

Water Discharges

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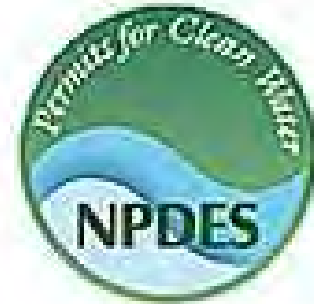


Regulated Water Discharges

The telecom industry has various equipment and operations that generate water discharges regulated by the CWA through the NPDES program.

Types of Water Discharges

- Facility Discharges
- Manhole/Utility Vault Discharges
- Stormwater from Land-disturbing Construction Activity



Regulated Water Discharges

Facility Discharges

- Oil/Water Separators or Clarifiers
- Cooling Tower & Boiler Blowdown
- Sump Pumps
- Sanitary Wastewater
- Remediated Groundwater



Regulated Water Discharges

Oil/Water Separators

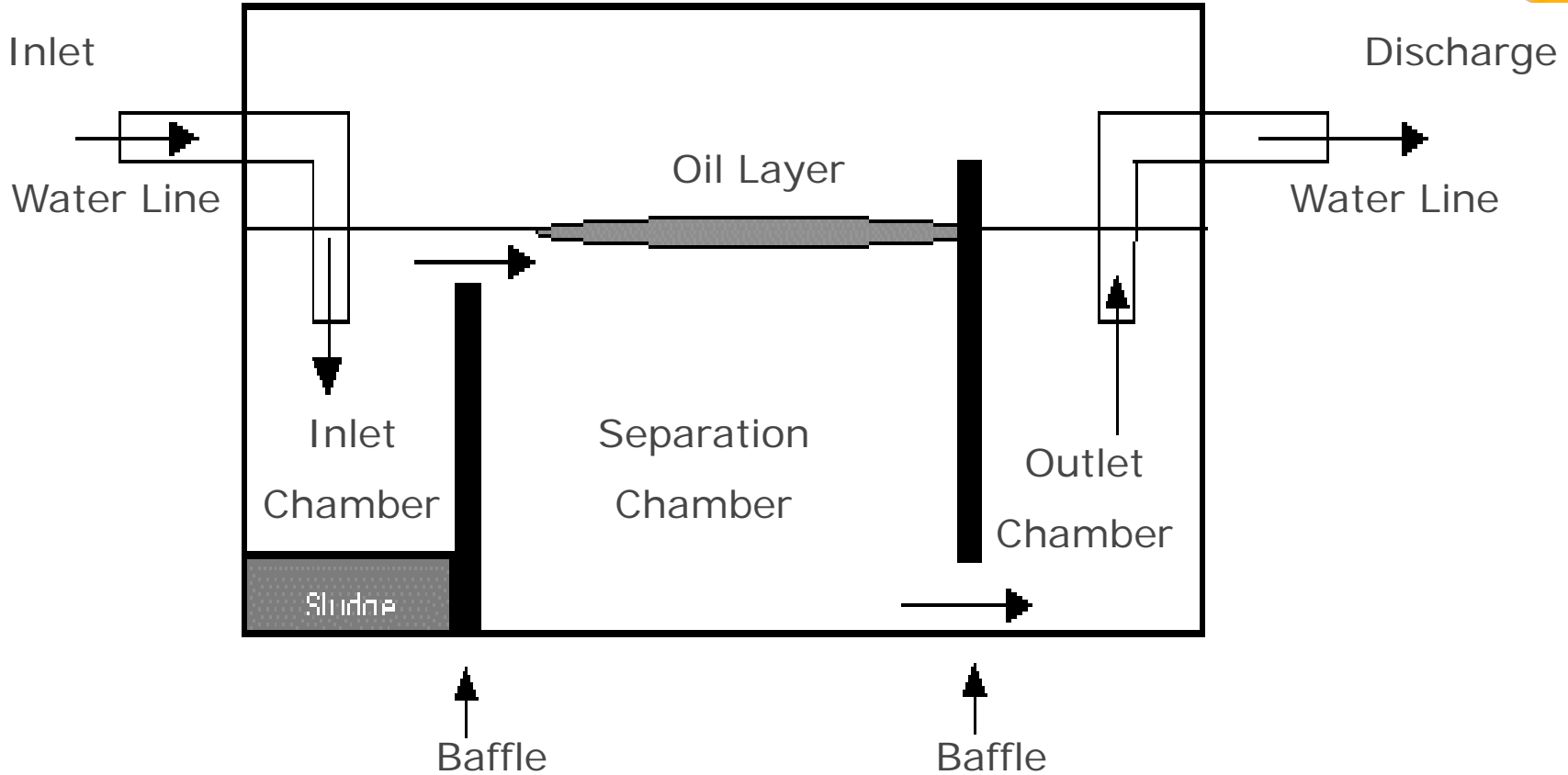
- Pretreatment Equipment
- Used to treat various wastewater discharges from:
 - Vehicle washing
 - Floor washing
 - Parking lot runoff
 - Catchment basin



