



The Stormwater Quarterly

National Stormwater Center

Our 12th year

Winter 2007 ♦ Issue 110

CLEAN WATER PERMITS *HOPE IS ON THE WAY*

Stormwater News

Committee on Reducing Stormwater Discharge Contributions to Water Pollution. See page 2.

Dr. Lawrence E. Band, U. Of NC at Chapel Hill

Dr. Clair Welty, U. Of Maryland, Baltimore

Dr. Roger Bannerman, Wisconsin DNR

Dr. Derek B. Booth, U. Of Washington

Dr. Stanley B. Grant, U. Of California, Irvine

Dr. Richard R. Horner, U. Of Washington

Dr. Charles R. O'Melia, Johns Hopkins University

Dr. Kurt Stephenson, Virginia Polytechnic Institute

Dr. Xavier Swamikannu, California EPA

Dr. Robert G. Traver, Villanova University

Dr. Robert E. Pitt, U. Of Alabama

Mr. Edward T. Rankin, Midwest Biodiversity Institute

Mr. Thomas Schueler, Ctr. for Watershed Protection

EPA has modified the Toxics Release Inventory (TRI) rule. The revised TRI rule rewards small companies that take aggressive steps to prevent any leaks or emissions of toxics by allowing them to use a short form to notify the community that the firms' use toxics in their manufacturing process.

Small companies spend more per employee to comply with federal regulations than larger companies.

For more information on efforts to reduce the burden on small business while protecting the environment, visit the Office of Advocacy website at www.sba.gov/advo.

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40% of Our Nation's Waters Don't Meet Water Quality Standards

There has been no improvement in the quality of the Nation's Waters for 20 years. (<http://www.epa.gov/owow/tmdl/overviewfs.html>) The intent of the EPA stormwater permit program was to advance the purpose of the Clean Water Act. It has failed to be effective.

But, there is a new found hope for cleaner water based on recent court decisions, new leadership in Congress and a scientific evaluation of the stormwater program.

The U.S. Supreme Court's Rapanos decision that NPDES permits apply only where there is a significant connection (nexus) to navigable water means a technical focus on protecting water, not on preventing development.

Arriving are Senate and House committee chairmen with pro environment agendas. Gone is House Bill HR5558, designed by the National Home Builders Association to get stormwater permits for construction operators.

Beginning this month, a national evaluation of the EPA stormwater program will determine how to make changes that achieve the objective of the Act "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters."

There is renewed hope that the government institutions will get it right this time. *

Making Clean Water From Stormwater

Finally, someone at EPA thinks that the stormwater permit program should focus on clean water for our rivers, lakes and estuaries. Credit Jenny Molloy of the Headquarters EPA Water Permits Division. She has commissioned a two-year study for the stormwater permit program to determine changes that will lead to clean water.

The focus of the proposed study is stormwater discharges from urban areas, industrial activities and construction sites. The study team will assess effectiveness of stormwater pollution prevention plans and monitoring requirements.

EPA expects to receive recommendations to modify the permit program to better protect water quality. The study objectives (see box to the right) are summarized for clarity:

- ! A protocol linking runoff to water quality
- ! Effluent parameters, limits and benchmarks
- ! Relationship of plans to water quality
- ! Permit conditions to ensure water quality
- ! Stormwater permitting program design

Study Team

National Research Council, under the aegis of the National Academy of Sciences, will conduct the two-year study. The study team is composed primarily of professionals and scientists, not lobbyists, with expertise in the following areas:

- hydrology & hydraulics
- environmental engineering
- stormwater management
- watershed modeling
- water quality modeling and monitoring
- aquatic ecology and limnology
- social sciences

Staff support is provided by the Water Science and Technology Board.

The first meeting of the Committee is on January 22-23, 2007 at the National Academy of

Sciences Building, 2100 C St. NW, Washington D.C.

