Newport Aeration Upgrade
by Arnold Greenleaf

The Town of Newport first began operating aerated lagoons in 1988, using the Lasaire tubing system that many of you are so familiar with. That system only lasted a couple of years before we started having serious problems with our treatment capability. In 1992 we replaced the Lasaire system in lagoon #1 with the new Environmental Dynamics Inc. (EDI) “REEF” units. 1993 saw the upgrade of lagoon #2 with the same system. The results were tremendous, for the first time since the aeration system became operational we could now put as much air into the lagoons as we wished and we were no longer blowing it off at the check valves in the blower room. Electrical savings suddenly became a reality as we could now use what air we produced and turn the system up or down whenever we needed. We were no longer trying to overcome the backpressure on the old tubing. We also no longer needed the Hydrogen Chloride gas and that was a nice improvement.

Our only problem now was the decaying yard piping and the amount of air that we were losing into the soil before it ever got to the lagoons. We also experienced serious plugging of the new aerators in parts of lagoon #1 due to the pipe corrosion and the sloughing off of iron particles from the yard piping into the orifice plates of the remaining iron particles and eliminate the problems with them plugging on us anymore.

Like anything else that wears out, the media plates in the REEF units by 2000 had plugged beyond repair and it was time to replace them. When we contacted the factory we found that it would be more economical to upgrade to their new fine bubble system than purchase new media plates for the REEF units. So during the summer of 2001 we switched out all 50 of the REEF units in lagoon #1 and replaced them with EDI’s Flex-air fine bubble aerators. This immediately brought us a major improvement in treatment as well as another reduction in our electrical consumption. We found that it took far less air to do the same amount of treatment and by increasing air input to the lagoon we could overcome our

Newport Aeration — Continued on page 11
**NHWPCA OFFICERS**

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Newsletter Committee: Dana Clement, Bryce Fletcher, Harvey King, Editor – Tom White
Send articles to: State of New Hampshire
Department of Environmental Services
P.O. Box 95
Concord, NH 03302-0095
Attn: Tom White

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**NHWPCA Director’s Meeting**

**March 5, 2003**

- **In attendance:** Steve Clifton, Ray Vermette, Rick Cantu, Ed Rushbrook, John Grout, George Neill, Paula Anania and Fred McNeill presiding.

- **Minutes** of last January Directors Meeting were read and accepted.

- Ed Rushbrook discussed NEWEA related issues. He mentioned that membership was an issue as it is in most associations. He wants input as to what NEWEA could do for operators in order to bolster membership increase. He reminded people to give him nominations for next years Operator and/or Peloquin Awards.

  Ed updated the board on the status of the Ops Challenge Team. There will be a four-man team this year and Ed mentioned that the team needs sponsors. Steve and John volunteered to chase down some – both financial and equipment/supplies. The team will function without a coach unless someone steps forward. At the very least, Victoria DelGreco will be available to coach at the actual events. The spring training event for all of New England will be held at the Franklin Training Center in Franklin, NH on April 25th.

- **Trade Fair:** We should be all set for April 10th. Currently a number of booths are available at the Bedford Wayfarer. Poster Contest winners will be announced by Harry Stewart, Director of DES Water Division. NEWEA President Norton True will be invited to make award presentations.

- **User Rate Seminar:** George reported that we’ve made arrangements for an outside speaker to come to NH and present recently developed User Rate Software. This seminar will be sponsored by NHPCA and DES and will be held at the DES auditorium on May 30th at a cost of $30.

- **BNR Seminar:** We have made arrangements with Mike Gerardi of Penn State to teach a class on oxygen demand and denitrification on June 27th at the DES auditorium in Concord. This will be sponsored by our association and NH DES. Tentative cost will be $60 for members and $85 for non-members. We will be advertising far and wide for this worthwhile seminar.

- **Golf Tournament:** We’ve had to move the old tentative date for this from August 14th to August 7th. It will still be held at Lochmere Country Club in Tilton, NH. We will attempt to hold another Putting Contest and have a 50/50 prize that we’ll donate to Ops Challenge.

- **Fall Meeting:** Fred has made inquiries into having tours at both Stonyfield Yogurt and AES Power Plant, the new facility that uses Manchester WWTF effluent for cooling water. He’ll look into either the Highlander or the Yard Restaurant for lunch following the morning tours.

- **Winter Meeting:** Tentatively planned for December 4th, 2003. We hope to have tours of the upgraded Solids Handling Biosolids System at the Hall St. WWTF in Concord. John will inquire about a facility to hold a luncheon meeting.