Above-ground oil/water separator



Regulated Water Discharges



Regulated Water Discharges

Cooling Towers & Boiler Blow-Down

- Produced due to maintenance activities
 - filters backwashed to remove debris & other sediment
 - blowdown due to elevated TDS
- May include chemical additives used to prevent corrosion and microbial growth
 - Biocides
 - Inhibitors



http://cfpub.epa.gov/npdes/home.cfm?program_id=5



Regulated Water Discharges

Sump Pumps

- Collect/remove groundwater from buildings
- Discharge options:
 - Sanitary Sewer to POTW
 - Storm sewer
 - Similar to manholes (discussed later), may be covered under general de minimis permits
 - Privately owned WWTP
 - Ground or surface water
 - Similar to manholes (discussed later), may be covered under general de minimis permits
- All require permit or prior authorization



Regulated Water Discharges

Sanitary Wastewater

Includes wastewater from bathrooms, kitchens, etc.

Discharge Options:

- Sanitary Sewer System to POTW
- Septic System
 - Requires maintenance and local authorization
- Privately owned WWTP
 - Requires operating license and may require discharge permit



Regulated Water Discharges

Regulatory Environment

The General Pretreatment Regulations establish responsibilities of Federal, State, and local government, industry and the public to implement Pretreatment Standards to control pollutants from the industrial users which may pass through or interfere with POTW treatment processes or which may contaminate sewage sludge.



http://cfpub.epa.gov/npdes/home.cfm?program_id=3



Regulated Water Discharges

Roadblocks

- Telecommunication facilities are located throughout the United States
- Pretreatment regulations dictate that the local POTWs set local limits on pollutants introduced into their system.
 - Varies on a site by site basis

http://cfpub.epa.gov/npdes/home.cfm?program_id=3



Regulated Water Discharges

Remediated Groundwater

- Leaking Underground Storage Tanks
- Pump and Treat Systems
 - General Permits exist for discharging treated groundwater to surface waters
 - Recommend you discuss with your remediation project managers or environmental consultants/engineers



Regulated Water Discharges

- Prior to the Clean Water Act there was a presumed “right to pollute” our rivers and waterways but the default assumptions - and the laws - have changed.
- There is no “right to pollute” (without a permit and conditions)
- Various laws regulating “point-source” discharges have resulted in making many U.S. rivers and lakes cleaner.
 - Federal Clean Water Act (1972)
 - NPDES program
 - Various state, regional and local level programs
- More recently regulators are pursuing “non-point source” and less obvious forms of pollution.
 - Letters between Senator Harry Reid and EPA Administrator/Office of Water 1997
- “Utility-Vault General Permits” regulate manhole discharges
- CSOs – Challenge to determine if the storm drain goes to surface water or through a CSO which may regulate this type of discharge



Regulated Water Discharges



As recently as the 1960s – polluted U.S. rivers sometimes caught fire



Regulated Water Discharges

HARRY REID
NEVADA

United States Senate

WASHINGTON, DC 20510-2803

July 31, 1997

The Honorable Carol Browner
Administrator, Environmental Protection Agency
401 M. Street, S.W./Suite 1101
Washington, D.C. 20460

Dear Administrator Browner,

As you may know, I have long been interested in protecting citizens from the harmful effects of lead, and other contaminants as they enter the environment through various sources.