THE STUDY OBJECTIVES:

- (1) Clarify the mechanisms by which pollutants in stormwater discharges affect ambient water quality criteria and define the elements of a “protocol” to link pollutants in stormwater discharges to ambient water quality criteria.
- (2) Consider how useful monitoring is for both determining the potential of a discharge to contribute to a water quality standards violation and for determining the adequacy of stormwater pollution prevention plans. What specific parameters should be monitored and when and where? What effluent limits and benchmarks are needed to ensure that the discharge does not cause or contribute to a water quality standards violation?
- (3) Assess and evaluate the relationship between different levels of stormwater pollution prevention plan implementation and in-stream water quality, considering a broad suite of BMPs.
- (4) Make recommendations for how to best stipulate provisions in stormwater permits to ensure that discharges will not cause or contribute to exceedances of water quality standards. This should be done in the context of general permits. As a part of this task, the committee will consider currently available information on permit and program compliance.
- (5) Assess the design of the stormwater permitting program implemented under the Clean Water Act.

If you would like to attend the sessions of this meeting that are open to the public or need more information contact:

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(Continued on Page 7 “Why The NRC Study”)

Elections Have Consequences

The 110th Congress Will Do No Harm, May Do Good

Not only were anti-environmentalists unseated by the 2006 election, their seats will be filled by environmentalists. The word *environmentalists* may be too strong, but what we know is that Congress will consider what's on the table, such as global warming, energy alternatives, endangered species and public lands. Off the table is oil drilling in ANWR (Arctic National Wildlife Refuge) and House Bill 5888 to ease the pain for home builders

House Speaker Nancy Pelosi and Senate Majority Leader Harry Reid have strong environmental records. The Senate Environment and Public Works Committee is now chaired by Barbara Boxer. The Chairman of the House Resources Committee is Nick Rahall and John Dingell is the new Chairman of the House Energy and Commerce Committee.

The Democratic Party victory is not large enough to change government policy during the last two years of the Bush presidency unless some Republicans decide they need to run away from the Bush environmental record. Overcoming a Presidential veto will require even more Republican insecurity.

The Clean Water Act was amended last year to relieve oil and gas construction activities from stormwater permitting. When Congress removes tax loopholes for oil companies, that could be reversed.

The Stormwater Enforcement and Permitting Act (HR5558) is dead on arrival. This bill would have prevented EPA enforcement in state issued permits, excused permitting for discharges into an MS4, and allowed builders a one-time chance to correct permit deficiencies (that don't cause environmental harm) without a violation.

The 110th Congress will certainly be looking to hold their seats in the 111th Congress. *

Stormwater News

(Continued From Page 1)

EPA wants states to increase permit fees for a better permit program. A proposed rule would provide a financial incentive to states to use fees to run NPDES. It would allot up to three percent of state water pollution control grant funds to states that have adequate National Pollutant Discharge Elimination System (NPDES) permit fee programs.

The rule is intended to create financial incentives to prompt more states to implement adequate fee programs and shift part of the financial burden to those who benefit from the permits.

"We encourage states to use permit fees for additional funding for their clean water programs," said EPA Assistant Administrator of Water Benjamin H. Grumbles. "A variety of tools and funding approaches are needed for a strong program, including having permitted facilities share the cost of keeping water clean."

No more sand on Connecticut Roads. The state joins Massachusetts, Vermont and New York in turning to salt alone in its battle with winter, banishing the use of environmentally harmful sand. The state DOT said it plans to use plows, salt and liquid calcium chloride to clear roads and also treat some surfaces before storms. Municipalities do not have to follow suit, but Connecticut requires towns and cities to clean up sand when it is placed on the roads because of the impact the material has on water supplies.

Christopher Stone, the state Department of Environmental Protection's stormwater permit coordinator, said clearing winter roads is really about finding "the lesser of all evils."

EPA making an example (bad) of Lexington, KY.

In November, the EPA filed a suit accusing the Lexington-Fayette Urban County Government of failing to properly operate its treatment and storm sewer systems and allowing pollution to flow into waterways.

The suit alleges the governments have "failed to implement controls adequate to reduce the discharge of pollutants from its municipal storm sewers to the maximum extent practicable."

