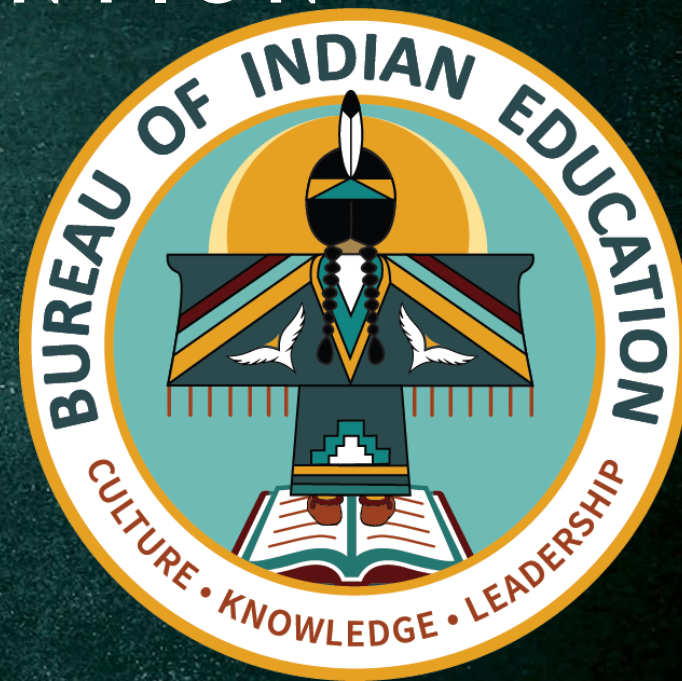




U.S. Department of the Interior
Bureau of Indian Education



CLEAN WATER ACT STORMWATER POLLUTION PREVENTION





OBJECTIVE

To provide situational awareness and general guidance for maintaining regulatory compliance with stormwater requirements as it pertains to the Clean Water Act.

MEETING TIPS FOR ONLINE TRAINING

- ❖ 1). Place yourself on “Mute” to prevent background noise.
- ❖ 2). Use the “Chat with all” feature to ask questions.
 - ❖ Note: All participants will be able to see your comments or questions.
- ❖ 3). Every participant will receive a certificate of completion.



BIE BRANCH OF ENVIRONMENTAL MANAGEMENT (BIE BEM) WHO WE ARE...

Albuquerque Office

John Clymo, Program Manager, Supervisory Environmental Protection Specialist

Candace DeSantis, Lead Environmental Protection Specialist

Karlisa Benally, Environmental Protection Specialist

Priscilla Avila, Environmental Protection Specialist

Henryetta Price, Environmental Protection Specialist

Rochelle Mariano, Program Support Assistant

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Gallup Office

Karmen Billey- Badonie, Environmental Protection Specialist

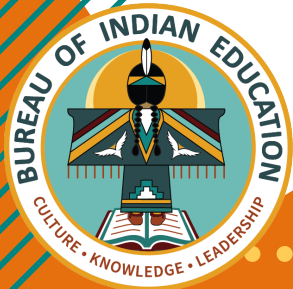




INSTRUCTOR INTRODUCTION

AGENDA

- ❖ Clean Water Act History
- ❖ Stormwater Permits (NPDES)
- ❖ Stormwater Pollution Prevention Plans (SWPPP)
- ❖ Stormwater Best Management Practices
- ❖ Allowable and Illicit Discharges
- ❖ Enforcement and Compliance



WATER REGULATION HISTORY

<https://www.blueridgenow.com/story/lifestyle/2010/04/22/earth-day-no-more-burning-rivers-but-new-threats/28242159007/>



<https://cen.acs.org/environment/pollution/Marking-50-years-since-Cuyahoga/97/i24>

- **Post WWII**

-  Industry  Water Pollution

- **Cuyahoga River**

- Oil-polluted water caused major fires in 1952 and 1969
- One of the most polluted rivers in the United States

 Clean Water Act



WATER REGULATION HISTORY

1948

Federal Water Pollution Control Act

- First water pollution rules

1972

Clean Water Act (CWA)

- Regulates discharges and sets quality standards

1974

Safe Drinking Water Act (SDWA)

- Drinking water quality and supply



CLEAN WATER ACT (CWA)

- Purpose: to restore and maintain the nation's waters' chemical, physical, and biological integrity
- Regulates pollution discharges into surface waters to prevent water pollution and protect aquatic ecosystems
- Establishes regulatory programs such as the National Pollutant Discharge Elimination System (NPDES)
 - Regulates point source pollution
 - Sets water quality standards and guidelines for controlling pollutants