Recently, one of my constituents, an environmental technology firm based in Nevada, presented to me findings of a study of various utilities throughout the country. The study showed that each year more than 6 billion gallons of water are pumped from the nation's one million utility manholes and vaults. Of this water, an estimated 10 to 20 percent is polluted. This means that, potentially, a minimum of 625 million gallons of polluted water enter the water supply each year from manholes and vaults. The most common pollutants found in man-holes and vaults are lead, copper, and hydrocarbons.

I have been informed there is some confusion in the utility industry as to whether these utility manholes and vaults are considered point sources for purposes of the Clean Water Act since they are not specifically named in the definition of "Point Source" in the code of federal regulation. In pertinent part the definition for point source discharge includes "[a]ny discernible, confined and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container..."

If vaults and manholes are included in the point source definition, then utilities would be required to test and treat the water for pollutants before it is dumped. I believe this is not only sound public policy, but clearly within the scope of Congressional intent. Therefore, I would urge you to examine the issue, and, if the concern is valid, to clarify the EPA's opinion as to whether vaults and manholes are included in the definition of Point Source for purposes of the Clean Water Act.

Thank you in advance for your attention to this matter. I look forward to your reply.

Sincerely,



HARRY REID
United States Senator

The USEPA's Office of Water responded.

- This discharge is a point source discharge and require a NPDES permit
- *"Manhole dewatering is not storm water discharge because it is neither runoff nor surface drainage"*



Regulated Water Discharges

States	Manhole Dewatering Regulation
Arizona	De Minimis Permit
California	General Permit – Utility Vaults and Underground Structures (admin. extended)
Colorado*	Phasing out MINDI – Guidance document
Florida	Miami-Dade County; City of Coral Gables
Nevada	De Minimis Permit – Category 4
North Dakota	Submit BMPs for approval
Ohio*	No general permit but is “regulated”
South Dakota	General Permit – Temporary Discharge Activities
Texas	<i>“Permit by Rule”</i>



Regulated Water Discharges

Individual Permits

- This organization has been attempting to get the USEPA to produce guidance or a federal level general permit, but so far unsuccessful
- Reviewing other State's requirements and submitting requests for BMP approvals in lieu of individual permit



Regulated Water Discharges

Potential Pollutants

- These spaces are subject to intrusion of infiltrated groundwater and surface runoff from above, as well as potentially from leaks in other underground utility service lines (e.g. storm drains and sanitary drain lines) or other sources of existing groundwater contamination.
- Operations in telecommunication underground structures do not directly contribute to the introduction of contaminants in water.
- These structures are part of the telecommunications infrastructure and do not contain potential sources of pollutants found in other utility structures such as oil containing transformers.
- These structures may have occasional traces of sewage, oil, grease, petroleum, organic matter, mud, silt, pesticides, and other pollutants (potentially metals) in small amounts usually resulting from surface runoff , auto exhaust, irrigation or existing groundwater contamination.



Regulated Water Discharges

Disposal Options

BMPs do not allow for observed, tested or confirmed pollutants to be discharged. What are our options in this situation?

- Pump and Haul - \$\$\$\$
- In situ stabilization - \$\$ and potential regulatory hurdles
- Collection and accumulation at a central location for disposal



Stormwater Discharges from Land Disturbing Activities



Telecom Construction Projects

- **Types of Land-Disturbing Activities**
 - Linear construction projects: buried copper, buried fiber, cable reclamation
 - Building and parking lot construction: administrative buildings, data centers, work centers
 - Network equipment site construction: cell sites and associated roads, huts, cabinets, etc.