The suit asks the judge for fines of \$27,500 per day for each day of a violation prior to March 15, 2004, and \$32,500 per day for each daily violation after that. *

The Clean Water Act Is Unambiguous

Court Decisions Trend Toward Clean Water

Looking at several recent court decision, it is reasonable to conclude that judges understand the clear intent of the Clean Water Act. The Law is an easy read and is well organized.

The 2006 Supreme Court decision on navigable waters and their tributaries tell us that the current makeup of that Court supports the objective of the act to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”

Another 2006 decision by a Federal Court in Florida will lead to requiring NPDES permits for water transfers that add pollutants to distinctly different water bodies. This decision, if upheld by the Supreme Court, will generate a new series of NPDES permits where water is distributed to various users.

Finally, the courts are now resolving citizen suits against EPA and states that have failed to protect water quality by complying with section 303(d) of the Act and implementation of TMDLs for impaired water bodies.

A Discharge with Significant Nexus to Navigable Waters Requires a Permit

The U.S. Supreme Court consolidated two NPDES cases and made a decision on June 19, 2006. While both cases concern Section 404, wetland permits issued by the Army Corps of Engineers, the outcome also determines what activity needs an NPDES permit. Stormwater permits are not required unless the discharge is to navigable waters or their tributaries.

Four justices argued that Congress has given implicit approval to the EPA and Corps definition of navigable waters for 30 years. They backed the appeals court decision to require NPDES permits. A different group of four justices argued that the interpretation of the law was too broad and voted to return the case to the lower court

for further review. But they also voted to exclude from the definition of navigable waters, “dry channels through which water occasionally or intermittently flows.” The ninth justice, Anthony Kennedy, sided with the latter group making it a majority opinion, but disagreed with the majority to exclude intermittent flows.

Justice Kennedy said the Clean Water Act can reasonably be interpreted to cover the paths of intermittent streams. Kennedy further said a permit could be required if there's a “significant nexus to waters that are, or were navigable in fact, or that could reasonably be made so.” The discharge must “significantly affect the chemical, physical, and biological integrity” of nearby navigable waters.

As a result of the split, Justice Kennedy’s concurring opinion becomes the law for regulators and for the lower courts. His opinion places the burden of proving a “significant nexus” to covered waters more readily understood as navigable. Kennedy correctly used the objective of the Clean Water Act to drive future permits.

Water Transfers - New NPDES Category

A federal judge recently ruled that Florida water managers violated the Clean Water Act by back-pumping contaminated water from drainage canals into Lake Okeechobee. U.S. District Judge Cecilia M. Altonaga, ruled in December 2006 that the “plain meaning of the Act” requires the Water Management District to obtain NPDES permits.

Water leaves the Lake in canals and picks up runoff pollutants from agricultural, and nearby communities. Some of the water is then back-pumped to manage the water levels in the canals and the lake. The U.S. EPA intervened in the case with a proposed rule intended to allow such water transfers without permits through the Nation. The court’s decision trashes the EPA’s

proposal as contrary to the Act. Therefore, a new category of NPDES permits - transferring water from body to another - will soon be the law of the land.

The clear reading of the Clean Water Act is unambiguous. Point source discharges that add pollutants to navigable waters require a NPDES permit. Why is that so difficult to understand.

TMDLs mean Total Maximum Daily Loads

EPA went to court arguing that the word “Daily” in TMDL also means annual or seasonal. On April 25, 2006, the U. S. Court of Appeals for the District of Columbia Circuit rejected EPA’s arguments. “Daily means daily, nothing else,” the Court said.

In response, EPA issued a November 2006 memo advising states that all TMDLs be expressed in terms of daily time increments. For example: Minimum and maximum daily loads, average daily loads, or differing daily loads depending on the season.

Regulators could define TMDLs on wet vs. dry conditions, load duration curves and/or a table or graph based on water quality concentrations and daily stream flow.

More than 20,000 TMDLs have been established. The purpose is to attain and maintain the applicable water quality standards, to account for seasonal variations and to include a margin of safety.