- **Budget:** Steve Clifton handed out a draft budget as well as our financial status over the past year. The board had lengthy discussions over all line items and agreed to a final budget that will actually incur deficit spending. We are currently in the black and we actually made money last year, in spite of a budget that showed a deficit.

- **Next Meeting:** The directors will next meet immediately after the Trade Fair on April 10th, 2003.
Michael Gerardi Wastewater Biology Training Seminar
BOD & Metabolism / Denitrification

The New Hampshire Water Pollution Control Association (NHWPCA) is sponsoring a one day training seminar presented by Michael H. Gerardi of Penn State University. Mr. Gerardi presents wastewater biology courses throughout the country and has authored numerous technical publications. He will present two 3-hour sessions emphasizing: 1) BOD & Metabolism and 2) Denitrification, for a total of 6 hours of instruction.

BOD & Metabolism will review the different types of BOD and how BOD is removed, degraded and transformed into sludge as it passes through the activated sludge process. Aerobic, anoxic and anaerobic respiration will be discussed as well as a presentation on the process control measures used to reduce sludge production. Denitrification reviews the biological principles involved and their application for process control, troubleshooting, permit compliance and cost-effective operation. Controlling undesired denitrification will also be discussed.

The seminar will be held on Friday, June 27, 2003 at the New Hampshire Department of Environmental Services auditorium in Concord, NH. Seminar hours will be from 8:30 - 4:00. The cost will be $60 per registrant for NHWPCA members and $85 for non-members. For additional details and registration information call Wes Ripple at (603) 271-2940 or e-mail at wripple@des.state.nh.us. Registration deadline is June 13, 2003.

Conference

The Annual Region I Pretreatment Coordinators Conference will be held this year on Thursday, June 19.

NHDES is pleased to host the meeting in the Hazen Drive auditorium and conference rooms. All pretreatment and other interested plant personnel are urged to attend for updates on current issues and informative sessions related to industrial discharges.

For information contact George Carlson at DES or Jay Pimpare at EPA Region I.

In Memoriam
Dale Edward Whitman
1943 – 2003

Our thoughts and prayers are with his family and fellow workers in North Woodstock, NH

PUZZLER
Making an Endless Chain

Mary, an operator at the North Dump and Klump WTP, needed an endless chain (connected at both ends) for a valve in the RAS line. Rummaging through a box of odds and ends in the maintenance garage, she found eleven lengths of chain, each having ten links each.

I’ll just cut one end link from each length of chain, attach the next length, and then weld each link closed, Mary thought. Finally, I’ll join the end to the front of the chain in the same way. I should have these eleven links cut and welded by lunchtime.

Mary put one length of chain in the vice and started to cut a link. Then she stopped. DUH! she thought. I can make the same length of an endless chain without cutting and welding as many links as I had thought. I see an early lunch in my future.

What are the fewest number of links that Mary needs to cut and weld to make this endless chain?
Utility Security in a New Era
Planning and Implementing Practical Programs

W. A. Peterson, Senior Vice-President, Aquarion Services Company
Brent R. Herring, Compliance Manager, Aquarion Services Company
Charles Conway, Training Manager, NEIWPCC

Introduction

Time has evolved to include realities that all of us, including utility operations professionals, must embrace as part of our daily lives. One by-product of the times we live in includes heightened concerns about security of the wastewater conveyance and treatment facilities we are responsible for operating. That responsibility is more than a job; such facilities are an important and integral part of the infrastructure that makes much of what is in our community possible.

The challenge before us lies in applying practical and comprehensive approaches that result in real world programs that can and will be implemented. There is little reward in completing studies that mark time on bookshelves or are produced at a cost of something that was more critically needed for the operation and maintenance of the treatment system. Some of the issues to consider when addressing security needs are discussed below.

The Real Risk

Much has been made of the results of terrorist actions by disgruntled groups of people as it relates to water resource infrastructure. The reality may be that many targets of opportunity in the infrastructure arena are most likely to be those that are convenient and are easily understood by laymen with or without reference material. Our society is an open one with elected officials providing much information about the infrastructure that is, after all, owned in some manner by the users of the system. The risk of damaging actions by unknown groups is as significant as actions by a disgruntled employee. The tasks to be implemented at a practical level are no less important and perhaps overdue in the operation profession.

