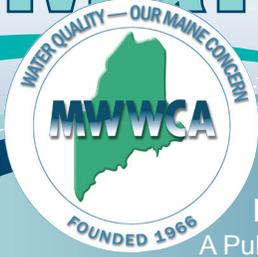


# Maine WasteWater NEWS



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February 2010 • Winter

A Publication of the Maine WasteWater Control Association

## President's Corner



André Brousseau

I am truly honored that the Executive Board and the entire membership have given me the opportunity to serve as your Maine WasteWater Control Association President. I would like to thank all the wastewater professionals for making a difference in people's lives every single day.

We work in a unique profession. When someone asks what we do for a living, the answer is a shocker to most of them. This is because they do not understand the service that we provide. We are not driven by awards and accolades; we are driven to make our waters safer for all. This is reflected by years of progress since the clean

water act was passed in 1972. Now that the world is becoming more environmentally conscious our field is now coming to the forefront of the newest technology. We are no longer the "Nortons" from the Honey-mooners.

The day to day operations of our local WWTPs make quite the difference. With computer technology going way beyond what our first generation of operators did not have, our jobs tend to be much easier. We have better tools to let us know when the process needs to be adjusted. We should all consider ourselves "environmentalists" and stewards of earth's natural water cycle.

Being involved with MWWCA is a great way to make a difference with issues that arise throughout the year. Several committees welcome many participants to be a part of their decision making process before a position or idea is presented to the executive board. At times, some committees do not meet due to a lack of participation. This can be resolved by a simple phone call or email. For instance, our government affairs committee by far is the strongest committee with several members participating in conference calls, emails and monthly meetings. The GAC will place a mass email out requesting voices to be heard during legislative hearings. It is of my opinion, the more the merrier.

As always our open relationship with Maine DEP will continue. The DEP always makes a point to have a representative at the MWWCA monthly meetings to keep the board informed of issues and/or regulations that

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## 2010 Officers

### President

André Brousseau  
Springvale, ME

### First Vice President

Paul Rodriquez  
Portland, ME

### Second Vice President

Jeff McBurnie  
Portland, ME

### Immediate Past President

Tom Wiley  
Portland, ME

### Secretary/Treasurer

Al Jellison  
Bangor, ME

### Assistant Treasurer

Dan Bisson  
North Yarmouth, ME

\*For a complete Board Listing, please visit the MWWCA website at:

[www.mwwca.org](http://www.mwwca.org)

## Upcoming Board Meeting Dates:

**March 19** – 9:00 A.M.  
Monthly Meeting – MMA

**April 22** – Noon-Lunch Provided  
Long Range Planning Meeting  
Hollywood Slots Hotel &  
Raceway

**May 21** – 9:00 A.M.  
Monthly Meeting – MMA

# Report to MWWCA and MWUA on the development of “Maine’s Climate Change Adaptation Plan” from appointed stakeholder representative Mary Bowers

The genesis of developing a Climate Change Adaptation Plan came about as a result of LD 460 which required an evaluation of the likely environmental effects of climate change as reported in a University of Maine document titled, “Maine’s Climate Future: An Initial Assessment”. The evaluation would then be delivered to the Natural Resources Committee of the 124 Legislature in the form of a report in March of 2010.

Taking the lead in organizing the evaluation (and the development of a subsequent plan and the report) is a coordinating committee at Maine DEP. The facilitator for the committee is Malcolm Burson.

From the start, the stakeholders stressed the importance of having all State agencies involved in the process. They also agreed that there is an ongoing need to have updated climate data, including a coordinated climate information center.

“Maine’s response to climate change will need to be ongoing, incorporating new information and continuing to adapt and evolve. Consequently, data-gathering, monitoring, and assessment are critical tools that Maine must utilize to inform decision makers, resource managers, stakeholders, and the public. Our decisions must be founded on the best available scientific data, and Maine’s planning must support continuing research.”