<https://www.usbr.gov/ColoradoRiverBasin/>

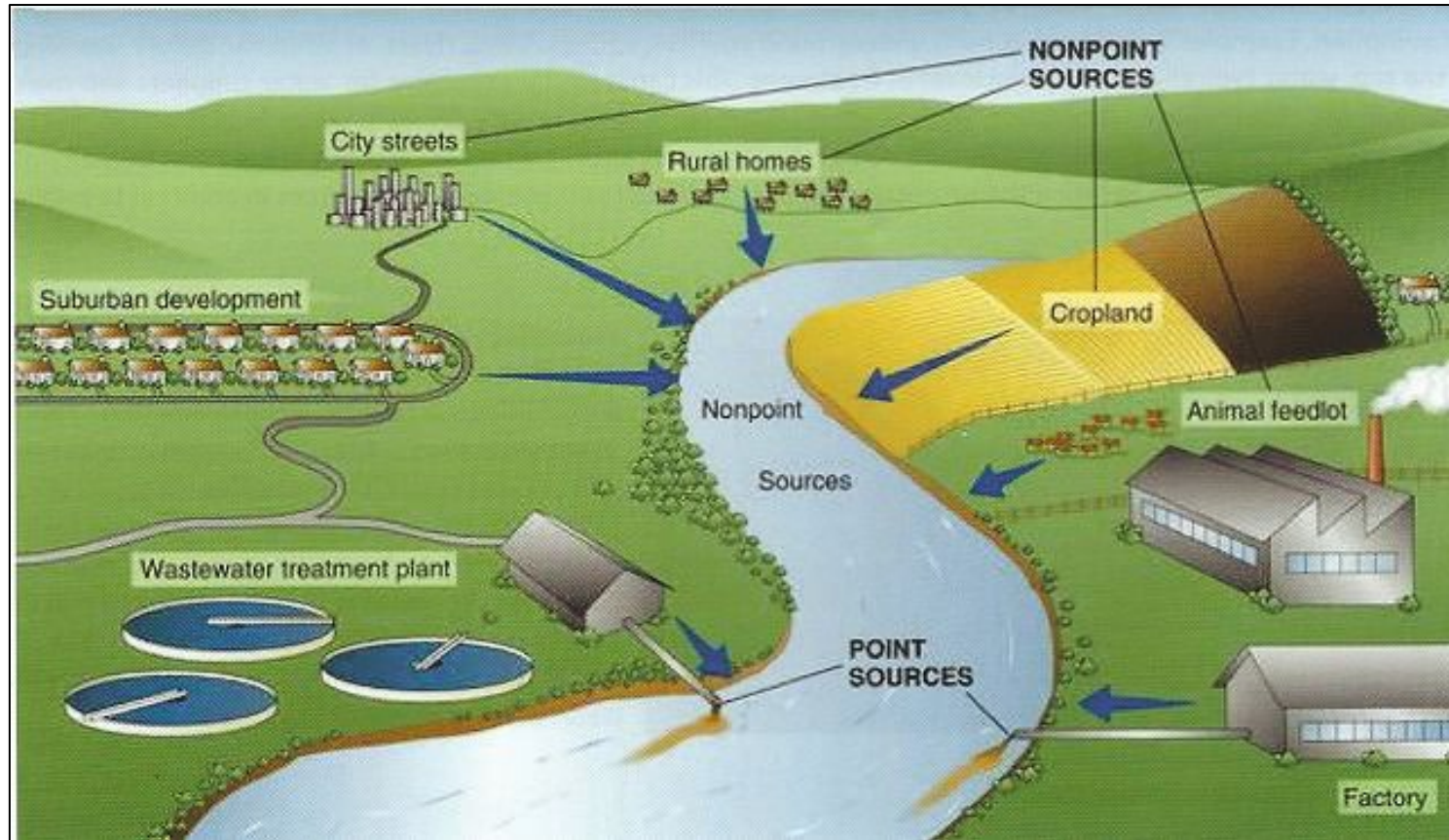


KEY DEFINITIONS

- Point Source Discharges: refers to contaminants discharged into water bodies from discrete conveyances which are readily identifiable, such as pipes, ditches, and channels.
- Non-point Source Discharges: caused by rainfall or snowmelt moving over and through the ground. As the runoff moves, it picks up and carries away natural and human-made pollutants, finally depositing them into lakes, rivers, wetlands, coastal waters and ground waters.



POINT VS NONPOINT SOURCE DISCHARGES



<https://www.scbwa.org/contaminants>



NPDES PROGRAMS



NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

- ❖ The NPDES program regulates point source pollution by requiring permits for the discharge of pollutants into navigable waters of the United States.
- ❖ Permits set limits on the types and quantities of pollutants that can be discharged.
- ❖ Permits include:
 - ❖ Industrial Stormwater
 - ❖ Municipal Stormwater (MS4)
 - ❖ **Construction Stormwater**
 - ❖ **Municipal Wastewater**
 - ❖ Industrial Wastewater
 - ❖ Pesticides



NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

- ❖ EPA authorizes the NPDES permit program to state, tribal, and territorial governments, enabling them to perform many of the permitting, administrative, and enforcement aspects of the NPDES program. Currently 47 states and one territory are authorized to implement the NPDES program.
- ❖ EPA's Pacific Southwest (Region 9) issues all NPDES permits on Navajo Nation tribal lands
 - ❖ <https://www.epa.gov/npdes-permits/navajo-nation-npdes-permits>
 - ❖ <https://www.epa.gov/npdes-permits/arizona-tribal-lands-npdes-permits-excluding-navajo-nation>



CONSTRUCTION PERMITTING

- ❖ Ground disturbing activities of more than one acre are required to be permitted
- ❖ Permitting via the Construction General Permit (CGP) or similar state permit
- ❖ Compliance includes inspections, training, discharge monitoring, and reporting
- ❖ Major pollution concerns are from spills and erosion/sediment control
- ❖ The contractor doing the work should obtain the permit, but the requirement must be included in the contract and schools/CORs must make sure the contractor obtains the permit.