Assessing real risk is not easily accomplished. Risk assessment should be developed based on multiple perspectives (developed through experience) such as emergency management, professional operations expertise and security expertise, to name a few. The real risk to wastewater facilities is perhaps less than that as compared to drinking water systems. Or, the risk may be greater at different points in the system. What is the risk to a wastewater treatment plant with large quantities of chemicals that might be used for nefarious purposes? What is the real risk to a wastewater pump station in an urban area versus a water treatment booster station in a rural location? How much more risk should be assigned to a treatment system in a community with a large military installation versus a treatment system located in a town known as a tourist destination?

All these considerations and more are an important part of the risk evaluation process. The quality of the assessment team will ensure that the approach will produce a report that assesses quantifiable risks, recommends practical solutions and develops realistic schedules that will put the necessary programs in place. The right team and the right approach will deliver the needed enhancements to the community.

Security Concerns

Security enhancements today would almost appear to be something new and dramatically different. However, there is much within the context of risk assessment that includes actions taken in the past. Security becomes an umbrella to incorporate all activity. The conventional wisdom has operations professionals utilizing separate yet related documents and procedures to protect the system from actions generally labeled highly unlikely. Current wisdom requires operations professionals to incorporate the conventional wisdom considerations in a more highly sophisticated way. This should be considered with an understanding that the system should be protected from actions that while highly unlikely, are not highly improbable any more. The possibility and the probability have now become a wild card for which concerns should be at least addressed consciously (and planned for) instead of being dismissed casually.

The first leg of the three-legged stool labeled security contains the plans, procedures and policies under which the facility operates in response to emergency models. Some of these responses are institutional in nature (fire, police, and emergency medical responses) while others are site specific and will de-
epend on site conditions (chemical spills, for example). The first leg includes emergency response plans, vulnerability analyses, process safety management plans, first responder procedures and other such actions. As an aside, but yet relevant to this discussion, is the fact that development and implementation of a security plan will become a cost saving measure in that an effective program may help reduce insurance premium costs in the future as the industry assesses and prices risk.

The second leg of the stool are the actions which are practiced at facilities with little or no consistency and wholly dependent on the owners and managers practices. These actions include policies on locking of doors and other points of access, gate access and control, positive identification of delivery drivers, limited access to sensitive areas of the plant as defined by the location of control systems and records, and the location of records and the maintenance of a copy of such records off-site for safekeeping, to list a few. New wisdom should be challenging professionals to actively check the fence perimeter for integrity; to observe and walk up to strangers on the plant grounds to determine if they have a right to be on the property; a funded plan to change locksets routinely and to log access to areas critical to system operation; and maintaining document integrity for procedural information that could be construed as being operational information.

The third leg of the stool is to apply considerations that perhaps were not of concern during the conventional wisdom era. For example, vehicles that are used by the system staff might be parked both inside and outside (especially with a lack of garage space) with the keys in the ignition and unlocked doors. Conventional wisdom, moderated by local concerns, held that few people would enter a water or wastewater or groundwater treatment facility to steal vehicles. In the same breath, it was not thought likely that anyone would enter a plant for the purpose of damaging chlorine or other chemical lines to endanger the residents of an area. Now that those concerns have been determined to be legitimate, the source actions that could prevent such threatening and frightening results should be reevaluated and implemented.

**Protection of the System Components**

It is generally accepted that there is a significant challenge in protecting far flung system assets for water and wastewater infrastructure. The debate ranges from targeting the entire system to key components. The reality will be that a melded approach will be the most practical and easily implementable and the site-specific action plan will have just enough differences so as to ensure that each system is generally protected in a unique manner. This approach will deter commonality in security protocol application and make someone who wants to damage, destroy, or otherwise do damage to a system component will have to work harder to do it.

The practicality of funding, purchasing, and installing security measures to protect every element of a widely dispersed system appear to be unlikely, at least in the very near term. The more realistic approach will be to plan for a rapid response to system abnormalities regardless of the nature of the abnormalities. The ability to respond and characterize the nature of the abnormality will depend, in large part, on a human response factor that is missing even with the use of cameras and instrumentation. Around the clock real time monitoring for very critical components or processes could be an appropriate response in some situations.

**Common Sense and Awareness**

The front line deterrence is and will continue to be a system staff trained to be observant, trained to be competent and motivated to be professional when protecting the infrastructure assets. While security protocols that may be suggested might be out of reach financially or not likely to be implemented immediately, operations professionals trained in security measures (appropriate to the facility) will bring the most value in the very near term. Common sense in applying security measures such as challenging visitors, locking doors when entering or exiting, verifying credentials of chemical truck delivery drivers, limiting access to areas of the facility regardless of the visitor—all of these and more will highlight the value of the existing staff while other hardware and construction required enhancements are funded and implemented over time.