The most likely scenario for climate change in Maine is that there will be:

1. Larger, more intense storm events
2. Seasonal variability, including later onset of winter, increased icing events
3. Sea level rise affecting coastal areas
4. Temperature increases resulting in greater evaporation

*(Already I’m hoping some of you may be thinking ahead... Might the increased rainfall from number 1 above be offset by the evaporation in number 4 underscoring the need for planning for more water storage?... Would significantly higher temperatures positively or negatively affect water and wastewater treatment?)*

Malcolm Burson has synthesized the comments from the stakeholders and the State Agencies into a draft report which includes an initial list of strategies and recommendations to address climate change as they were identified. The draft report has a stated goal of “building a climate-resilient Maine”. I can provide a link to the draft if anyone is interested in reading the entire document, but for the sake of brevity I have only addressed climate change issues related to drinking water and wastewater infrastructure.

The draft report, at this point in time, is focusing on a comprehensive outline including:

1. Identifying vulnerabilities and making risk assessments with regard to climate change impacts. Perform an inventory and map all public drinking water supply systems, wastewater treatment facilities, and locations where infrastructure interfaces with surface waters. (The actual methodology for making the assessments still remains to be developed). *Examples include wastewater pump stations that are in the coastal area, or inland along rivers, may be at greater risk of flooding. In-ground septic systems in similar areas may be at risk of inundation. Drinking water resources, both private and public may be at risk of contamination during periods of inundation. Severe flooding may delay the delivery of water treatment chemicals.*

2. Identifying adaptation strategies
3. Estimating costs to implement the adaptation strategies, including the cost of the “do-nothing” option
4. Securing funding (federal, state, local) to implement the adaptation strategies and to compile and disseminate the climactic data

Planning future infrastructure construction and rehabilitation using new design standards that consider the likely climate change scenario.

Improving mapping (through the use of LIDAR) of at risk areas and make it available to all agencies at the State and Local level.

Looking for any opportunities that may result from the climate change scenarios. For example, Maine may become one of the last recreational areas in the northeast for winter sports.

There are a couple of related potential issues that came up in the stakeholder sessions that I want to share with you. One is that the demand for emergency response resources such as MEMA and the county Emergency Agencies may increase dramatically, possibly to the point of not being as readily available to us as they are now.

The other relates to the wastewater sector and the possibility of more regulations. The report states the coastal ecosystem and the Gulf of Maine will be the recipient of excessive storm-water runoff, probably increased amounts flow from non-point pollution sources, and possibly overflows from inadequately sized infrastructure (pump stations, pipes, etc.) when the larger storm events occur. This will result in higher pollutant and nutrient loads. In the draft report Recommendation C.2.2.1 is for the MEDEP to develop new state-level standards including TMDL’s for criteria other

Cont’d on page 3

## ON MY SOAPBOX:

By Mac Richardson, Newsletter Editor

If you ever want to find a person that has the good of a volunteer organization at heart, works hard, is not looking for glory and adulation, look no further than the organization's treasurer. It occurs to me that the Maine Waste Water Control Association has been blessed in the recent past with a string of dedicated people who have faithfully served in this often thankless and time consuming job. In my time with the association the list starts with Mike Grove and continues with Vivian Matkivich and Dan Bisson. Talk about a trio that has done it all! Add to this distinguished group, Al Jellison. Al has recently stepped up to assume the financial reigns of our association and we can all feel confident that our finances continue to be in good hands.

One financial issue that has surfaced lately is the "Proxy Tax". It is a tax that is imposed upon associations like ours when lobbying is engaged in. Clearly one of the important functions of the MWWCA is to remind

our elected leaders of the importance of the work we do every day and the resources that are needed in order to support that work. This counts as lobbying. Essentially the issue is that our dues can be deducted from the taxes paid by individuals or companies as a business expense. Unless we inform our membership that a portion of the dues that they pay are no longer considered tax deductible, then we will end up paying this tax which is 30% of the amount the association spends on lobbying. In the case of MWWCA this was estimated to represent a hit of as much as \$15,000 or more! Thus you may notice on your membership renewal form that 50% of net dues are not considered tax deductible in accordance with IRS section 6033.

So if you have any questions about the changes to the membership dues, and the Proxy Tax, Al is your man. And while we are at it, perhaps we could all say thank you to Al and the treasurers that have preceded him, they are a great group of hard working folks!