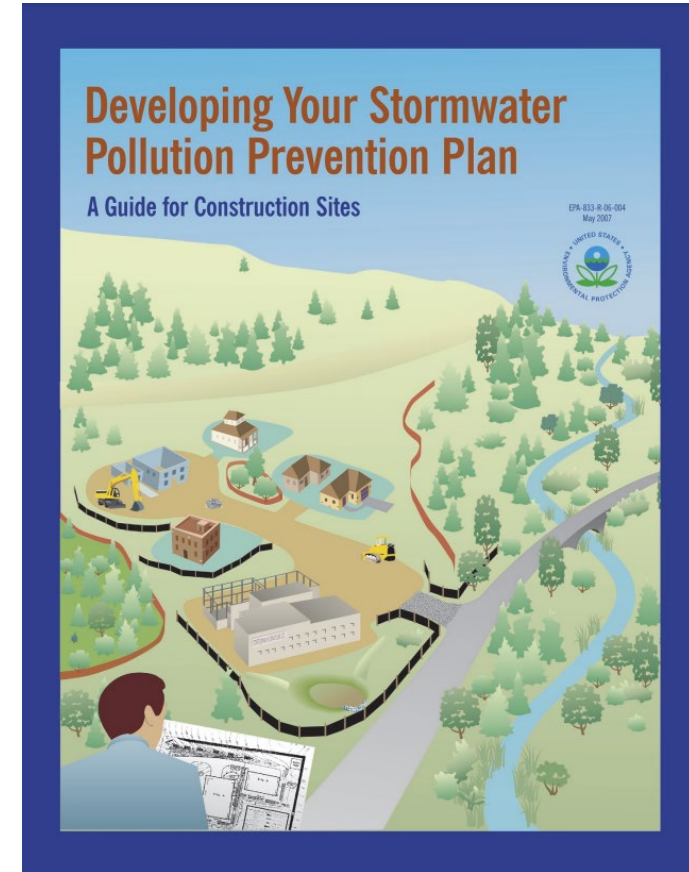


https://www.123rf.com/photo_204910510_big-construction-site-with-construction-machinery-in-the-construction-area.html



STORMWATER POLLUTION PREVENTION PLAN (SWPPP OR SWP3)

- ❖ A written plan written for a construction project/facility
- ❖ Identifies potential sources of pollution
- ❖ Prescribes Best Management Practices (BMPs) to prevent and reduce stormwater pollution
- ❖ SWPPP is a permit requirement
- ❖ The contractor doing the work should develop and implement the SWPPP, but the requirement must be included in the contract and schools/CORs must make sure the contractor has a plan.



https://www3.epa.gov/npdes/pubs/sw_swppp_guide.pdf

BEST MANAGEMENT PRACTICES (BMPS)

Primary practices to prevent or reduce
stormwater pollution

Outlined in SWPPP

Can be administrative or physical



COMMON ADMINISTRATIVE BMPS



Training



Inspections



Monitoring

Microsoft Stock Images



COMMON PHYSICAL BMPs

<http://armchairbuilder.com/resources/how-to-build-your-own-home>



Silt Fences

<https://www.flickr.com/photos/sfwmd/34483614420>



Vegetation/Hydroseed

<https://siltsaver.com/product/round-base-frame-filter/>



Drain Protectors and Filters

May vary by location

- ❖ e.g., vegetation will be more difficult to apply and take hold in arid environments



STORMWATER BASINS

- ❖ Another common physical BMP
- ❖ Slow down stormwater discharge to
 - ❖ Prevent overloading stormwater system
 - ❖ Prevent downstream flooding
- ❖ Allow sediment and other pollutants to settle out prior to discharge
- ❖ Can be temporary or permanent BMPs
- ❖ Retention (Wet) Basins
 - ❖ No discharge outlet
- ❖ Detention (Dry) Basins
 - ❖ Do have a discharge outlet
- ❖ Require recurring maintenance to ensure proper functioning



<https://siltshhttps://www.ecodesignsd.com/blog-1/what-is-a-detention-basinaver.com/product/round-base-frame-filter/>

MOSQUITO CONTROL

- ❖ Mosquito-borne diseases, like West Nile virus, are human health concerns
- ❖ Proper design and maintenance of stormwater structures can impact mosquito control
- ❖ Rainwater can also collect in items like pots, buckets, old tires, etc. and can provide habitat for mosquitoes
 - ❖ Rain barrels that are not set up properly can also attract mosquitos
- ❖ Make sure all stormwater systems are functioning properly and avoid storing things outside in a way that harbor mosquitos
 - ❖ Properly dispose of used tires



ALLOWABLE DISCHARGES

❖ Only stormwater goes in the storm drain!



