

USE ALL STAFF + VOLUNTEERS FOR LOW COST PERMIT COMPLIANCE

Stormwater News

Expect the New EPA Administrator to be Gina McCarthy. She was nominated by President Obama and has been before the Senate Environment and Public Works Committee for confirmation. The committee has not scheduled a vote on Ms. McCarthy's nomination.

She is currently the Assistant Administrator for EPA's Office of Air and Radiation. Previously she served as the Commissioner of the Connecticut Department of Environmental Protection.

McCarthy received a Bachelor of Arts in Social Anthropology from the University of Massachusetts at Boston and a joint Master of Science in Environmental Health Engineering and Planning and Policy from Tufts University, near Boston.

Nancy Stoner, Acting Assistant Administrator for EPA's Office of Water, remains in her position at EPA until Ken Kopocis is confirmed by the Senate. Mr. Kopocis has worked on water issues in Congress for more than 25 years and helped develop numerous pieces of environmental legislation, including the Clean Water Act.

Mr. Kopocis was approved by the Senate Environment and Public Works Committee but has yet to be brought before the full Senate.

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Inspectors Are The Solution For Stormwater Compliance

Stormwater permit compliance is dependant on inspections and audits. A successful program depends on inspectors that are trained in the rules, have the temperament to communicate effectively, and use their enforcement discretion by focusing on pollution potential and environmental damage.

Construction activity is best inspected by a person with an understanding of the industry and experience in code enforcement. Building code officials would be ideal but only if they are trained in the stormwater rules.

Restaurant inspectors for discharges of fats, oils, greases (FOG) can be used to conduct illicit inspections with minimum training. Pretreatment inspectors are also readily trained to inspect industrial and commercial activities for illicit discharges.

Utility workers know storm drains and can report illicit discharges. Code Enforcement inspectors enforce municipal ordinances. Citizen volunteers, trained to report pollution, and failed management ponds, can also sample water.

Resources needed to comply with the municipal permit may be in-house or they may be citizen volunteers. *

Construction Experience is Important But Training is Necessary

Training for Building Code Officials

Most (if not all) municipalities have adopted the International Residential Building Code, including Section 401.3 Drainage stating:

“Surface drainage shall be diverted to a stormwater sewer conveyance or other approved point of collection that does not create a hazard.”

Unfortunately, this code requirement is inadequate and fails to provide the building inspector with the drainage standards that apply to construction.

The pollution problems generated by the construction and development industry arise from failures to properly protect stormwater drains and conveyances from stormwater runoff during site preparation and during construction activity.

Failure of the industry to adopt controls leads to siltation of both the stormwater drainage system and the natural watercourses. This not only reduces the capacity of those systems resulting in flooding, but also negatively impacts the recreational value of public waters.

This failure is compounded by the discharge of other materials of construction including:

- building materials and products,
- construction wastes,
- trash,
- landscape materials,
- fertilizers, pesticides, herbicides,
- detergents and solvents,
- stucco, paint,
- form release oils,
- curing compounds,
- sanitary waste,
- dewatering trenches and ponds,
- fuel and chemical spills and leaks,
- wastewater from concrete washout,
- wastewater from cleaning materials,
- wastewater from cleaning tools.

Generally, building code officials are not trained to understand and to enforce construction stormwater permits and municipal ordinances. They are trained in enforcing specific building codes.

Until building code officials are trained, inspections should be done by code enforcement or public works staff. While these inspectors may understand stormwater permit requirements, they may have little or no construction experience.

Qualifications to conduct stormwater inspections require training in and understanding the following:

Erosion and sediment controls to include soil properties, erosion control technologies, stormwater water controls, sediment management, use of vegetation and stabilization techniques. When certifications are offered, testing is included.

Management of stormwater volume and velocities is required where erosion could result in the discharge of sediment. These controls, applied during active construction are part of developing science. Post construction controls are better understood.

Requirements of the stormwater permit issued to the construction activity must be understood. This begins and ends with the pre-construction agreements, filing for intent to comply with a general stormwater permit, a review of the construction site stormwater Pollution prevention Plan (SWPPP) and contractor sampling and inspection reports.

