



Maine Department of Environmental Protection

Bureau of Land & Water Quality

O&M Newsletter

July 2008

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

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Websites of the Month

A new regular feature in the O&M News where we will suggest helpful and interesting websites on a variety of wastewater related topics.

<http://cfpub.epa.gov/npdes/> The Environmental Protection Agency's website for the NPDES program. This site contains technical and regulatory information regarding the NPDES program including detailed information regarding permitting, CSOs, SSOs, pretreatment, compliance data, stormwater, the Clean Water Act, etc.

<http://janus.state.me.us/legis/> The Maine Legislature Website. This site contains contact information for senators and representatives, information on legislative committees, links to listen to committee hearings and work sessions, a search function to find and track bills, and various legislative publications.

<http://me.water.usgs.gov/> The United States Geological Survey water site for Maine. This site is loaded with great information regarding Maine's surface and groundwater including real time flow data for many surface waters, historic hydrologic data, flood and drought conditions, ice out and snow pack data, educational resources, etc.

Spring Exam

The results from the Spring 2008 Wastewater Operator exam are in and they were not very good as you can see below. The Fall Exam will be on November 19, 2009. Applications will be due in to the JETCC office in late September.

Grade	Pass	Fail	% Pass
Grade 1	1	10	9.1%
Grade 2	2	4	33.3%
Grade 3	0	8	0.0%
Grade 4	0	1	0.0%
Grade 5	1	8	11.1%
Overall	4	31	11.4%

For Practice

1. The Aerobic Sludge (or Solids) Retention Time (Aerobic SRT) is
 - a. The length of time an average microbe spends in the aeration basin.
 - b. The length of time an average microbe spends in the secondary clarifier and return sludge line.
 - c. The length of time an average microbe spends in the treatment system before being wasted or lost in the effluent.
 - d. The ratio of the solids in the aeration basin to the solids in the primary effluent.

2. The term most commonly used for untreated wastewater is
 - a. Aerobic
 - b. Septic
 - c. Ground
 - d. Raw

3. The letters MSDS stand for:
 - a. Maine Safety Determination Specifications
 - b. Material Safety Data Sheet
 - c. Materials Source and Delivery Sheet
 - d. Management Specifications for Determining Safety

4. If a chemical feed pump will supply a maximum of 23,500 pounds per day, what is the maximum feed rate in gallons per minute? (assume the chemical being fed has the same specific gravity as water)
 - a. 0.82 gpm
 - b. 1.12 gpm
 - c. 1.96 gpm
 - d. 2.34 gpm

Overflows Happen!

SSOs (Sanitary Sewer Overflows) sporadically occur from wastewater systems due to mechanical problems, blockages, or periods of high precipitation or runoff. SSOs are discharges from wastewater systems occurring upstream of the treatment system headworks. As such, they violate Maine State Law 38 M.R.S.A. 413 (“Unlicensed Discharge”) and 38 M.R.S.A. 414(5) (“Violation of License”). These illegal discharges can occur to land, water bodies, buildings or other facilities and areas connected or adjacent to wastewater systems. Incidents require notification within 24 hours followed by a written report within 5 days.

According to Section B.5. of the Standard Conditions Applicable to All Permits, a bypass is defined as: *the intentional diversion of waste streams from any portion of a treatment facility.* Bypasses are generally prohibited unless:

- (1) *The bypass was unavoidable to prevent loss of life, personal injury or severe property damage;*

- (2) *There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and,*

- (3) *The permittee notified the Department of Environmental Protection within twenty four (24) hours after becoming aware of an unanticipated bypass or, if possible, within ten (10) days prior to the date of the bypass.*

In addition, as required in Section D.1(f), *A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances.*

Bottom line...there are several types of unlicensed, illegal discharges that can occur from wastewater collection and treatment systems. These discharges can be caused by a variety of factors, and can occur at any point in the system to land, water, public or

private facilities. It is important for system managers and operators to report these incidents to the Department even if its reportability is in doubt. This can be determined best in consultation with your DEP Compliance Inspector during the initial call. Written "Non-Compliance Incident Reports" should include the cause of the incident; the nature and volume of the discharge; the receiving water, land area or facility; site observations; the impacts to human health and the environment; facility response and corrective actions. A standard DEP form is available to list basic information, usually accompanied by a narrative report.

Thank you for your continued cooperation, and please call your DEP Compliance Inspector, if you have further questions or comments.

Chuck Rossoll

Answers to *For Practice*:

1. a. The Aerobic Sludge (or Solids) Retention Time is the amount of time a typical biomass cell spends in the aeration basins. This is where the microbes in the sludge do most of their work removing organic matter from the wastewater
2. d. Untreated wastewater is called Raw Wastewater.
3. b. MSDS stands for Material Safety Data Sheet
4. c. The pump delivers 23,500 pounds/day which is 976.17 pounds/hour or 16.32 pounds/minute. 1 gallon weighs 8.34 pounds so the feed rate is $16.32/8.34 = 1.96$ gallons/minute.