<https://www.amherstma.gov/3500/Stormwater>

ILLICIT DISCHARGES

- ❖ Are NOT allowed
- ❖ Any discharge to the stormwater system that is NOT stormwater
- ❖ Only stormwater goes in the storm drain
 - ❖ Leaves, trash, sand, and soil are not allowed
- ❖ Illicit = Unpermitted
 - ❖ NOT allowed
 - ❖ Containment basins that may be contaminated must be pumped out and disposed of properly

City of Portage, Michigan



<https://www.aces.edu/blog/topics/fish-water/how-to-identify-report-water-pollution-from-illicit-discharges/>



City of Portage, Michigan

EFFLUENT LIMITATIONS AND STANDARDS

- ❖ Effluent limitations are restrictions on the quantity, concentration, or quality of pollutants that can be discharged from a point source into water bodies.
- ❖ Water quality standards set limits on pollutant discharges to protect the receiving water body's designated uses, such as drinking water supply, aquatic life habitat, or recreational activities.
- ❖ These standards are established based on water quality criteria and antidegradation requirements.
- ❖ Set forth by permitting agency and permit.



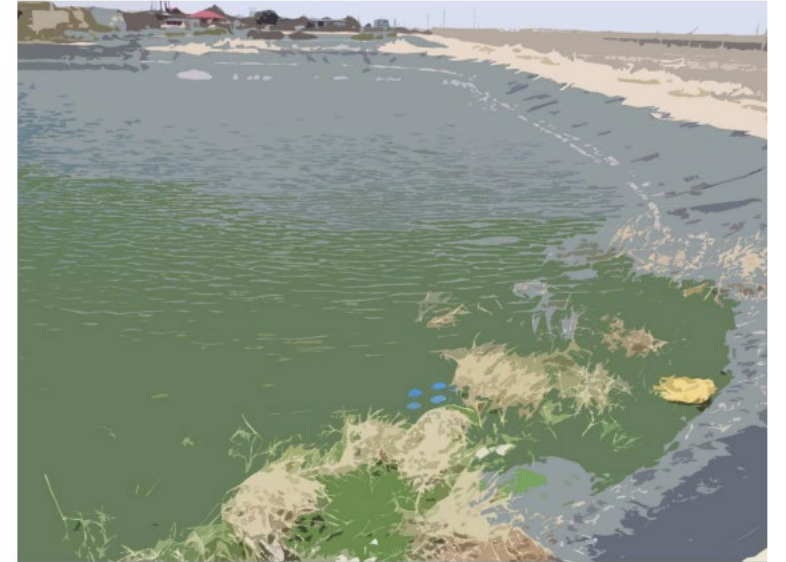
<https://mgccontractors.com/portfolio/roberto-r-bustamante-wastewater-treatment-plant-headworks-improvements/>



LAGOON NPDES PERMITS

What do schools need to make sure they do, regarding lagoon permits?

- ❖ Obtain a permit
- ❖ Maintain the permit
- ❖ Conduct lagoon maintenance
- ❖ Follow all conditions of the permit
 - ❖ Sampling/Monitoring
 - ❖ Recordkeeping
 - ❖ Will vary by permitting agency
- ❖ For example, NNEPA permit requirements include:
 - ❖ Specific design, configuration, and sizing requirement
 - ❖ Maintaining state wastewater operator certification
 - ❖ Operations and Maintenance manual, schematics, standard operating procedures, sampling/monitoring requirements, development of an Emergency Action Plan
 - ❖ Inspection criteria



Navajo Nation Domestic Wastewater Regulations

Domestic Wastewater Program
Navajo Nation Environmental Protection Agency
P.O. Box 339
Window Rock, AZ 86515
928-871-7755
www.domesticwastewater.gmail.com

LAGOON NPDES PERMITS

Obtain the Necessary Permits:

- ☐ Ensure the school has the appropriate permits for operating the lagoon, typically an NPDES (National Pollutant Discharge Elimination System) permit issued by the EPA or the state environmental regulatory agency.
- ☐ Verify that the permits are current and cover all aspects of the lagoon's operations.




