



## Welcome

Welcome to the first edition of Wastewater News published by the Pennsylvania Department of Environmental Protection (DEP), Bureau of Clean Water. This newsletter will feature short articles, operator certification and training information, and compliance and Operations & Maintenance (O&M) tips with links to further information and related sources for sewage and industrial wastewater operators, facility permittees, and staff.

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#### Certification Question:

Straggler floc in a clarifier is typically caused by \_\_\_.

- A. old sludge
- B. young sludge
- C. denitrification
- D. increase in solids

See page 4 for the answer.

We're pleased to announce that the Operator Tools are back!



Ctrl-click the button to open and save the Operator Tools spreadsheet.

## Federal e-Reporting Rule & DEP's eDMR

EPA's [e-Reporting Rule](#) was finalized on September 24, 2015, published in the Federal Register on October 22, 2015, and became effective on December 21, 2015. The rule replaces most paper-based National Pollutant Discharge Elimination System (NPDES) permitting and compliance monitoring reporting requirements with electronic reporting. Most NPDES-permitted facilities are now required to use DEP's Electronic Discharge Monitoring Report (eDMR) system to submit DMRs. In September 2016, DEP sent a letter to facilities not using eDMR, requesting the submission of registration paperwork by December 21, 2016. In April 2017, DEP sent a Notice of Violation letter to facilities that failed to submit registration materials as instructed in the September notification. If you are required to submit DMRs and haven't yet registered for eDMR, do so as soon as possible to avoid enforcement by DEP. Visit the [eDMR System](#) webpage for registration materials and instructions.

Note that there may be a considerable delay in processing the large number of eDMR registrations DEP has already received. Until your eDMR registration is processed by DEP and a "Welcome to eDMR" email is received, permittees who have submitted registration materials should continue to submit paper DMRs.

DEP also strongly recommends that permittees download and use DEP's approved [Supplemental Reports](#) spreadsheets prepared for each of the reports that are to be submitted with the eDMR. For assistance to set up or use these spreadsheets, contact DEP's HelpDesk at [depgreenporthelpdesk@pa.gov](mailto:depgreenporthelpdesk@pa.gov) or 717-705-3768.

## Facility Success: Saltsburg Borough STP



The Saltsburg Borough wastewater treatment system located in southern Indiana County consists of a combined sewer system and a new 0.2 MGD activated sludge facility with a discharge to the Conemaugh River. The plant is operated by a father and son team, Don and Rob Kelly, who also perform other Borough duties.

Due to some recent violations and at the request of DEP's Southwest regional office, DEP's [Wastewater Technical Assistance Program](#) staff evaluated plant operations and conditions. The facility was found to be alkaline deficient. The operators installed a chemical addition system resulting in an increase in the pH and complete nitrification. A sludge wasting plan was implemented to reduce the solids content in the clarifiers and aeration tanks, along with a wet weather management plan to help reduce washouts during high flows.

Overall compliance continues as the operators implement an effective operation and maintenance strategy for the plant and collection system.

# Cause for Concern — Solids Spills

*Many of these incidents could have been avoided with more attention.*

In recent months across the Commonwealth, several sewage treatment facilities have accidentally discharged sewage sludge from treatment tanks onto the ground or into surface waters.

Many of these incidents could have been avoided with more attention. On occasion, an operator opens a sludge wasting valve and walks away to conduct another task. Being caught up in their work, the operator completes their other tasks for the day and heads home. All the while, the sludge wasting valve is still open. Eventually, the sludge overfills

the holding tank or digester and discharges to the ground, possibly flowing further into the local stream.

These unpermitted discharges are violations of the facility's NPDES permit, DEP Regulations, and the Clean Streams Law. As such, these facilities' owners, permittees, and operators are subject to penalties and costs associated with the cleanup.

All permittees and operators have a duty to report such incidents immediately to their local DEP office. See the *Incident Reporting Required* article below.