These training courses are offered by some states, several consultants and the National Stormwater Center. *

FOG Inspectors Visit Restaurants + More

Fats, oils and greases (FOG) normally clog drains, both sanitary and stormwater. FOG inspectors inspect restaurant kitchens and enforce rules to prevent clogging.

But FOG outside restaurants also clogs stormwater drains. Normally restaurants carry waste vegetable oil to the rear of the store for deposit into a FOG container.

But not all of the waste FOG gets into the containers, some spills on the ground where it can be washed into the stormwater drain during a precipitation event. The discharge usually leaves stain evidence. This is an enforceable violation of illicit discharge ordinances.

FOG is also seen around outside trash dumpsters and the cleaning of floor mats. FOG inspectors need to protect storm drains outside of restaurants and other activities such as car washing, vehicle maintenance, and waste disposal located at commercial activities.

Restaurants and nearby commercial facilities have trash dumpsters. These are a source of FOG as well as other pollutants. FOG inspectors can observe overloading, exposure, missing plugs, broken or missing covers.

Inspectors should observe waste transfer to a garbage truck to assure there is no waste water spillage during transfer to and from the transporting vehicle.

Parking lot drain inlets should be observed for a oil sheen and debris. Reports by FOG inspectors can result in sweeping and cleaning of the parking area.

The Polluter Should Pay

Requiring commercial establishments to prevent drain pollution or to clean up contamination from drains will save taxpayer money. Should taxpayers pickup the cost of treatment or should the polluter pay the cost of controlling their own waste? *

Stormwater News

(Continued From Page 1)

EPA's "post-construction" stormwater rule (expected to be proposed this Summer) will set retention standards for controlling runoff.

EPA will propose standards to retain the stormwater runoff from an 80th to 90th percentile storm event for up to 24 hours after rainfall. To encourage redevelopment the standards would be slightly less. Credit for green infrastructure would reduce the retention requirements.

Also, EPA would expand the area covered by MS4 permits, to target areas designated in the U.S. Census as "urban clusters," which are defined as areas with a population under 50,000, none under 10,000 population.

A Washington State developer was sentenced to six months prison for contributing to two major landslides. Bryan Stowe, as president of Stowe Construction, Inc., admitted knowingly violating the Construction General Storm Water Permit for the Rainier Park of Industry project, located in Sumner. He will serve one year of supervised release, make a \$100,000 payment to the National Fish and Wildlife Foundation, and pay a \$300,000 fine for knowingly violating a NPDES permit. Stowe admits in the plea agreement to failing to install adequate improvements, falsifying inspection & discharge sampling reports and he ignored violation letters.

Bret Simpson, owner of Principle Metals has been sentenced to four months in prison, eight months of home detention, 100 hours of community service and three years of supervision as a result of failing to report an oil discharge and unlawfully discharging oil into the Columbia River near Camas, Washington.

Simpson's company began to cut a barge apart to sell the metal for scrap without making arrangements to remove the fuel oil and diesel fuel from the vessel. He failed to have the oil removed before workers started cutting up the metal barge. When the first oil spill occurred Simpson failed to notify authorities and failed to take adequate steps to monitor the vessel or protect it from natural forces and further structural damage, according to the Department of Justice. The Coast Guard and state authorities spent eight months and about \$22 million to clean up the spill and to remove the derelict barge from the river.

EPA has published the final general permit for vessels. It replaces the current permit expiring on December 19, 2013. The permit applies to discharges incidental to the normal operation of a vessel into "waters of the United States."

Owners or operators of vessels operated as a means of transportation with a weight 300 gross tons or greater, or having the capacity to hold or discharge more than 8 cubic meters (2,113 gallons) of ballast water is regulated by this permit. Most vessels seeking coverage under this permit will be greater than 79 feet in length; however, commercial fishing vessels and other non-recreational vessels less than 79 feet are also eligible for permit coverage under this permit or those vessels may seek coverage under EPA's small Vessel General Permit. *

You Are in Charge of the Stormwater Permit? Then Evaluate Your Progress!

Why Not Sample Stormwater Runoff ?