**Public Right to Know**

Much of the information generated in both raw and finished form from activities performed in the daily operation of water, wastewater and groundwater treatment systems and treatment units are public knowledge under various state, local and Federal rules and regulations. Some information is now exempted.
Coliform and *E. coli* Testing

(3<sup>rd</sup> of 3 articles)

by Tim Loftus

The first article in this series emphasized that the ways of validating bacteriological testing differ from those methods used to validate chemical or physical analyses. The second article was an overview of federally required techniques and procedures needed to produce reportable results. This article will cover the requirements for reading the results and for calculating the geometric mean for NPDES reporting.

### Reading the Results:

After incubating, count the colonies under 10X to 15X magnification. It’s important to report only the results that meet certain requirements. Often background colonies will grow on the membrane filter (will be a different color than the target organism). The total of the fecal coliform colonies and the background should not exceed 200 colonies per filter. If it does, consider that dilution to be invalid. Note that the *E. coli* test methods are not specific on this point.

Report only the fecal coliform results from membrane filters that have between 20 and 60 colonies or the *E. coli* colonies that have between 20 to 80 colonies per filter. Disregard the other dilutions. Don’t forget to factor all dilutions back up to a 100 mL sample volume. The following example shows how the result of a fecal coliform analysis is to be determined.

<table>
<thead>
<tr>
<th>SAMPLE DILUTION</th>
<th>COLONY COUNT</th>
<th>BACKGROUND COLONIES</th>
<th>DILUTION FACTOR</th>
<th>COLONIES PER FILTER</th>
<th>RESULT</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 mL to 100 mL</td>
<td>15</td>
<td>67</td>
<td>4</td>
<td>4x15</td>
<td>60 col/100 mL</td>
</tr>
<tr>
<td>50 mL to 100 mL</td>
<td>34</td>
<td>110</td>
<td>2</td>
<td>2x34</td>
<td>68 col/100 mL</td>
</tr>
<tr>
<td>no dilution</td>
<td>190</td>
<td>1</td>
<td>1</td>
<td>1x190</td>
<td>55 col/100 mL</td>
</tr>
</tbody>
</table>

Report on your NPDES DMR a fecal coliform value of 68 col/100 mL. Here’s the reason: The first dilution (25 mL to 100 mL) does not produce a fecal colony count of 20 to 60 colonies per membrane filter (it produces only 15). Therefore it doesn’t meet the counting requirements of the test. The third sample (no dilution) does produce enough colonies on the filter (55), but the total of fecal and background colonies is too high (55 + 190 >200). Likewise, this dilution does not meet the reporting requirements. Only the second dilution (50 mL to 100 mL) produces a reportable result.

There are a few exceptions to this. If your effluent disinfection system is working well, you may not have any or very few, fecal coliform or *E. coli* bacteria in the sample. No matter what dilution you use, you will get a very low result. Choose the dilution closest to the requirements and report that result as an estimate.

Conversely, if your disinfection system isn’t working properly, even a highly diluted sample will exceed the reporting requirement limits. While the actual number of colonies may be inaccurate, it is obviously an NPDES discharge violation. The results should be reported as TNTC (Too Numerous To Count).

### Calculating the Geometric Mean:

The geometric mean is a calculation to determine an average when the set of numbers cover a wide range. Results of bacteriological testing often cover such a large range. The easiest way to calculate the geometric mean is to use a scientific calculator. The first step in the calculation involves converting all your daily coliform results to log values. Add up these log values and divide by the number of samples. For example: The daily coliform results during the week were 25 col/100 mL, 285, 15 and 460.

\[
\log 25 + \log 285 + \log 15 + \log 460)/4 = (1.3979 + 2.4584 + 1.1769 + 2.6627)/4 = 1.9238.
\]

The second step is to take this value and find the antilog. This will be the 10x button on your calculator. Press the button for 10x then type in 1.9238. Press “enter” and the display will show 84. Report 84 colonies/100 mL as the weekly geometric mean. Monthly geometric means are done the same way, except you will be using many more data points.

The information in this article is based on general test methods that are used throughout the New England area for NPDES monitoring of the fecal coliform group and for *E. coli*. As usual, check your federal, state and local regulations. You may have additional regulations or reporting requirements that you must meet.