## Should Your Collection System Be Recognized?

The Charles Perry Award is given annually by the Maine Wastewater Control Association to a Municipality, District, or Private Waste Water Collection System in Maine. This award is given to recognize the outstanding efforts of the collection systems' personnel for the excellence in Management, Operations and Maintenance of that collection system. While all facilities strive for compliance, this award recognizes the extra effort and originality that is put forth in the

operations of a wastewater collection system to reduce the environmental impact on that community.

The MMWCA Collection Systems Committee is currently accepting nominations for the Charles Perry Award in hopes of presenting the award at the 2010 MWWCA Spring Conference. For more information, nomination forms, or to send completed forms: Doug Howard, [dhoward@sacomaine.org](mailto:dhoward@sacomaine.org) (284-6641). Nominations need to be in no later than March 26, 2010.

This is your newsletter – if you have news you would like to pass along or an opinion to express that would be of interest to the membership of MWWCA we are always interested in receiving material and will make every effort to incorporate your submissions.

## PRESIDENT'S CORNER cont'd

may be on the horizon. On many occasions they have asked that MWWCA members become part of a stakeholders group. These members give the MWWCA a voice and also bring back a different perspective on the DEP's decision making.

Thank you for allowing me to serve as your president. I am very excited to keep the association's momentum moving towards a safer and healthier environment.

Yours Truly,  
André Brousseau, President 2010

## REPORT cont'd

than bacteria in estuarine watersheds and watersheds. Recommendation C.2.2.2 is to improve design standards for engineering stormwater systems and wastewater treatment systems to lower overall pollutant and nutrient loads reaching the Gulf of Maine.

If anyone has input in the development of the report they want to share, I'd be happy to pass it along, or, you are welcome to submit comments directly to Malcolm Burson.

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Website: [www.mwwca.org](http://www.mwwca.org)

**Editorial Staff:** Mac Richardson, LAWPCA, P.O. Box 1928, Lewiston, ME 04241-1928. Phone: (207) 782-0917.

E-mail: [crichardson@lawpca.org](mailto:crichardson@lawpca.org)

# Operator Exchange

By Stephan Doiron, Sanford Sewerage District

A couple of weeks ago I participated in the Operator exchange program with the State of Vermont. I had the pleasure of visiting numerous facilities. On my first day I visited the Springfield Wastewater treatment plant. I was impressed with their recent upgrade and the quality of the compost that was produced. I followed up the Springfield visit with a brief stop at the Windsor Treatment plant. I have to give the operators at this facility two thumbs up. Despite the age of the equipment and the limitations of their plant, they produce impeccable effluent. Next on my trip was the Montpelier Treatment Plant. I was most impressed with the SCADA system that Bob Fischer had designed. I took a break from my plant tours with a day trip to the Green Mountain Water Environment Association Fall Convention. Everyone made me feel welcome at this very well organized event. The last stop on my trip was

the Essex Junction Treatment Plant. I was extremely surprised to learn that the plant produced 40% of its own power from methane. I was amazed to see how many treatment plants use anaerobic digesters in Vermont. I am not accustomed to seeing this process and it was nice to learn a little more about it.

I appreciate all the hospitality that was shown to me by the operators who provided the tours. I found everyone to be very knowledgeable about their facilities and willing to share information. I would like to acknowledge all of the time that Norton True has put into this program. Without his guidance the trip would not have been as educational and enjoyable. Lastly, I would like to thank NEWEA, GMWEA, and MWWCA for this opportunity. It was a privilege to represent the State of Maine and a pleasure to experience other facilities and their operations. 🌐



A couple of cool operators and their hot rod on a Vermont road trip

## UPCOMING EVENTS:

### \*\*Legislative Breakfast/Monthly Meeting\*\*

February 23 – 7:30-10:00 A.M.  
Senator Inn-Augusta

### \*\*MWWCA/NEWEA Congressional Briefing\*\*

March 15-17  
Washington D.C.