If the Clean Water Act is about water, then why so much paper? The practical answer is that writing a report is evidence that actions were taken. If it is not reported, it did not get done.

Beyond compliance, why not evaluate progress? It may not be required, but it's a good management practice to document success. It starts with measuring the amount of pollutants currently being discharged from the municipality, industry or activity. The plan is to measure the same place to develop a trend, best shown in a graph.

Automatic sampling devices require professionals to set up, operate and evaluate results. Grab samples are instantaneous readings and have no scientific credibility, but they are cheap and are representative of the discharge.

What to measure?

First determine if nearby receiving waters are impaired, if so, what are the pollutants of concern. If there are no pollutants of concern, then do a few common pollutants that could be in the discharge. These are likely to be total suspended solids (TSS), nitrate, phosphorus, bacteria, and pH. All of these except pH must be sent to a wet chemistry laboratory for analysis, but the cost is low.

There are some pollutants that can be measured without sending samples to a laboratory. A pH meter costs less than \$100, a conductivity meter is about the same and is an indicator of suspended and dissolved solids.

Why not create a graph showing the trend.

Who samples?

Because the grab sample is not scientific, anyone can do it with little training. If anyone can sample, why not use citizen volunteers?

Some training is necessary. It is important for citizens to understand that sampling is the best way to measure for permit compliance and progress in reducing pollution in streams, rivers, estuary and on beaches.

Training is necessary to understand the use of the collection tools and how to document the activity. Understand when a glass container is used. Understand why there is a preservative in some plastic containers. Training is necessary to deal with safety, insurance, trespassing, and procedures.

Where to sample?

Documentation of the sample location is critical to developing a trend analysis. Pictures and a marked site map are important.

The place to start is the entry of water into the drainage system, especially if it is not stormwater. Collect samples as the runoff enters a drop inlet or ditch. Determine where the sampled water will actually discharge into a public water body.

There may be control measures in place prior to the final discharge. The point of discharge to a receiving water body may be after mixing with other inlet discharges. All of this must be documented.

Sampling at the entry to treatment and after treatment will represent the effectiveness of the controls. Finally, sampling in the ambient public water body will determine if there is a water quality problem and if so, how bad it is.

Report

Sampling is of no value without a report. The report will present the date, location and results in a format that supports a conclusion. Reporting analytical results with a visual report is helpful. Report color, smell, oil, turbidity and any other indicators of pollution.

*

Maximize Citizen Involvement in Stormwater Permit Compliance

by Karen Sadowski

Rain storms bring out earthworms better than anything else, and fish love earthworms. When there is no rain, worms can be tricked into exposure by watering the lawn.

When my father watered the lawn, it meant only one thing; tomorrow he would take me fishing. Growing up in rural Wisconsin, there was no greater joy than to be awoken at 3:00 AM to pack up the bamboo cane poles, tackle box, earthworms harvested the night before, and head out to the fishing hole.

It also meant that we were conservative; hunting earthworms was the sole reason for lawn irrigation. We had no concept of watering the lawn to make it green or fertilizing or applying pesticides and herbicides to control anything. If a weed needed pulling, we pulled the weed.

These conservative values remain imbedded in my life, and water conservation, preservation and recreation have always been a focal point. Yet, to my chagrin, the edicts of the Clean Water Act remained utterly elusive.

I was aware of the Act yet had no concept of its goals, its implementation through NPDES, nor how I, as a citizen of the United States, have a responsibility to it. While it is commonly accepted that ignorance of the law is no defense, I must question why I could have little knowledge of the Act and of how my individual actions can support it or work against it.

Section 101 (e) of the Act directs the U.S. EPA Administrator, or any State, to develop and publish regulations specifying minimum guidelines for public participation in the processes of developing, revising and enforcing regulations, standards, effluent limitations, plans and programs.

My belief is the reason the general public has little awareness of the Act and their

responsibilities under it lies in the directive to specify minimum guidelines. The definition of minimum is “the least quantity or amount possible.” Sadly, 40 years after the adoption of the Clean Water Act, minimum is exactly what we have achieved in water quality.