## How can incidents like this be prevented?

1. Install a high water level visual/audible alarm in the sludge holding tank or digester.
2. Set a timer or alarm on your watch or phone to remind you to finish what you were doing.
3. The last operator on site for the day should walk through the plant to make sure all equipment is operating properly.

## Quick Links (Ctrl-click)

[DMRs](#)

[DMR Supplemental Reports](#)

[eDMR](#)

[Operator Certification](#)

[Continuing Education](#)

[Biosolids](#)

[Permit Applications](#)

[Emergency Preparedness](#)

[eLibrary](#)



## Is it Flushable? It's a Toilet, Not a Trashcan!

Treatment facilities are often mistreated by their customers' flush-and-forget use. Many operators deal with severely clogged lines or pumps due to grease or "flushable" wipes.

Everyone can help to make your job easier and to keep water clean by not flushing grease, cat litter, unused medications, personal care and baby wipes, or household hazardous materials.

Consider sharing information in your billing or on social media to remind users how damaging grease, wipes, and other materials are for the sewer system, and where or how to dispose of chemicals and other items.

Conditions leading to higher maintenance or operational costs may result in higher sewer bills.

Links to: [Public Information Resources](#) & [Public Education Toolbox](#)

## Incident Reporting Required

DEP's regulations and facility NPDES permits require immediate notification to DEP of any incident causing or threatening pollution. You must call the regional office and report the incident to a DEP representative. Leaving a voicemail during normal business hours does not meet your reporting obligations.

In case of a spill or other pollution incident, contact the Emergency Response team at the Regional Office regulating your facility.

### DEP's 24-hour Emergency Response Contact Numbers

<b>Northwest:</b>	<b>800-373-3398</b>
<b>Southwest:</b>	<b>412-442-4000</b>
<b>Northcentral:</b>	<b>570-327-3636</b>
<b>Southcentral:</b>	<b>866-825-0208</b>
<b>Northeast:</b>	<b>570-826-2511</b>
<b>Southeast:</b>	<b>484-250-5900</b>

For more information, see the DEP Fact Sheet:

[Reporting Requirements for Spills and Pollution Incidents Under Pennsylvania's Clean Streams Law](#)

## Operations Corner: Toxic Effects



Is the effluent cloudy, but it meets the permit limits (mostly)? Are the process control tests within the ranges you expect, but not at the usual levels?

How can you tell if you've received a toxic or shock load, or the plant is just a little upset? Maybe you've received a substance in an amount that wasn't strong enough to cause a full-blown plant upset. Should you change your wasting rate, wait it out, or track it down?

Several quick and easy tests and checks will show whether your biomass has been affected by a toxic or shock load.

**NOTE:** All of these will work better if you have previous information about what is normal for your plant to compare with these results.

1. Do a microscopic exam. Sick bugs are 'wrinkly', or have empty circles inside of them, or aren't moving as usual.
2. Use India ink—put a drop of ink on a drop of mixed liquor. Under the microscope, the biomass will be light against a black background. Extremely bright biomass is poisoned.
3. Have the lab run a chemical oxygen demand (COD) test along with the influent biological oxygen demand (BOD). Domestic wastewater will have a ratio of 2:1 COD:BOD. If the ratio is larger (3:1) than usual, then the toxin interfered with the BOD oxygen depletion (can't 'breathe' if you're dead). Ask the lab to send you a copy of the bench sheets. Toxic effects show up when more sample is used but the calculated BOD is lower.
4. Run an oxygen uptake test. If the bugs don't use the DO within the first couple of minutes, then...same thing — can't breathe if you're dead.

## Understanding Chapter 302 – Operators' Certification Program

It is important that owners and operators of wastewater (and water) systems read and understand Chapter 302 of DEP's regulations, which describes not only an operators' but also an owners' responsibilities under the Operators' Certification Program.