### \*\*MWWCA Spring Conference\*\*

April 23 – 8:00 A.M.  
Hollywood Slots Hotel &  
Raceway-Bangor

## Welcome Assistant Editor

We are pleased to welcome Aubrey Strause, P.E. of Tata and Howard as assistant newsletter editor. She may be reached at 222 St. John St, Suite 301, Portland 04102. (207) 518-9500 e-mail: [astrause@tataandhoward.com](mailto:astrause@tataandhoward.com)

## CATCH YOU AT JORDAN BOWL!

### Don't Forget

March 10, 2010

Maine WasteWater Control Association's  
Third Annual  
SKI DAY

At Sunday River

\$45 per person includes ski ticket, lunch, and Apres Ski networking with hors d'oeuvres. Sign up by February 26.



**STANDARD METHODS**  
FOR THE  
**EXAMINATION OF WATER AND WASTEWATER**  
JOINT EDITORIAL BOARD  
**MEMORANDUM**

**To:** Standard Methods Users  
Biochemical Oxygen Demand (BOD)

**From:** Rodger Baird  
Joint Editorial Board (JEB)

**Re:** BOD Dilution Series

**Date:** May 13, 2009

This letter is in response to questions about the changes in the 20th and 21st Editions of Standard Methods regarding the recommended dilution series in the 5-day BOD test, Method 5210B. As described below, it was never the intention of the *Standard Methods* Joint Task Group for 5210B to make it mandatory that more than one dilution per sample meet the DO criteria.

The 19th and earlier editions recommended making several dilutions in order to insure that at least one met the DO uptake criteria of at least 2.0 mg/L depletion and a residual of 1.0 mg/L. The 20th Edition was edited to recommend up to five dilutions of unknown matrices be made in order to get two dilutions that met the DO criteria. The 21st edition was edited again to recommend at least three dilutions be made that meet the DO criteria. The language is as follows for the two later editions:

**20th Edition, 5210B.4.f:** "Make several dilutions of sample that will result in a residual DO of at least 1.0 mg/L and a DO uptake of at least 2.0 mg/L after a 5-d incubation. Five dilutions are recommended unless experience with a particular sample shows that use of a smaller number of dilutions produces at least two bottles giving acceptable minimum DO depletion and residual limits."

**5210B.5:** "If more than one sample dilution meets the criteria of a residual DO of at least 1 mg/L and a DO depletion of at least 2 mg/L, .... average results in the acceptable range."

**21st Edition, 5210B.5.c:** "Using the dilution water prepared in ¶ 5a, make at least three dilutions of prepared sample estimated to produce a residual DO of at least 1.0 mg/L and a DO uptake of at least 2.0 mg/L after a 5-d incubation. Five dilutions are recommended if experience with a particular sample does not produce at least three bottles having acceptable minimum DO depletion and residual limits (¶ 6a)."

After JEB discussion with the Part Coordinator and Joint Task Group Chair for Section 5210, it has been determined that the recommendations made regarding the number of dilutions meeting the DO criteria in the 20th and 21st Editions were not intended to represent a pass-fail criterion for the BOD test results. It is important to understand that the sole purpose of sample dilution in the BOD test is to insure that a valid sample aliquot is tested in this 5-day test, because if the DO window is missed, the sample can not be re-run with validity. The presence of additional dilutions that meet the DO criteria have an adjunct benefit in some cases if sample toxicity is revealed, but this is a rare occurrence. There is no statistical advantage to "averaging" results from several dilutions because they are not true replicates in either a statistical or analytical sense. They are averaged if they all meet test criteria only because it cannot be determined that one result is "better" than another.

As additional support that the recommended changes were not intended to be prescriptive in a pass-fail sense, the calculation section of the 20th Edition quoted above says "**If** more than one sample dilution meets the criteria (for DO) .... average results ... ". And in the 21st Edition, the language cited above says " ... make at least three dilutions ... **estimated** to produce a residual DO of.. ... ". [emphasis added]. Clearly, the analyst is being instructed to estimate that the dilution series will fall into the necessary DO range, an expectation that can only be found out after five days. In other words, the instructions are a "due-diligence" guide for the analyst. Because of holdingtime considerations, samples cannot be re-tested after the 5-d results are known, and it was never the intention of the Standard Methods Committee or Joint Task Group to arbitrarily create either a procedure change that would cause test failure, or a regulatory sticking point for laboratories. The guidance represented in these editorial changes of the 20th and 21st Editions of 5210B were, rather, made to help analysts (particularly, inexperienced analysts) achieve a valid BOD test result.