Municipalities now publish stormwater information on their website, conduct outreach in schools, organize an annual “Clean the _____” day, and may send periodic information along with utility bills. But why do U.S. EPA and most municipalities not recognize that **maximum** citizen involvement is as much a key to achieving the goals of the Act as inspections and audits?

A 2009 survey conducted by the Capital Region Watershed (St. Paul, MN) found that:

- ★ 91% of those surveyed are either "concerned" or "very concerned" about water pollution
- ★ 87% believe actions can make a difference in water quality
- ★ Lack of knowledge is one barrier for residents to take water quality protection actions
- ★ More than 75% would pay an increase to support water quality protection

There is an obvious conclusion: Citizens care, citizens will take action, and citizens will support action efforts. It is time for municipalities to start **maximizing** the free resources of their citizens.

Consider Iowa City, Iowa. Not only does the city publish information on their website, they have developed multiple participatory citizen programs including training volunteers to conduct water quality monitoring, conducting a prescription medications disposal program, and hosting rivers and wetlands clean-up programs, canoeing and kayaking events, speaker events, native species planting ...

(See Maximize Citizen Involvement on page 7)

ONLY RAIN IN THE DRAIN

It doesn't take much training to see and report pollution going into a storm drain. But it does take some training.

What are the rules? The Federal Clean Water Act prohibits “any discharge to a stormwater drain that is not composed **entirely** of stormwater, with some exceptions.”

There are only two exceptions: (1) discharges due to an emergency, and, (2) relatively clean water. For example: the following are allowed unless prohibited by a government authority:

- flows from fire fighting
- street wash water
- water line flushing
- landscape irrigation
- diverted stream flows
- crawl space pumps
- footing drains
- foundation drains
- residential car washing,
- riparian habitats & wetlands
- dechlorinated swimming pool
- uncontaminated ground water
- potable water sources,
- air conditioning ,
- springs & rising ground waters

Not included on the list are pollution from

- Waste containers (dumpsters)
- Garbage collection truck releases
- Porta potty cleaning
- Dirt from construction exit
- Discharges from industrial rolloffs
- Restaurant grease and cleaning
- Car and truck washing
- Carpet cleaning
- Landscaping yard waste
- Trash and oil from parking lots
- Pressure cleaning

Training all municipal employees does not take very long and does not cost much. It can be done in a one page memo but more effectively with a PowerPoint meeting including questions and answers.

How to report will be a question. It must be

easy to report and the report must be documented into a computer system.

Local citizens can also be trained using the same memo or PowerPoint. Trained citizens should expect their reports to receive high priority. They can be issued a report form with a unique identification code and report instructions.

A telephone call answered by a recording can be converted into writing within the computer along with text messages and emails. Reporting can be completely automated, but organizing and prioritizing cannot be automated.

Setting priorities and tracking is a daily activity. The report description and the current weather conditions will determine the priority for further inspection and action.

Managing Illicit

The value of the illicit program is twofold; (1) minimize pollution, and, (2) reduce drain maintenance cost.

Why not install a screen in front of stormwater drains? Consider more street sweeping to reduce drain maintenance.

Education begins with labeling the drains and mailing literature to citizens. This must be followed with presentations to business groups, homeowner associations, and school groups. Charitable car wash applications offer an opportunity to educate the highschool groups that could otherwise not be interested.

Aggressive education may result in a citizen advisory committee and volunteers to see and report illegal and illicit discharges. When a business owner “rats” on a competitor, the education program is working, and the polluter pays the cost. *

Court to EPA: Regulate Pollutants, Not Flow

EPA's TMDL for Accotink Creek in Fairfax County, Virginia is based on stormwater flow to reduce sedimentation. A federal court overturned the TMDL based on their decision that the Clean Water Act only allows the regulation of pollutants, not stormwater flow.

In July 2012, the Virginia Department of Transportation and the Fairfax County Board of Supervisors (collectively Virginia DOT) filed a lawsuit in U.S. District Court for the Eastern District of Virginia based on the following question: Does the Clean Water Act authorize EPA to regulate the level of a pollutant by establishing a TMDL for the flow of a nonpollutant into the creek?