Over time this newsletter will highlight important issues regarding [Chapter 302](#). DEP is also conducting outreach efforts to promote a better understanding of the rule, such as

the recent 4-hour credit course, *Responsibilities of Clean Water Professionals* (#7122).

Questions relating to wastewater systems may be directed to the DEP staff who inspect your facility or to the Bureau of Clean Water in Harrisburg at 717-787-6744.

For more information, visit DEP's [Operator Certification Information Center](#).

## Continuing Education



Search for approved training opportunities on the [Earthwise Academy website](#), such as:

- a [calendar](#) of classroom courses,
- a [course catalog](#) including distance (online and correspondence) courses, and
- DEP's six [web-based wastewater courses](#), including the required Security Training.

Member associations and training vendors also sponsor workshops and classroom training that can be found on their websites.

Email any training questions to [DEPWSTechTrain@pa.gov](mailto:DEPWSTechTrain@pa.gov)

## Maintenance Tip: Air Lift Pumps

If your plant has all or some of these symptoms:

- Higher than usual DO in aeration basin
- Rising or high clarifier sludge blanket
- Low volume of return sludge flow
- Blower outlet pressure has increased

Then, the return sludge air lift pump is probably clogged.

Check the Operations and Maintenance Manual or contact your service representative for troubleshooting help.



## Announcements

- **Wastewater Operator Resources [Website!](#)** DEP has developed this website just for wastewater operators that includes publications, fact sheets and spreadsheets. Download the [Operator Tools](#) spreadsheet.
- **eLibrary** Find all laws and regulations, forms, permit packages, publications (including fact sheets), and technical guidance documents mentioned in this newsletter in the [eLibrary](#).
- **Continuing Education** Everything about continuing education is detailed in Chapter 4 of DEP's [Drinking Water and Wastewater Systems Operator Certification Program Handbook](#), updated in January 2013.
- **EPA Courses** EPA provides online courses and workshops on topics such as combined and sanitary sewer overflows (CSO & SSO), energy management, pretreatment, and stormwater. Visit their [webpage](#) to view or download webinars.
- **Contact Us** Share your feedback or offer a suggestion for a future edition of **Wastewater News**, using the contact information to the right.



## Wastewater News

A Newsletter for Pennsylvania's  
Wastewater Treatment Plant  
Operators and Permittees

6/2017

Bureau of Clean Water  
PO Box 8447  
400 Market Street  
Harrisburg, PA 17105-8447  
Phone: 717-787-6744  
E-mail: [RA-WWOperatorNews@pa.gov](mailto:RA-WWOperatorNews@pa.gov)



DEP receives a lot of questions from wastewater operators and owners.

We thought we'd share some of those questions and answers to reach more operators.

Send your questions to:

[RA-WWOperatorNews@pa.gov](mailto:RA-WWOperatorNews@pa.gov)

All questions will be answered.

### Answer to Certification Question:

B. Young sludge

Note: Straggler floc is often seen with morning or evening peak loads; and may also be caused by an organic overload or a slug load.

## What About...?

**Q: Does DEP have a website where I can download a copy of my NPDES permit?**

A: Yes.

DEP maintains a database record of NPDES permits. Most permits issued over the past five years are available here: [DEP's Final Issued Individual NPDES Permit Documents Report](#).

You must enter from and to dates, uncheck the null box and enter the permit number to find all permits issued during the date range.

For permits unavailable through the website, please contact your [regional](#) Clean Water Program, Operations section.

**Q: The surface of my clarifier is covered with a layer of sludge solids. Is this a normal condition?**

A: No.

Is the sludge blanket burping or rising? Is the skimmer working properly? Do the return rates need to be adjusted? What are your MLSS, RAS, settleability and SVI? Do you have too many filamentous bacteria? Did the plant receive a slug load? Do you need to increase the wasting rate?

These are operational and maintenance conditions that you are responsible for and that the inspector will be checking. These conditions may be cited as a violation of your permit.

A good rule of thumb once a change is made is for improvements to be seen within 1 to 2 MCRTs.