

Wastewater Treatment

Sources of potential environmental liability for local governments



Introduction

Wastewater treatment plants, often referred to as publicly-owned treatment works (POTWs), can incur environmental liability through their own acts or omissions or through the activities of others. This fact sheet provides an overview of the major sources of potential liability for POTWs.



NPDES permit compliance issues

The Federal Water Pollution Control Act (Clean Water Act, or CWA) prohibits discharges to waters of the United States unless those discharges are allowed under a facility-specific National Pollution Discharge Elimination System (NPDES) permit. Typically, an NPDES permit sets numeric limits and other specific conditions, such as compliance schedules, mandating that the POTW take specific actions by specific dates. When a permit violation occurs, whether intentionally or accidentally, the U.S. Environmental Protection Agency (EPA) or the state (if it has NPDES authority) will require compliance and perhaps assess a penalty. If a return to compliance does not occur in a timely manner,

EPA or the state may seek administrative or criminal penalties against the violator. The penalties can include fines of \$10,000 per day per violation and/or imprisonment up to one year, or both; for serious or persistent violators, the penalties increase dramatically.

Because of the nation's increased focus on protecting the quality of surface waters, POTWs are facing more stringent NPDES permitting requirements, both in the number of parameters regulated and in stricter numeric limits. A POTW receives increased scrutiny when one of the following applies:

- Its discharge point is upstream of a public water supply source.



- Its discharge constitutes a large percentage of the receiving water's flow during dry times of the year.
- The receiving water has been designated as a sensitive environment.
- The receiving water has been found to be impaired under Sections 303 (d) or 304 (l) of the Clean Water Act.

In any one of these instances, it is likely that a watershed protection plan and/or total maximum daily load (TMDL) will be developed. Once such measures are adopted, more stringent numeric limits and/or other requirements will be incorporated in POTW permits. These new requirements may trigger the need for expensive capital improvements and/or may restrict future connections to the POTW collection system.

Another area with significant potential liability that EPA and the states rigorously monitor and enforce is the effluent sampling and analyses required under the NPDES permit. The enforcement agencies have undertaken aggressive civil enforcement actions, including imprisonment of POTW managers and operators when the agencies have proven that compliance samples were collected in a non-representative manner or were adulterated (e.g., by the addition of potable water) and/or that the laboratory results were changed.

Residual disposal

Wastewater treatment plants generate solid and semi-solid residuals as part of their wastewater treatment process. Residuals that meet the “clean sludge” criteria established in 40 CFR § 503.13 are termed biosolids. Biosolids must be managed, sold, given away, or otherwise disposed of in accordance with the limits established by these regulations.

POTW residuals that do not meet the Part 503 criteria and/or that are managed and disposed of through some other mechanism are generally termed sludge. Sludges are considered solid waste under the federal Resource Conservation and Recovery Act and state law, and must be managed and disposed of in accordance with solid waste regulations. In addition it is

found to cause or contribute to a threat to human health or the environment. If wastewater sludges were disposed of at a landfill, the POTW, as generator of this sludge, may be named a “potentially responsible party” (PRP) under federal and state Superfund laws and could be held jointly and severally liable for investigation and cleanup costs.



possible, although rare, that POTW sludge, especially in a heavy industrial area, could meet the federal or state definition of a hazardous waste. If this occurs, management and disposal of the hazardous waste sludge must meet federal, state, and local regulatory requirements. These regulations are very prescriptive, and failure to comply with them can lead to significant fines (up to \$25,000 per day) and other penalties, including imprisonment. In addition, some wastewater sludges may have been disposed of at a landfill (or elsewhere) before the industrial pretreatment requirements (discussed below) were mandated. These wastewater sludges have been

Releases not covered by an NPDES permit

Discharges from POTWs under an NPDES permit that meet the requirements of the Clean Water Act are generally shielded from liability. However, planned or unplanned discharges from sewer systems and discharges originating from locations not specifically listed in the NPDES permit are not shielded from enforcement actions. These unpermitted releases may trigger federal or state Superfund liability, citizens' suits, natural resource damage claims, punitive damages, imposed compliance schedules, and significant negative media attention. In the event

of a natural disaster, or even a deliberate terrorist attack, releases from the collection or the treatment system can lead to potential liability.

POTWs that use aeration or other forms of mixing as part of their treatment process may emit volatile organic compounds (VOCs) and other potentially hazardous pollutants into the air. Some newer large POTWs are covered by federal New Source Performance Standards; their air emissions may also be regulated by state and local authorities. Air emission permits carry with them potential environmental liability for failure to comply with their requirements, and generally do not provide the same kind of shield that the NPDES permit does. It is important to note that most POTWs have not been identified as major sources of hazardous air pollutants.

Wet weather issues, including CSOs and SSOs

Combined sewer systems, as defined by EPA, are sewers that are designed to collect rainwater runoff, domestic sewage, and industrial wastewater in the same pipe. Sanitary sewer systems, as defined by EPA, are solely municipal sanitary sewer systems.