If you have any questions, suggestions or comments, please contact NEWEA Lab Practices Committee Chair Phyllis Arnold Rand (207) 782-0917 (prand@lawpca.org) or Tim Loftus at (508) 949-3865 (timloftus@msn.com).
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PETROTECH System in Waste Odor Elimination

Background:

The town of Georges Mills Wastewater Pump Station in New London, NH has, as many other wastewater pump stations, a serious problem with odor. This problem is especially pronounced in the summer months and the municipalities receive continuous complaints from residents. The town of Georges Mills experimented unsuccessfully with numerous products and processes to eliminate odor. Their conclusion was that these products merely masked the existing odor temporarily.

Searching for a solution, the town contacted Petrotech America Corporation for advice and assistance.

Odor Elimination System and procedures:

Petrotech America Corporation installed a custom designed spraying system in the pumping station on September 25, 2002.

The PETROTECH ODOR ELIMINATOR product was discharged from this system every two hours into wet wells in the form of a fine spray mist. The duration of the discharge is 5 seconds, which is equivalent to 200 ML of diluted PETROTECH product.

Starting with the first application, the odor previously experienced ceased and did not return within the interval spray cycles. Further, no adverse effects were detected with regards to hygienic or other environmental issues.

Research on the product history has revealed that the PETROTECH ODOR ELIMINATOR product has been used internationally for more than ten (10) years in treatment plants dealing with the effluence of leather tanneries and paper treatment plants.

Conclusion:

Instead of masking the odor, PETROTECH ODOR ELIMINATOR encapsulates the gases thereby biologically eliminating odor.

Cost analysis showed that one 55-gallon drum of PETROTECH ODOR ELIMINATOR concentrate is sufficient to eliminate the odor generated by this pumping station for an entire year.

Subsequently, the town has decided to install an additional system in another pumping station.

Newport Aeration — Continued from page 1

previous problems with low D.O.s during times of high demand. The new aerators in lagoon #1 did cause an imbalance in the air system during the summer of 2001, as we had to keep the airlines throttled down if we wanted any air to go to lagoon #2. That problem was resolved in early 2002 as we installed 38 Flex-air units in the second lagoon to make both of them compatible.

Our treatment has been much better since we have done this last upgrade for both lagoons and electrical consumption has been at an all time low for us. Maintenance on the Flex-air units is far less and much quicker to perform than the REEF units ever could have been. We only need to replace the two rubber membranes on each end of the Flex-air unit when they plug or if they should rupture, that is far less of a task than the changing of the media plates on the REEF units. Currently we have had no problems with any of the units and the first lagoon will have been online for 2 years as of this summer. Overall, we are extremely pleased with them and will continue to maintain the system until it becomes obsolete or too expensive to maintain.

Should you need any further information or have any questions call Arnold Greenleaf, Plant Superintendent at (603) 863-4338.

Utility Security — Continued from page 5

from disclosure but it is important to understand that the withholding of information that is legally required to be disclosed cannot be a unilateral action. Information being developed for reports in draft form and proprietary information can be withheld under certain conditions. This is a topic that utility managers should be familiar with and the need to protect infrastructure assets and keep the public informed in now even more important.

The Endgame Is About People

At the end of the day, applying security protocols is another facet of the diamond, another equally important factor in achieving excellence in operations. The physical activities that will need to be changed; working habits that will need to be altered; and the modifications in human behavior that will be necessary will all accomplish the single most important task in maintaining utility water and wastewater systems – the provision of safe drinking water and sanitary sewer services to enable growth and maintain public health.
This winter has been a long one in New Hampshire but the New Hampshire Water Pollution Control Association is planning for a busy year.

A successful winter meeting was held in December with a tour of the Manchester Wastewater Treatment Facility and a luncheon at the Back Room Restaurant at which new Officers were elected.

The year 2003 got off to a good start in January at the annual NEWEA Conference. The Association was proud to have Mike Hanscom of Concord receive the Alfred Peloquin award for excellence in plant operations and Chuck Buzzell of Derry receive the Operator of the Year award.

Other New Hampshire award winners include the Antrim, NH treatment facility for the EPA New England Regional O&M Excellence Award; George Neill of NHDES for the EPA National Wastewater Trainer Award and Jeffrey Thompson of Derry for the NEWEA Student Scholarship Award.