LAGOON NPDES PERMITS

Conduct Maintenance:

- ☐ Inspect for operational issues with the lagoon, including, but not limited to,:
 - ☐ Low water, out of compliance analytical samples, erosion/burrowing animals, overgrown vegetation, etc.
- ☐ Refer to permit Best Management Practices (BMPs) and the document “Compliance Tips for Small Wastewater Treatment Lagoons with Clean Water Act Discharge Permits”



 **COMPLIANCE ADVISORY** OFFICE OF ENFORCEMENT AND COMPLIANCE ASSURANCE


Reducing Significant Non-Compliance with National Pollutant Discharge Elimination System Permits

EPA Document # 305F22002 March 2022

Compliance Tips for Small Wastewater Treatment Lagoons with Clean Water Act Discharge Permits

Background on this Compliance Advisory

This advisory is written to assist owners and operators of small publicly and privately owned lagoon wastewater treatment plants (WWTPs) to comply with the law. Of the facilities in recent "significant noncompliance" (SNC) with their Clean Water Act National Pollutant Discharge Elimination System (NPDES) permit, approximately 60 percent are WWTPs. WWTP owners and operators are reminded of their responsibility to comply with the requirements in their NPDES permit, and that compliance and financial assistance resources are available to help them comply. Also note that EPA and states currently are undertaking an [initiative to reduce NPDES SNC](#). As a result, NPDES permittees, regardless of industry sector, facility size or type, will see an increased presence by EPA and its state and tribal partners in an effort to identify and address SNC violations using enforcement and other compliance assurance tools.



This advisory provides extensive information on the causes of, and potential solutions to, lagoon WWTP noncompliance. Because there are various types of lagoon WWTPs in operation, not all the information provided in this advisory will apply to any one lagoon system. Also note, EPA has issued a separate, similar [advisory to assist owners and operators of small mechanical WWTPs](#).

While this advisory focuses on operational issues affecting small lagoon WWTPs, another frequently identified noncompliance concern at small lagoon WWTPs is the failure of owners and operators to submit required discharge monitoring reports (DMRs) or the submittal of incomplete or inaccurate DMRs. These failures can mask serious violations. If you are having trouble completing or timely submitting your DMRs, contact your permitting authority and request assistance.

Increased WWTP compliance will improve surface water quality and reduce potential impacts on drinking water supplies. For more information about EPA's current efforts to reduce SNC, refer to: [Clean Water Agencies Increasing Attention to Significant Non-Compliance Dischargers](#).

Lagoon WWTP Compliance: Quick Reference Guide

Attached to this Compliance Advisory is a **Guide** to assist lagoon owners and operators in troubleshooting operational and compliance problems. The information in the **Guide** is presented in three parts:

- 1. Wastewater Lagoon Overview**

Waste stabilization ponds, also known as wastewater lagoons, are frequently used to treat municipal and industrial wastewater in the United States. Although wastewater lagoons can be used to treat a variety of wastes, their low energy and maintenance requirements often make them suitable for treating wastewater from small and rural communities. **Table 1** in the **Guide** provides an overview of lagoon types. Facultative and aerated lagoons are the primary focus of this document.

Compliance Advisory Page 1

<https://www.epa.gov/system/files/documents/2022-03/lagoon-complianceadvisory.pdf>

LAGOON NPDES PERMITS

Comply with Permit Conditions:

- ☐ Adhere to all conditions outlined in the NPDES or state-issued permit. This includes monitoring and reporting requirements, effluent limitations, and operational standards.
- ☐ Implement best management practices (BMPs) for lagoon maintenance and operation as specified in the permit.
- ☐ Permit conditions vary by permit and permitting agency. Ensure you are familiar with these varying requirements.



STORMWATER RUNOFF

High runoff



High
pollutant load

❖ Can interrupt food webs and damage delicate ecosystems

- ❖ Sediment
- ❖ Oil
- ❖ Hazardous chemicals
- ❖ Sludge



Microsoft Stock Images



WETLANDS CONSERVATION

- ❖ Prevent impacts to nearby wetlands
 - ❖ Avoid stormwater runoff and pollution
 - ❖ Reduce, reuse, recycle plastics
 - ❖ Use pesticides sparingly
 - ❖ Incorporate native plants into landscaping whenever possible
- ❖ Wetlands provide numerous beneficial services, including:
 - ❖ protecting and improving water quality
 - ❖ providing fish and wildlife habitats
 - ❖ storing floodwaters and maintaining surface water flow during dry periods
- ❖ Includes marshes, swamps, bogs, and fens
- ❖ Special considerations are needed for conserving these natural resources

<https://www.nationalgeographic.com/animals/article/amazing-pictures-of-fish-other-freshwater-river-wildlife>



ENFORCEMENT AND COMPLIANCE



COMMON VIOLATIONS

Microsoft Stock Images



Unpermitted facilities
or activities (NPDES
Construction)