Very Truly Yours,  
Rodger Baird, Joint Editorial Board  
*Standard Methods for the Examination of Water and Wastewater*

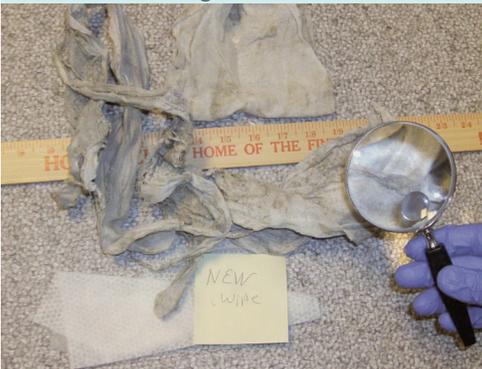
# The Flushing of Unmentionables

By Tim LeVasseur

It seems every time I turn on the television a new flushable product is being advertised. Some products claim they are bio-degradable with natural ingredients. Other items really don't say to flush after using, but they lead you to believe clean up is a breeze, no mess, just flush.

It's amazing to see how fast a new product on the market shows up at the local treatment plant within days of being released to the public. I recall in the 70's when a birth control device known as "the Sponge" hit the European market. Years later it was advertised that "the Sponge" would soon be available in the United States. So with my keen senses, I started to watch for "The Sponge". Within days of the release we saw it on our influent rotating drum screens.

It's fun when an operator unintentionally finds a product on the Influent bar racks, such as money. I've been fortunate to start up several new WWTPs; we always framed our first sewer dollar bill. The excitement continues. We collect items for viewing and display at KSTD for our Plant tours. The collection includes small toys, miniature balls, additional money, ID cards, dentures and many other interesting items.



**A FLUSHABLE PRODUCT FACTOID:** *Humans lose about 25 inches of hair per day or about 250 yards per year. KSTD in Waterville, Maine treats sewage from 35,000 people. So we may be receiving about 1,700 miles of hair a year!*

Items which we do not collect include men's socks, yards of dental floss, root balls, hair, self-developing photographs, slip liner used for sewer relining, rats (dead or alive) and other plastic goods people use and feel the need to flush.

**A FLUSHABLE PRODUCT FACTOID:** *Dental floss is made of nylon cloth and Gore-tex. Americans use, on average, 18 yards of dental floss per person per person per year (far short of 122 yards needed to properly maintain good dental hygiene) yet when totaled comes to 2.5 million miles annually, enough to circle the earth 100 times. Dr. Maroon is quoted to say, "Someone should invent "Tooth paper" which would work just like toilet paper. Then people will understand that it is important to wipe off what goes in just as much as what comes out". So would "tooth paper" be a better flushable product?*

The problem gets serious when items like underwear, cloth handy wipes and baby diapers begin to cause pump plugging problems. The majority of these plugs are made up of other common flushable products which people do not want to touch, or even look at, after they have used it. When you see what else is mixed in with these items you quickly learn that the Bar Rack room is not a place to eat your lunch!

**A FLUSHABLE PRODUCT FACTOID:** *A baby will utilize 6,000 disposable diapers –roughly 2 tons of "A proven sewage pump plugging product," before he or she is potty trained.*

Pump plugging is the number one cause making life as an operator unpleasant. Maintenance personnel have creative ways to accomplish the process of cleaning out a plugged pump. Most guys I've seen can clean a completely plugged sewage pump without getting any spillage splashed onto their pants or shoes. But then I have seen some guys that need complete rain gear on to prevent contamination of

their work clothing. Remember, do not leave the material on the pump room floor! Poor housekeeping will haunt you when these materials get into your sump pump during the night and flood the dry pit.