Combined sewer overflows (CSOs) and sanitary sewer overflows (SSOs) occur when collection sewers fill beyond capacity and discharge to surface waters or back up into basements because of wet weather, improper maintenance, or vandalism. Unless these overflows are specifically identified under the POTW's NPDES permit, they are not covered by the permit and therefore can be treated as an unpermitted release. Regulations are being developed requiring the management of sewer systems to reduce the frequency of these overflows. These regulations would require

regular repairs and upgrades to the system. They would also require public notification of overflow events, but local governments would receive some protection for overflow events beyond their control if they had complied with all other requirements.

The stormwater discharges of POTWs must be covered by an NPDES permit as well. This permit may be in the form of a general permit, or the facility may obtain an individual permit. In either case, the permit must cover all sources of stormwater and potential contaminants. The facility must also submit a description of its proposed measures, including best management practices, to control pollutants in its stormwater discharges. Failure to comply with these requirements may subject the facility to the same penalties as those for other unauthorized discharges to surface waters (see "NPDES Permit Compliance Issues" above).

Hazardous and toxic materials

Under CWA Section 307(b) and 40 CFR Part 403, POTWs are required to implement an industrial pretreatment program (IPP) if they receive wastewater from an identified industry and/or in volumes that exceed regulatory thresholds. Over the last twenty-five years IPPs have been largely responsible for the significant decrease in potentially toxic and hazardous materials being discharged by POTWs. Thus, EPA and the states aggressively monitor and enforce the industrial pretreatment requirements. Violations are subject to the same CWA penalties that are discussed above.

Generally, EPA does not regulate discharges of nuclear waste materials that are subject to regulation under the Atomic Energy Act and the regulations found in 10 CFR Part 20. Licensed

facilities may discharge low-level radioactive wastes into the sanitary sewer system provided the material is readily soluble in water and the quantity meets the standards set out in Appendix B of 10 CFR Part 20. If more than one radionuclide is released, there is an annual limit on all radiological waste that can be discharged. POTW sludge can potentially be contaminated with radioactive materials at levels that prevent its normal management and disposal. In some instances, POTWs have had to pay some of the additional costs for management and disposal.

Security issues

Because of their importance in protecting the quality of life, wastewater treatment plants may be targets for terrorist disruption. Although the intentional introduction of a toxic or hazardous material into wastewater could occur, POTWs have not typically been seen as likely targets because treated effluents from these plants are not consumed by human beings, nor are human beings likely to come into contact with the undiluted effluent. However, physical disruption of the collection system may occur, which could lead to the discharge of untreated domestic sewage and other toxic or hazardous materials, especially in heavily populated areas. A release of untreated or partially treated wastewater due to an act of terrorism could be a violation of the POTW's NPDES permit and/or be deemed a release not covered by that permit. However, if a POTW can demonstrate that it conducted a vulnerability assessment, took preventive steps to avoid a release, and made contingency plans to respond to any emergency, the likelihood of agency enforcement is significantly reduced. Nevertheless, liabilities (e.g., the cost of repairs and/or replacement of damaged parts in the system) and

litigation for damages (to individuals and/or their properties harmed by the event, or to worker health and safety) can be significant.

More information on the federal statutes that affect local governments and on the various categories of environmental liability that can be incurred under specific statutes and common law theories, and a brief outline of strategies for minimizing exposure to environmental liability, are available in *The Primer for Local Governments on Environmental Liability* at <http://www.lgean.org/documents/primer.pdf>

Resources

Clean Water Act: <http://www4.law.cornell.edu/uscode/33/ch26.html>

Local Government Environmental Assistance Network (LGEAN): <http://www.lgean.org>

National Biosolids Partnership: <http://www.biosolids.org>

U.S. EPA – Industrial Pretreatment Programs: <http://www.epa.gov/npdes/pretreatment>

U.S. EPA – National Pollution Discharge Elimination System (NPDES): <http://www.epa.gov/npdes>

U.S. EPA – Stormwater: <http://www.epa.gov/npdes/stormwater>

U.S. EPA – Water Infrastructure Security: <http://www.epa.gov/safewater/security/index.html>

U.S. EPA – *What Wastewater Utilities Can Do Now to Guard against Terrorist and Security Threats:* <http://www.epa.gov/npdes/pubs/wastewaterutilityfactsheet.pdf>

Water Environment Federation: <http://www.wef.org>

Water Information Sharing and Analysis Center: <http://www.waterisac.org>

Acknowledgements

This fact sheet was written to provide local government managers, elected officials, and their staff with a primer on the potential environmental liabilities that local governments face.

The International City/County Management Association (ICMA) would like to thank the Public Entity Risk Institute (PERI) for their continued support of local governments, and particularly their support of ICMA's Environmental Liability Outreach (ELO) project, under which this fact sheet was developed. The project is managed through ICMA's Local Government Environmental Assistance Network (LGEAN). Special appreciation goes to Claire Reiss, Director of Grants and Research at PERI, for her support of the ELO project.

ICMA would also like to thank the Water Environment Federation, and the law firm of Nixon Peabody, LLP, for their development of materials for this fact sheet.

Disclaimer

The information provided by the Local Government Environmental Assistance Network (LGEAN) is for your review and convenience. It is not intended to provide legal advice or compliance instruction with respect to any specific matter or any other federal, state, or local regulation. The user shall be responsible for consulting with legal counsel and the appropriate federal, state, or local regulatory authorities before interpreting any regulations or undertaking any specific course of action.

For more information contact LGEAN at (877) 865-4326 or lgean@icma.org.



printed on recycled paper