**Maine Department of Environmental Protection**

**Bureau of Land & Water Quality**

# O&M Newsletter

November 2008

A monthly newsletter for wastewater discharge licensees, treatment facility operators and associated persons

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## Websites of the Month

**http://cfpub.epa.gov/surf/state.cfm?statepostal=ME Surf Your Watershed – Maine**

An EPA site that allows users to access a large variety of information regarding their watershed including: water quality data, flow data, attainment status, and local citizen groups working in the watershed.

**http://win-water.org/ The Water Infrastructure Network (WIN)**

WIN is a broad-based coalition of local elected officials, drinking water and wastewater service providers, state environmental and health administrators, engineers and environmentalists dedicated to preserving and protecting the health, environmental and economic gains that America's drinking water and wastewater infrastructure provides. The site contains information on legislative activity, news articles and reports regarding water and wastewater infrastructure.

**http://www.wateronline.com/ Water Online**

Provides news, articles, case studies, list of events, and products for the water and wastewater industry.

***Brian Kavanah***

## *Fall Exam*

The Fall Exam for all operator grades was given at the on November 19, 2008. Results will be sent to those who took the exam as soon as they are received from ABC. Applications for the May 13, 2009 Spring Exam will be due in to the JETCC office by March 27, 2009 or postmarked by March 25, 2009.

## *For Practice*

1. What is the best long-term fix for high F/M sludge bulking?

    a. Add chlorine to the RAS.
    b. Decrease sludge wasting.
    c. Increase sludge wasting.
    d. Reduce sludge age.

2. How would you reduce the growth of bacteria in a filter bed?

    a. Adjust the pH
    b. Backwash more frequently
    c. Pre-chlorinate
    d. Slow the rate of filtration

3. If the feed time for sludge centrifuge operated in a batch mode is less that the optimum time,

    a. a better centrate will result
    b. a better effluent quality will result
    c. a dryer discharge solid will result
    d. a wetter discharge solid will result

4. Determine the solids loading on a floatation unit if the flow is 1.25 MGD and the influent suspended solids are 1,200 mg/l

    a. 10,000 lb/day
    b. 11,328 lb/day
    c. 12,510 lb/day
    d. 1,200 lb/day

## *Approved Training*

November 13, 2008 in Vassalboro, ME – Microbiology Methods for Compliance Testing with Review of EPA Approved Bacteria Test Methods – Sponsored by JETCC – Approved for 6 hours
*****
November 20, 2008 in Wells, ME – HDPE Facility Operation in Cold Climates – Sponsored by JETCC – Approved for 6 hours
*****
December 4, 2008 in Ellsworth, ME – Pump Rebuild & Maintenance Workshop – Sponsored by JETCC – Approved for 6 hours
*****
December 9 & 10, 2008 in Freeport, ME – MRWA Annual Meeting – Sponsored by MRWA – Approved for TBD hours
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Note: JETCC stands for Joint Environmental Training Coordinating Committee – PO Box 487 – Scarborough, ME 04070-0487 – Tel (207) 253-8020

Efficiency Maine is a program of the Maine Public Utilities Commission - 18 State House Station, Augusta, ME 04333-0018
Tel: 207-287-8350

MRWA stands for Maine Rural Water Association - 14 Maine Street, Box 36 - Brunswick, ME 04011 – Tel (207) 729-6569

NEIWPCC stands for New England Interstate Water Pollution Control Commission – 116 John St. – Lowell, MA 01852-1124 – Tel (978) 323-7929

**We're Here to Help**

DEP maintains a technical assistance unit to assist facilities with troubleshooting various problems. To get the most out of this free service, don't hesitate to give the Department a call if you encounter a problem you just can't quite figure out. Consider the following situation.

On a Monday in August of this year, the department received a citizen complaint of untreated raw sewage "boiling" up the previous day from a public wastewater treatment facility discharge pipe into a busy mid-coast harbor. DEP enforcement staff promptly investigated, making telephone calls to the public works director and town manager. Neither was aware of the problem. A check with the harbor master's office confirmed that a discharge looking like "chocolate milk" had occurred the previous day. Ultimately, the operator confirmed that a discharge of sludge from one of the facility's clarifiers had occurred the previous day while the facility was unstaffed.

A problem with bulking sludge in the one operating clarifier had started weeks before. A quick review of operation parameters showed diminished settleability back into early June. It is believed to have occurred in conjunction with low dissolved oxygen levels in the aeration basins and the addition of 30,000 gallons of supernatant decanted from a sludge digester. Rather than inform the department's Compliance and Technical Assistance Unit of the problem, plant operators attempted to solve the problem themselves. As the bulking sludge issue worsened, treatment plant personnel sent a sample of mixed liquor to an out-of-state lab for analysis. The report indicated abundant filamentous organisms and recommended corrective actions. The corrective actions taken by plant staff were inadequate and the discharge of bulking sludge to the harbor was reported by a citizen several days later.

Department compliance and enforcement staff visited the facility the day after receiving the citizen complaint. This was followed by a visit by technical assistance staff two days later during which additional process changes/improvements were recommended. Eventually, the facility was brought back into proper operation.

As later acknowledged by the operator, this discharge was likely preventable with "more aggressive remedial action." Unfortunately, however, the operator chose not to ask for help from the department's Compliance and Technical Assistance Unit when he became aware of an operational problem. His actions and inactions resulted in an unsightly and potentially harmful discharge of pollutants into a popular harbor which is heavily used by recreational boaters and tourists. Had the discharge received wide press coverage, it might have negatively impacted the local economy. From a legal standpoint, fortunately for the facility, the department responded this time with only a Notice of Violation rather than a formal enforcement action with penalties.

The message of this article is simple. If your wastewater treatment facility is having problems that you can't get a handle on, contact the department's Compliance and Technical Assistance Unit to ask for help. That's why we're here. It's better to get technical assistance now than to deal with compliance problems or bad press later.

***John Glowa***

## Answers to *For Practice*:

1. b To reduce bulking caused by a high F:M sludge, you need to reduce the F:M (Food: Microorganism) Ratio. To do this, you must increase the mass of microorganisms in the system. This is done by reducing the wasting rate and increasing the sludge mass in the system

2. c Pre-chlorination provides a chlorine residual in the water influent to the filter, reducing or eliminating microbial growth on the filter.

3. d If a centrifuge is not run for the optimum time, all the water that can be removed from the sludge will not be removed and the sludge will be wetter than it should be.

4. c 1.25 MGD × 1200 mg/L × 8.34 = 12510 pounds

## DMR-QA Study 28 Reminder

Any test parameters that received "Not Acceptable" evaluations in 2008 should be investigated by the laboratory analyst. The cause(s) for the analytical problem(s) should be determined. Another unknown(s) should be ordered and analyzed to verify that the problem(s) was resolved. Please identify the causes and any steps taken to prevent these problems in the future. Include the results of verification analyses for the tests in question in your report to DEP.

Send a "Corrective Action" letter to Ken Jones by December 5, 2008. Please send a copy of this letter to your compliance inspector so that they will know that you have satisfactorily addressed any laboratory problems detected in this year's DMR-QA study. Thank you for ensuring that the data generated at your WWTF is of high quality.

***Ken Jones***
DMR-QA State Coordinator

*Happy Thanksgiving*