Linear Projects

- **Who** = Telecommunications companies such as those represented in the EHSCP.
- **What** = Placing new conduit in the ground that will contain fiber optic cable. Projects can range from a few hundred feet to over 100 miles in length. Typically located within relatively narrow pre-existing easements along roads, but some may be “cross-country”.
- **How** = Telecom companies own the projects, draw up plans, obtain permits, and contractors perform the construction. Typically involves excavating long distances of cable trench, directional boring, and hand holes.
- **Where** = Telecom companies conduct these projects nationwide. It is not uncommon for one company to obtain permits for in excess of 1000 miles of linear projects on an annual basis.
- **Why** = Bring broadband and/or wireless connectivity to a new place (e.g. a new residential subdivision or commercial development). Provide increased capacity, as the public’s demand for bandwidth keeps growing. (Even cell phones depend on buried cables – they link cell towers to the rest of the telecommunications system). Sometimes have to move an existing buried cable (e.g. if local authorities want to widen a road).



Compliance Triggers

- Typical building construction disturbing 1 acre or more of soil.
- Linear construction projects 1 mile or greater in length (1 acre = ~ 1 mile) assuming up to 8 feet of disturbance.



Compliance Requirements – NPDES Stormwater Permits

Obtain NPDES Permit

- Submit NOI
- Prepare site-specific SWPPP
 - Work prints, project description, waterbodies, BMPs, sampling points
- Obtain authorization to proceed and permit from agencies.

Comply with Permit

- Install & maintain BMPs
- Conduct site inspections and maintain logs
- Perform sampling after specified rain events
- Report results to agency
- Maintain records
- Terminate permit (NOT)



Development of the SWPPP

The SWPPP is a requirement in all stormwater permits. It provides a description of the project and how the permittee is going to comply with the permit.

Contents:

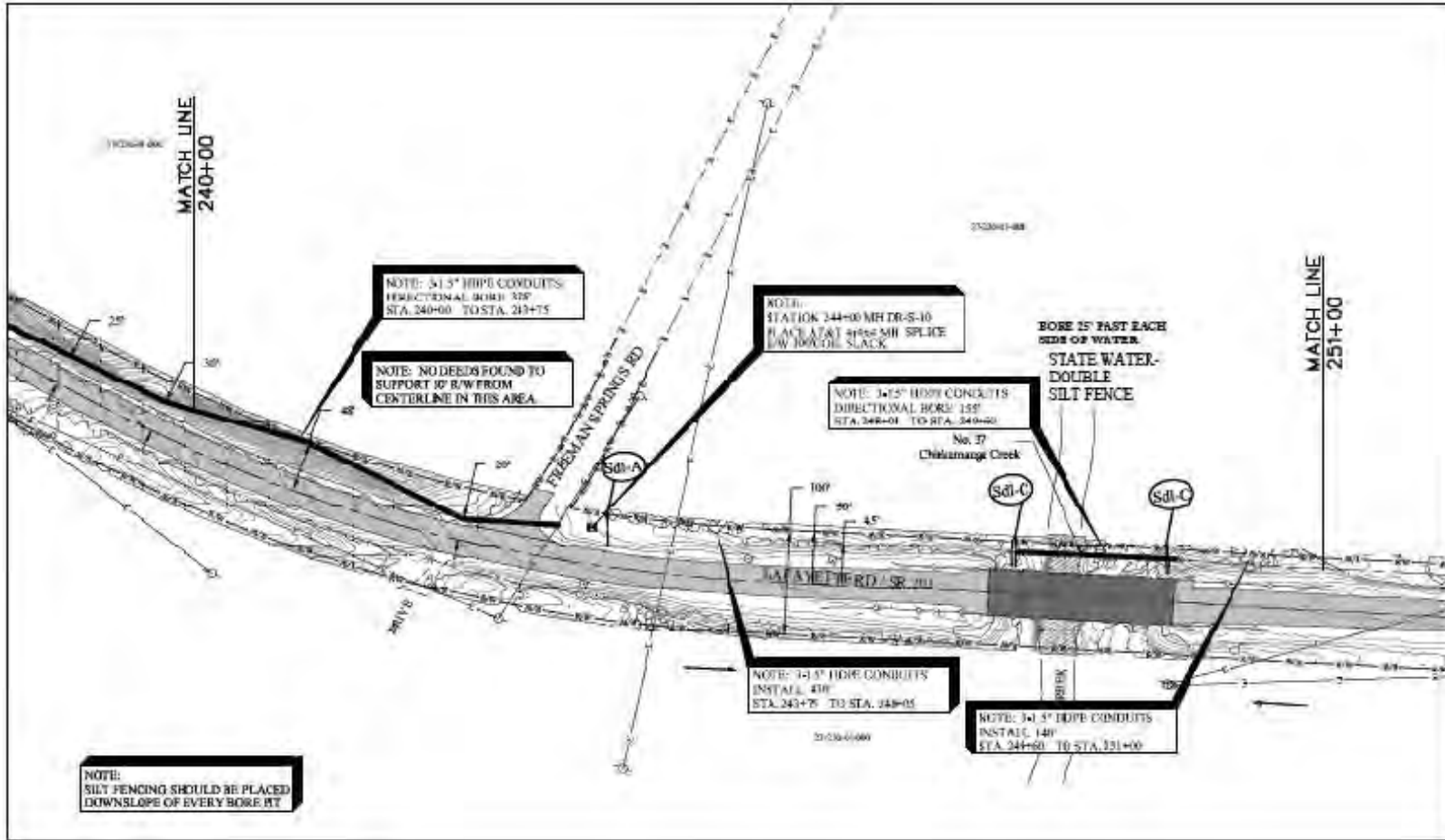
- General Information
- Project/Site Description
- BMPs or Engineering Controls
- Inspection & Maintenance Plans
- Sampling Plans
- Recordkeeping
- Appendices
 - Engineering Drawings
 - Maps