But, 40% of our nation’s waters still do not meet the water quality standards. This is over 20,000 individual river segments, lakes, and estuaries and 300,000 miles of rivers and shorelines and approximately 5 million acres of lakes -- polluted mostly by sediments, excess nutrients, and harmful microorganisms.

TMDLs are soon to be integrated into stormwater permits and the result will improve the quality of our Nation’s waters. *

No NPDES Permit for Pesticides Applied Under FIFRA Rules

EPA revised NPDES permit program regulations on November 27 to add a paragraph to the list of discharges that are excluded from NPDES permit requirements.

Excluded are applications of pesticides to waters of the United States consistent with all relevant requirements under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) in two specific circumstances:

- When pesticides are applied directly to water to control pests, including mosquito larvae, aquatic weeds and other pests in the water.
- When pesticides are applied to control pests that are present over or near water and some of the pesticide will unavoidably end up in the water in order to target the pests effectively.

EPA takes the position that pesticides applied under these circumstances *are not pollutants* and therefore are not subject to NPDES permitting requirements. EPA did not address the drift of pesticides over and into waters of the United States from pesticide applications to land.

The controversy over the use of aquatic pesticides was a citizens’ lawsuit against Talent Irrigation District’s use of pesticides to control weeds and vegetation. The Oregon Department of Fish and Wildlife found many dead fish in nearby Bear Creek from a leaking waste gate from the canal. The U.S. Court of Appeals for the Ninth Circuit held in *Headwaters, Inc. v. Talent Irrigation District (Talent)* that an applicator of herbicides was required to obtain an NPDES permit under the circumstances before the court.

The EPA rule will be challenged by agriculture interest for a broader EPA position covering land application of pesticides under FIFRA rules. *

A Better Spill Prevention, Control, and Countermeasures (SPCC) Plan

EPA's Major Cleanup of the Oil Spill Program

Changes to the EPA Oil Spill rule are effective February 26, 2007. The revised Rule streamlines the program and exempts certain vehicle fuel tanks and other on-board bulk oil storage containers.

EPA exempted mobile refuellers from the sized secondary containment requirements for bulk storage containers. Removed are requirements for animal fats and vegetable oils that pertain to oil production facilities, oil drilling and workover facilities.

EPA is extending the compliance date to amend and implement an existing SPCC plan to July 1, 2009. New facilities will have this time to prepare and implement a new SPCC plan.

Storage Capacity Clarified

The basic requirements have not changed. Facilities must have an SPCC plan if they have either an aggregate aboveground storage capacity greater than 1,320 gallons of oil or an aggregate storage capacity of completely buried underground tanks exceeding 42,000 gallons.

Exempt from the Rule are:

- Completely buried storage tanks subject to the technical requirements of the underground storage tank regulations
- Containers with a storage capacity less than 55 gallons
- Wastewater treatment facilities
- Permanently closed containers
- Motive power containers

Qualified Facilities May Self Certify

Qualified facilities may self-certify their SPCC Plan in lieu of certification by a licensed Professional Engineer (PE). A qualified facility is one that has an aggregate aboveground storage capacity of 10,000 gallons or less and has no recent significant spill. A disqualifying spill is one exceeding 1,000 U.S. gallons or no two discharges each exceeding 42 U.S. gallons within

any twelve month period in the three years prior to the SPCC Plan self-certification date.

When determining spill history, the gallon amount specified in the criterion (either 1,000 or 42) refers to the amount of oil that actually reaches waters of the United States, adjoining shorelines, the contiguous zone or in connection with specified activities in waters and not the total amount of oil spilled.

Plan Requirements

The SPCC Plan must list equipment, workforce, procedures, and training to prevent, control, and provide adequate countermeasures to a discharge of oil.

The Plan must include regular inspections, but the rule no longer specifically requires visual inspection in combination with another testing method. A signed record of inspections must be kept for three years.

Reporting

Operators must report any discharge of a **harmful quantity** of oil to navigable waters, adjoining shorelines, or the contiguous zone. A harmful quantity of discharged oil is one that violates state water quality standards, causes a film or sheen on the water's surface or leaves sludge beneath the surface. A report must be made to the National Response Center.