The first major event this year will be the Annual Trade Fair on April 10th, to be held at the Wayfarer in Bedford. It looks like we'll have a “Full House” of exhibitors again this year and a cash giveaway for visitors who visit the most exhibitors displays. Other events include representation of the NEWEA awards given in January in Boston, as well as the presentation of the Clean Water Week poster contest winners for New Hampshire School grades 1st through 3rd and 4th through 6th.

This year the Association will offer two unique training opportunities in addition to the courses offered at the Franklin Training Center by offering two all day “specialty seminars” open to both members and non-members. On May 30th, the Association will co-sponsor a 6-hour seminar with NHDES on User Rates in the New Hampshire Department of Environmental Services auditorium on Hazen Drive in Concord. The cost of the seminar is expected to be $30.

And on June 27th, the Association will co-sponsor a 6-hour seminar on the Activated Sludge process featuring Mike Girardi of Penn State University will be held in the NHDES auditorium. The cost is expected to be $60 for Association members and $85 for non-members.

Information on these two seminars can be obtained through Brian Hilliard at NHDES at (603) 271-3503. Details on the activated sludge seminar can be obtained on the Association’s web-site (www.nhwepca.org).

Non-members are reminded that joining the Association can easily reduce your cost for events over the year by reducing your registration cost for individual events. Members also receive The Collector, the Association’s newsletter, that contains useful information and operating tips on many aspects of plant operations.

The Crustaceans have already started training in preparation for the regional Operations Challenge competition at the Spring meeting in Woodstock, Vermont, June 1st through 4th, with hopes of qualifying for the national competition again this fall. Last fall the Crustaceans placed 2nd at the national level competition. Any contributions to the Crustaceans competition expenses would be appreciated from vendors, contractors and consultants to support them in demonstrating the skills of our New Hampshire Operators at the National level. Contributions can be made by contacting the Association’s treasurer, Steve Clifton, at (603) 436-6192.

The biggest social event this year will be the annual summer outing scheduled for June 20th at Ellacoya State Park. The weather is predicted to be sunny and warm and there is a rumor that a new unique “fun” event will be featured that you won’t want to miss. Of course, the food will be great, as usual, and a good time will be had by all. We hope to be honored by the presence of Norton True, NEWEA President and Elizabeth Haffner, Executive Director of NEWEA at this event.

The annual golf tournament will be held at the Lochmere Country Club in Lochmere, NH. The tournament will be held on Thursday, August 7th, 2003. (Note that this is a change from the previously advertised date of August 14th.) Last year was an overwhelming success and practically everyone walked away with a prize so don’t wait too long to make your reservations. And warm up your putter for the putting contest.

~ New Hampshire Water Pollution Control Association News ~

Continued on page 16
The Last Word
In Municipal Employee Benefits Is Trust

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THE TRADITION OF SERVICE CONTINUES

Subject: Manure

In the 16th and 17th centuries, everything was transported by ship. It was also before commercial fertilizer’s invention, so large shipments of manure were common. In dry form it weighed a lot less than when wet, but once water (at sea) hit it, it not only became heavier, the process of fermentation began again, of which a by-product is methane gas.

As the stuff was stored below decks in bundles you can see what could (and did) happen. Methane began to build up below decks and the first time someone came below at night with a lantern, BOOOOM!

Several ships were destroyed in this manner before it was determined just what was happening. After that, the bundles of manure were always stamped with the term “S.H.I.T.” on them, which meant to the sailors, “Ship High In Transit.” In other words, high enough off the lower decks so that any water that came into the hold would not touch this volatile cargo and start the production of methane.

You probably did not know this true history of the word SHIT.

Neither did I. I always thought it was a golf term.

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NOTE: See course description sheet for cost of each class.

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This year starts the Association's excellence award for Wastewater Treatment Plants in New Hampshire. The criteria are set and information can be obtained on the Association's website for interested plants.

Members are reminded that up to $300 is available to members for training seminars through the Kowse Scholarship program, but you need to apply to be eligible. (See the NEWEA website for details). This is a way that you can obtain funding for training if it's not available locally.

And it’s never too early for member’s to start thinking of nominations for its members through NEWEA. The two awards of major interest in the State Association are the annual Operator of the Year Award and the Alfred E. Peloquin Award. Association members are encouraged to nominate deserving potential candidates they know, keeping in mind that the nomination process is not lengthy or difficult. A detailed nomination form isn’t required, so if you know of a worthy candidate, call Ed Rushbrook at (603) 230-9898.

So we're off to a good start. Plans are under way for the Fall and Winter meetings and when details become available, they'll be posted on the web-site (www.nhwPCA.org) along with details on any of our events.