<https://www.durhamnc.gov/2822/Illicit-Discharge-Detection-and-Elimination>



Illicit Discharges

Previous EMAP



Improper storage of
hazardous materials or
waste

Previous EMAP



Failure to respond to
and clean up spills

<https://zilkerneighborhood.org/erosioncontrol/oxford1500-1.html>



Damaged
or ineffective BMPs

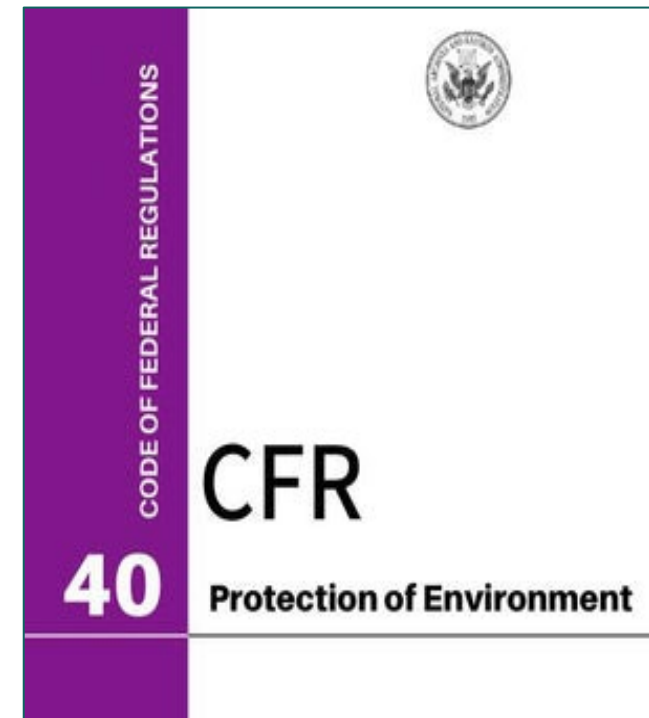


U.S. EPA'S ROLE IN ENFORCEMENT

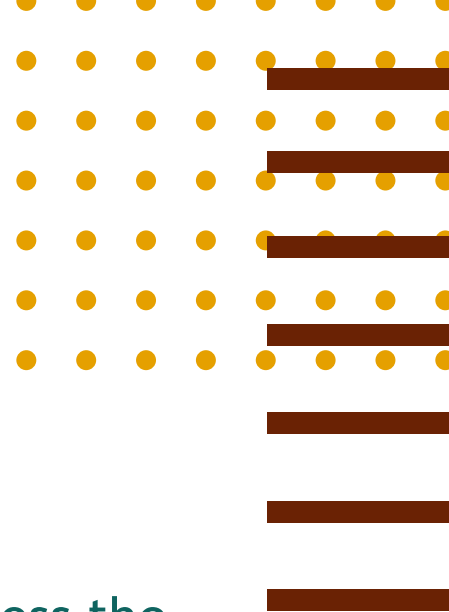
U.S. Environmental Protection Agency's (U.S. EPA) enforcement role is essential for ensuring compliance with environmental laws and regulations, protecting human health and the environment, and holding non-compliant entities accountable for their actions.

U.S. EPA plays a crucial role in enforcement under the Clean Water Act by:

1. Setting Standards and Regulations
2. Issuing Permits
3. Compliance Monitoring
4. Enforcement Actions
5. Collaboration with State Agencies
6. Public Outreach and Education
7. Monitoring and Evaluation



WHO HAS AUTHORITY TO ENFORCE CWA REQUIREMENTS AT BIE FACILITIES



Environmental Protection Agency (EPA):

- The EPA has the primary responsibility for enforcing CWA requirements across the United States, including on tribal lands and at BIE facilities.
- The EPA oversees compliance with CWA regulations, issues National Pollutant Discharge Elimination System (NPDES) permits and conducts inspections and enforcement actions as necessary.



WHO HAS AUTHORITY TO ENFORCE CWA REQUIREMENTS AT BIE FACILITIES

Tribal Governments:

- Tribes with EPA-approved water quality standards and CWA programs have the authority to implement and enforce CWA requirements on their lands.
- Tribal governments may issue permits, conduct monitoring and inspections, and take enforcement actions in coordination with the EPA.
- Tribes with "Treatment as State" (TAS) status have similar authorities to state governments under the CWA, allowing them to manage water quality programs and enforce standards on tribal lands.



WHO HAS AUTHORITY TO ENFORCE CWA REQUIREMENTS AT BIE FACILITIES

Bureau of Indian Education (BIE):

- While the BIE is responsible for the administration and management of education facilities on tribal lands, it typically coordinates with the EPA and tribal governments to ensure compliance with CWA requirements.
- The BIE may work with the EPA and tribal authorities to address any CWA violations and implement corrective actions to maintain compliance at BIE facilities.

The EPA holds the primary authority to enforce CWA requirements at BIE facilities, with significant involvement and coordination from tribal governments, especially those with EPA-approved water quality programs. The BIE also plays a role in ensuring compliance by working with these regulatory authorities.



PENALTIES FOR NON-COMPLIANCE

- Penalties serve as deterrents to illegal activities, encourage compliance with regulatory requirements, and ensure accountability for environmental harm.
- Enforcement agencies have discretion in determining appropriate penalties based on the specific circumstances of each case, with the goal of protecting human health and the environment.



<https://www.noaa.gov/education/resource-collections/ocean-coasts/oil-spills>

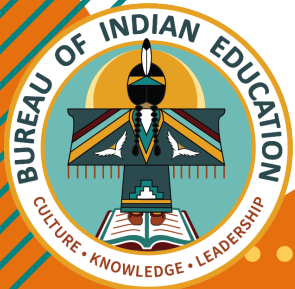


PENALTIES FOR NON-COMPLIANCE



Penalties for non-compliance with environmental regulations, including those under the Clean Water Act (CWA) can vary depending on the severity and duration of the violation, the potential harm to human health and the environment, and other factors.