On Jan. 3, 2013, the court ruled that stormwater runoff could not be used as a surrogate for other pollutants to meet a TMDL (*Virginia DOT v. EPA*, E.D. Va., No. 1:12-CV-775, 2013 BL 2384). The ruling went further by specifying that other "nonpollutants" may not be used as proxies for legally recognized pollutants.

The court cited the Clean Water Act stating that, "the total maximum daily load, for those pollutants which the Administrator identifies," and that "pollutants" (defined in the Act) is "not ambiguous in the eyes of the court and does not include stormwater runoff."

The court held EPA may not regulate something over which it has no statutorily granted power – annual loads or nonpollutants – as a proxy for something over which it *is* granted power – daily loads or pollutants.

EPA had until March 3, 2013 to appeal the decision, but declined to do so, meaning the ruling will stand. The lack of appeal means that EPA has either (1) no confidence in the success of an appeal or (2) may view the

decision as a threat to regulate flow under the NPDES program.

The TMDL program begins with water quality standards in receiving streams and works backwards to allocate restriction to dischargers. The NPDES, by contrast, is iterative and uses more flexible goals to address the impacts of stormwater runoff and cost to the discharger.

So the absence of an appeal allows EPA to use stormwater quantity and flow rates in the NPDES program. Therefore, EPA's effluent guideline for the construction and development industry, which regulates both volume and velocity in all construction general permits, nation-wide, is safe for now.

Certainly, EPA use of stormwater flow will be challenged. But EPA has another method of regulating flow. By regulating pollutant loads, identified as pounds, the discharger can reduce the concentration and/or runoff volume to calculate the pounds discharged. *

Maximize, Not Minimize Citizen Involvement *(from page 5)*

events, partnering with local restaurants to provide free meals to citizen stormwater volunteers, plus so much more. And they make it all look so fun! <https://www.facebook.com/iowa.city.stormwater.volunteers>

Just like picking earthworms was such a blast when I was a kid, citizen stormwater volunteerism can be fun. Oh, and the added bonus? It doesn't cost much to train and deploy citizens, the rewards reaped are exponential to the costs incurred, and our water quality standards can only be improved by the effort. *

John Whitescarver
Executive Director
National Stormwater Center



- * Served on team that organized US EPA and wrote Clean Water Act rules; National Expert in Municipal Permitting Policy;
- * Awarded EPA Bronze Medal 1970-1979
- * Appointed to EPA Advisory Committee on Compliance Assistance and Stormwater
- * Instructor for Florida DEP Erosion & Sedimentation Control Inspector Course
- * Civil Engineer, Bachelor & Masters Degrees from VMI and Virginia Tech
- * Board Qualified Environmental Professional by the Institute of Professional Environmental Practice

2013 Training Schedule:

On-Line Municipal Employee Training

June 20 - Commercial Inspections
July 18 - Post-Construction
August 15 - Public Participation
September 19 - Illicit Discharge Elimination
October 24 - Construction Inspections

2013 Certified Stormwater Inspector

ON-SITE Training Schedule

June 3-4 Birmingham, AL and Atlanta, GA
June 6-7 Jackson, MS and Savannah, GA
June 24-25 Tempe, AZ
June 27-28 Denver, CO
July 22-23 Virginia Beach, VA
July 25-26 Annapolis, MD

Special Events Schedule

2013 Stormwater Compliance Conferences

Nov 5-7, Region 4, Hilton Head, SC

Certified Employee Training

On-line Industrial Training by Sector

June 21, July 19, August 16
Sept 20, Oct 25, Nov 15

Be sure to see our website for our complete training and events schedule!
www.NPDES.com

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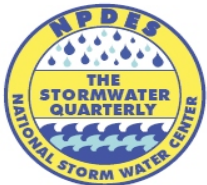
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Contributing Editor:

Karen Sadowski, Director of Training,
National Stormwater Center

National Stormwater
Center



817 Bridle Path
Bel Air, MD 21014

Our Nation's waters are a valuable resource that ought to be protected from illegal pollution. We support compliance with the Federal Clean Water Act by providing training and services to government and business.

