discussed above and in Part 2 of this series. But the good news is that when properly sized and applied they can be extremely effective in helping produce an excellent settling mixed liquor.

This wraps up discussion on controlling ML settleability, as one part of your strategy to maximize your activated sludge system's capacity. The next installment in this series will focus in on ways you can make your secondary clarifiers operate at peak performance. Please stay tuned.

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12:00 noon	Lunch
12:45 pm	Communicating Technical Topics to Elected Officials – Mark Gottlieb, Wisconsin State Senator
1:45 pm	Employee Performance Evaluations - Jean Cole, CVMIC
2:15 pm	Afternoon Break
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