1. Civil Penalties
2. Administrative Orders
3. Injunctive Relief
4. Consent Decrees
5. Criminal Prosecution
6. Cost Recovery
7. Revocation of Permits

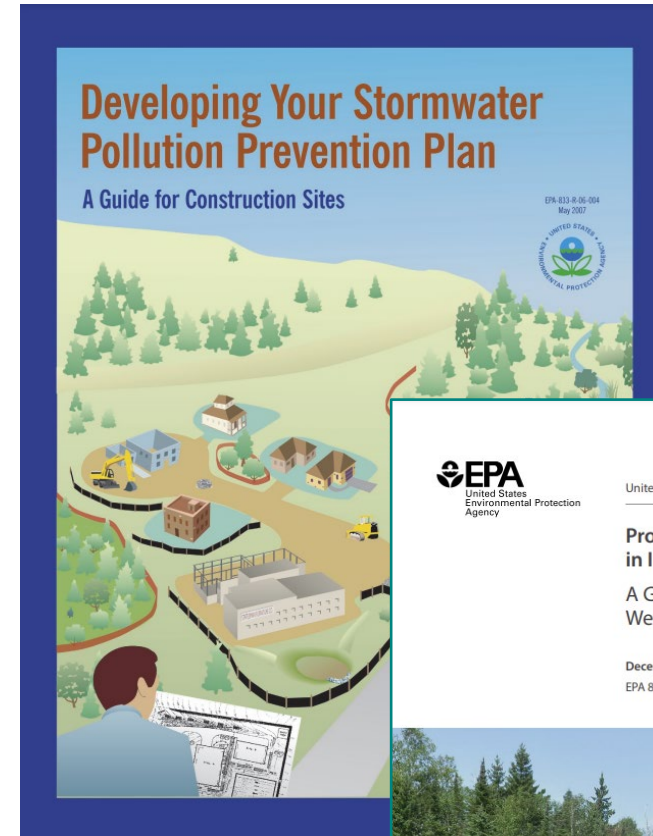


As of December 27, 2023, EPA CWA civil penalties are set at a maximum of \$66,712 per day for each violation!

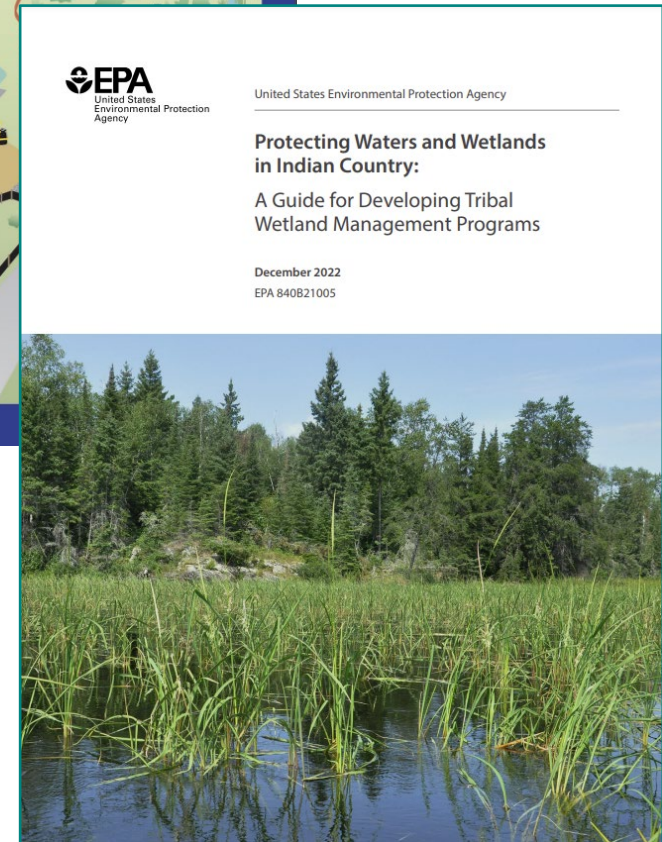
RESOURCES

- ❖ NPDES permits from primacy agency
 - ❖ Construction
- ❖ Developing A Stormwater Prevention Plan
 - ❖ Examples and guide (2007) from EPA
 - ❖ <https://www.epa.gov/npdes/developing-stormwater-pollution-prevention-plan-swppp>
- ❖ State Erosion and Sediment Control BMP Manuals
 - ❖ Good reference for approved BMPs from state environmental department or state transportation department

