



Department of  
Environmental Protection  
Bureau of Land & Water Quality April, 2001

O&M Newsletter

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

## Spring Certification Exam Notice

We received applications from 106 people to take exams this Spring. All of you who signed up should have received your letters by now. If you know you sent in an application and you haven't heard from us, call as soon as possible.

## For Practice

1. If the supernatant from an aerobic digester has a high solids content, how will it most likely affect the activated sludge aeration basin?
  - a. increase the DO level.
  - b. increase the MCRT.
  - c. increase the F/M ratio.
  - d. increase the removal efficiency.
2. The concentration of dissolved oxygen that may be held in water
  - a. increases as temperature increased
  - b. decreases as temperature decreases
  - c. is independent of temperature
  - d. increases as temperature decreases
3. The type of solids that is the most difficult to remove using a standard biological treatment process is.
  - a. organic dissolved
  - b. inorganic dissolved
  - c. organic suspended
  - d. inorganic suspended
4. The best description of new activated sludge floc is
  - a. young, poor settling, underoxidized
  - b. young, good settling, clear effluent
  - c. old, rapid settling, overoxidized
  - d. old, poor settling, underoxidized

*Dick Darling*

## UPCOMING TRAINING COURSES

April 1, 2001 in TBA – Chemical Feed Systems O&M - sponsored by MRWA, (207) 729-6569 - Approved for 3 hours.  
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April 3, 2001 in Old Orchard Beach – Instrumentation and Controls for Wastewater and Water Treatment Facilities - sponsored by MRWA, (207) 729-6569 - Approved for 6 hours.  
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April 4, 2001 in Ellsworth - Polymer Sealant Repair and Preventive Maintenance Systems - sponsored by JETCC, (207) 767-2649 - Approved for 6 hours.  
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April 4, 2001 in Topsham – Troubleshooting Control Systems at Wastewater and Water Treatment Facilities - sponsored by MRWA, (207) 729-6569 - Approved for 6 hours.  
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April 5, 2001 in Presque Isle - Computer Databases - sponsored by JETCC, (207) 767-2649 - Approved for 6 hours.  
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April 11, 2001 in Kennebunkport -  
Pump Station Control Panels - sponsored  
by JETCC, (207) 767-2649 - Approved  
for 6 hours.

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April 19, 2001 in Augusta - Basic  
Wastewater Treatment ( 2 days) -  
sponsored by JETCC, (207) 767-2649 -  
Approved for 12 hours.

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April 24, 2001 in Bangor - Bypass  
Pumping - How to Avoid the Headaches  
- sponsored by JETCC, (207) 767-2649 -  
Approved for 6 hours.

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April 30, 2001 in Bangor, ME –  
Wastewater Operator Certification  
Review – Class I/II - sponsored by  
MRWA, (207) 729-6569 - Approved for  
6 hours.

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May 1, 2001 in Presque Isle, ME –  
Wastewater Operator Certification  
Review – Class I/II - sponsored by  
MRWA, (207) 729-6569 - Approved for  
6 hours.

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May 17, 2001 in Waterville - Biosolids -  
sponsored by JETCC, (207) 767-2649 -  
Approved for 6 hours.

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May 10, 2001 in Presque Isle, ME –  
Wastewater Operator Certification  
Review – Class III/IV - sponsored by  
MRWA, (207) 729-6569 - Approved for  
6 hours.

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May 16, 2001 in Augusta - Hydro Cad -  
sponsored by JETCC, (207) 767-2649 -  
Approved for 6 hours.

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## Answers to For Practice:

1. c – Solids carried over into the treatment system from the supernatant of a digester will be seen as food by the system and will increase the Food:Microorganism (F:M) ratio
2. d - The amount of oxygen that can be dissolved in water increases as the temperature goes down. Cold water holds more D.O. than warm water.
3. b - Biological treatment system can remove organic matter, whether dissolved or suspended. Inorganic suspended solids can also be removed through the physical settling in primary and secondary clarifiers. However, there is usually little or no removal of dissolved inorganic solids in a normal biological secondary treatment plant.
4. a - New activated sludge floc, which usually occurs during plant start-up, is young and therefore not very dense and it settles poorly. It is also underoxidized having had little time to react with the food in its surroundings.