SWPPP



SWPPP – Site Plans



Best Management Practices

BMPs consist of structural and non-structural practices to control erosion and stormwater runoff.

- Silt fences
- Hay bale barriers
- Rock check dams
- Mulch and seed
- Spill prevention
- Construction techniques
 - bore or vibratory plow



BMP Examples



Construction Equipment



Telecommunications Industry Drivers

- Telecommunication companies will continue to see **increasing activity** in linear construction.
- The increasing demand for **broadband** and **voice coverage** are driving the installation of fiber and other network infrastructure to provide these services.
- Linear projects are **highly visible**. Most are in public view and often cross private property. Projects are subject to more potential complaints by the public and **inspections** by agencies.
- More NPDES permits = increased **risk of non-compliance** and potential for **agency enforcement**.



Regulatory Environment

- The EPA's new proposed CGP and many existing state permits do not accommodate the **unique nature** of linear telecommunications projects.
- Compliance with the terms of the permits is often **impractical or very costly** when compared to traditional construction projects.
- Compliance with some permit requirements often provides very little, if any, **environmental benefit**.
- Linear telecommunication projects are unique.
 - Long and narrow
 - Many small discharge points
 - Active site is small and constantly moving
 - Little or no capacity to control run-on
 - Limited ability to control runoff
 - Limited potential to contribute to sediment loading



Regulatory Environment

- Problematic requirements in EPA's new proposed CGP and existing state permits.
 - Sampling: numeric turbidity limits, # of discharge locations, segregating runoff
 - BMPs: stream buffers, retention ponds, perimeter controls, timing of installation, storage & fueling area requirements
 - Inspections: certification of personnel, frequency, where to inspect
- Because of the significant impact of these requirements, the EHSCP and member companies have submitted comments to the EPA on the proposed CGP.
 - Follow up on comments submitted to EPA. Watch for publication of final CGP. Consider judicial appeal if necessary.
 - Monitor states as their CGPs expire and they renew them to be compliant with current federal standards.