Operators must report to an EPA Regional Administrator when there is a discharge of: (1) more than 1,000 U.S. gallons of oil in a single discharge to navigable waters or adjoining shorelines; and (2) more than 42 U.S. gallons of oil in each of two discharges to navigable waters or adjoining shorelines within a twelve month period.

The new rule will cut the number of regulated facilities from 580,000 to 434,000. *

Why the NRC Study?

(Continued from Page 2)

Prior to the implementation of the EPA Stormwater program, there were 100,000 NPDES permits issued to control point source discharges from industrial process wastewater and sanitary discharges from publicly owned treatment works (POTW). Water quality improved dramatically, but states reported that 40 % of the nations waters remained below standards.

Congress amended the Clean Water Act in 1987 requiring stormwater permits. Over 100,000 stormwater permits were issued to industrial sources, 7,000 to municipalities and 400,000 permits/year to construction activities. Yet there is little evidence that water quality has improved.

In the study request to NRC, EPA writes “it is unclear whether this general permitting approach can control discharges adequately enough to protect water quality.” EPA made it clear that general permits are essential to the Stormwater Program and a change to individual permits is off the table.

Problem with Permit Variability

NPDES authorized states have been allowed to issue permits similar to EPA models, but many states vary permit conditions. The EPA industrial stormwater regulations require monitoring, but some state permitting authorities have not included monitoring requirements in their industrial stormwater permits.

Monitoring is required for large municipal stormwater systems, but not for small systems. Finally, for industrial stormwater there are 29 sectors of industrial activity covered by the general permit, each of which is characterized by a different set of possible contaminants and BMPs.

Sampling Issue at the Heart of the Study

According to the study request, EPA reveals “mounting political pressure from parties sympathetic to industry to eliminate monitoring requirements entirely.”

EPA wants the study committee to resolve this issue by having a better understanding of the relationships between stormwater discharge pollutant concentrations or loads, and ambient water quality.

Some states have continued the first general industrial permit that has very limited sampling while other states have used permits issued with no sampling requirement.

Sampling required in the EPA Multi-Sector General Permit (MSGP) has its own conflicts. For example, shipyards and boat yards are not required to sample while marinas must sample.

Stormwater inspectors report that permittees are selective in choosing which outfalls to sample and they fail to summarize the analytical data so as to evaluate the trend.

Controlling Runoff Velocity and BMPs

Stormwater permits are used to control the discharge of pollutants but how that is done is usually decided by the permittee. However, there is a growing trend toward required BMPs.

Since stormwater rarely goes through conventional treatment processes, any exposed contaminants that are on the ground surface are often transported directly into nearby water bodies. EPA believes it is important to find ways to decrease the velocity and quantity of stormwater while increasing its quality.

Stormwater sampling is an inexact science performed poorly by inexperienced people. The study committee should seriously consider performance standards (required BMPs) in permits instead of analytical sampling. *

John Whitescarver, Exec. Dir.
National Stormwater Center



- ▶ B.S. and M.S. in Civil Engineering
- ▶ Qualified Environmental Professional Board Certification by the Institute of Professional Environmental Practice
- ▶ Team to Organize US EPA & Write Clean Water Act Rules; National Expert, Municipal Permitting Policy; Awarded EPA Bronze Medal by US EPA, 1970-1979
- ▶ Appointed to EPA Advisory Committee on Compliance Assistance
- ▶ Appointed by Small Business Administration to EPA committee for streamlining Phase II stormwater rules.
- ▶ Instructor for Florida DEP Erosion & Sedimentation Control Inspector Course

Certified Stormwater Inspector

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Ontario, CA	Jan. 23-24
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Dallas/Ft. Worth	Mar. 13-14
Hartford, CT	Apr. 17-18
Oceanside, CA	May 15-16
Denver, CO	Jun. 19-20
Philadelphia, PA	Jul. 10-11
Las Vegas, NV	Aug. 14-15
Concord, CA	Sep. 10-11
Houston, TX	Oct 16-17
Cincinnati, OH	Nov. 13-14
Aberdeen, MD	Dec. 11-12

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