https://www3.epa.gov/npdes/pubs/sw_swppp_guide.pdf



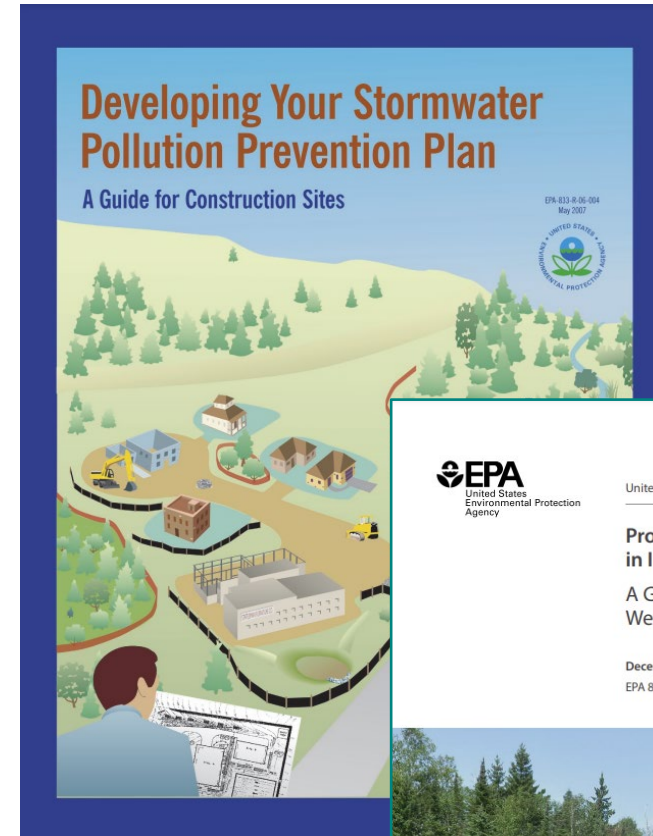
https://www.epa.gov/system/files/documents/2022-12/Final_Tribal_Wetlands_Guide_Rev_121422.pdf



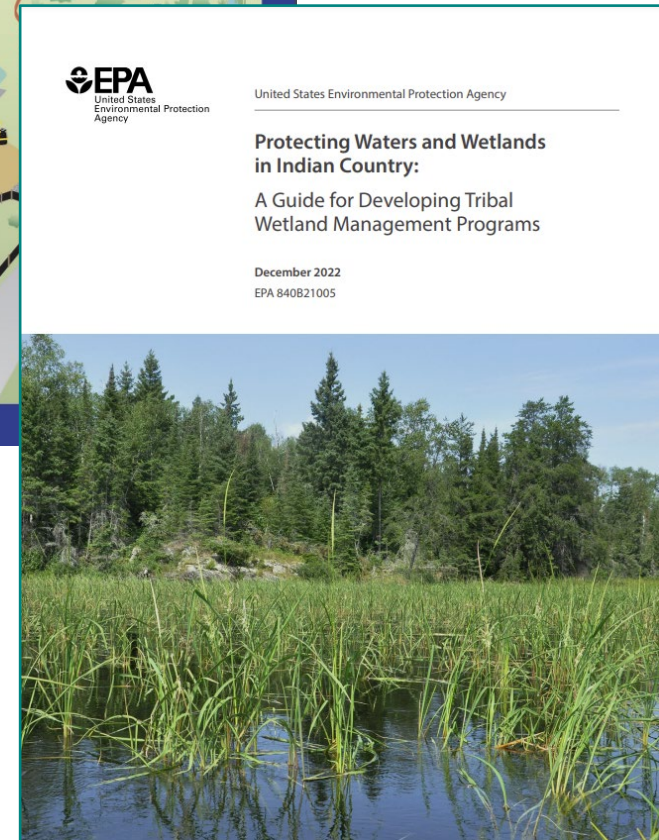
RESOURCES CONT.

- ❖ EPA's Stormwaters Structures and Mosquitoes Fact Sheet
 - ❖ [sw_wnv_0.pdf \(epa.gov\)](#)
- ❖ Stormwater Maintenance:
 - ❖ [Stormwater Maintenance | US EPA](#)
- ❖ Protecting Waters and Wetlands in Indian Country: A Guide for Developing Tribal Wetland Management Programs, December 2022
 - ❖ <https://www.epa.gov/wetlands/guide-developing-tribal-wetland-management-programs>

https://www3.epa.gov/npdes/pubs/sw_swppp_guide.pdf



https://www.epa.gov/system/files/documents/2022-12/Final_Tribal_Wetlands_Guide_Rev_121422.pdf



SUMMARY



<https://www.akron-pa.com/public-works/stormwater>





QUESTIONS?



BIE BEM PROGRAM CONTACTS



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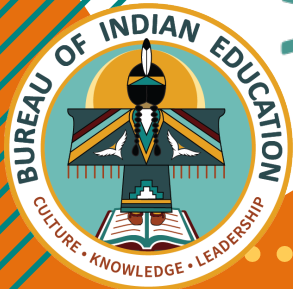
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Mvto HiyHiy LemLmts Wado
DaWaEh Miigwech Wopila
Pinangigi Wimblahoho
Quyana Baasee AnaaBasee
Ahéhee HiriweTudahe
Pilamiya
Nya:Weh Aho
Thank You Tansi