**A PPE SOP FACTOID:** *Always practice good PPE and Hygiene when performing this fun task. Proper lockout/tagout of electrical gear and piping is most important. Practice good housekeeping techniques.*

Then there's the array of tools to grab and remove the plugs stuck in the pump or check valves. I've seen the use of: Bare hands, hands protected by two layers of long rubber gloves, sharp proof gloves, short and long pliers, and packing remover tools. Then there's the technique to open the hand clean out port and then open the inlet valve, flushing the crap onto the floor. Here's one for the books, I heard of people turning the pump on and holding the discharge check valve fully open, then turn the pump off. This allows the water to flow backwards, in the hope

that the plug unravels itself and goes back into the wet well.

***A SOP FACTOID: Don't do this at work, I have seen people do the back flush process but let the discharge check valve slam shut before closing another manual valve to stop the water flow. I am guessing they feel this "humongous water hammer" loosens the plug. In fact, it will break pipes. Please note, do not restart pump when it's turning in the opposite pumping direction.***

We've all seen or heard about the smaller sewage pump stations that had a "dry weather overflow" due to the continuous plugging of what appears to be underwear. Polyester underwear does not dissolve. It seems to collect with other rags in the sewer system as it tumbles down sewer pipes to the pump station wet well. Most likely the currents created by the falling sewage in a wet well creates a snow ball effect by gathering additional rags before the pump turns on. Then WAM! "HOUSTON WE HAVE A PROBLEM!"

At our Benton pump station the 7.5 HP centrifugal pumps plug fairly often with what appears to be the new "Swiffers" cloth handy wipes. This polyester material is married with paper fiber to create wiping cloths that will not rip or dissolve such as a paper towel would. This stuff is tough!

Because of this KSTD staff has become the CSI of "Sewage Rags Investigation" (SRI). Our intelligence has demonstrated that these wipes seem to be from a large roll where the length of each rag varies. It appears that it's a multiple layer cloth with diamond shape symbols in the wipe. And boy, whoever is the user, and the flusher uses a lot of it.

Our SRI team has contacted the elementary school janitor who claims they do not use such cloths. We called 3 local automobile shops, same answer, not us! Now we are thinking it could be home care health users in various homes or possibly home car care shops.

So what can we do to stop the dumping of these items into our sewer system? Yes, Wastewater professionals always talk about public education. There are many examples of how Maine's WWTP have educated the public with success. Google it someday or call other area local WWTP. But at some time we have to just say the answer is, "zilch. Nothing. Zip can be done to stop it. The answer may be the WWTP needs to adapt to the changes of sewer users".

***GOOGLE SEARCH FOR "DISPOSABLE WIPES IN SEWERS" FACTOID: 7,030 articles were found with this Google search. Most listings provided WWTP one page flyers of their quest to alleviate rags from being flushed by the public. It also showed Steve Lane of Winterport Maine, Sewer District article, " Disposable wipes make bigger mess". Falmouth and Portland WD were listed too. Other listing titles were, Don't Flush Those Moist Towelettes", "ALERT! Swiffers Damages Sewer System!", and then there was a threat of "Solid Waste that***

***causes obstructions in sewer system is a violation of the City's Sewer Use Ordinance".***

But maybe we can be more aware of our pump station performance, upgrading and selection of proper equipment along with being aware of seeing potential plugs before they cause a dry weather overflow or reduce our capacity during a wet weather event.

It's amazing to me how much does pass through a well maintained and operated pump system before it fails. Everyone involved in sewage pump station operations needs a "pat on the back for your success". Yet there are times when we do the "blame game", citing what people flush down the toilet as the cause of the problem; or is it equipment failure and fatigue? or possibly misapplication of equipment and maybe we just need to adapt to the changing times....

Adios and happy pumping.

Timothy J. LeVasseur, KSTD, 207-873-0611 ext 102. Or tl@kstd.com



Three kings or is it past presidents.

# Maine WasteWater NEWS

## FEBRUARY 2010 ISSUE

*please circulate and share with your colleagues*



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MAINE WASTEWATER CONTROL ASSOCIATION  
LOCAL GOVERNMENT CENTER  
60 COMMUNITY DR  
AUGUSTA ME 04330