

Our Water

Keeping it Clean

North Dakota Department of Environmental Quality

Program Highlight: Water Quality Permitting

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The North Dakota Pollutant Discharge Elimination System (NDPDES) Program, also known as the Permits Program, works with industries, municipalities, companies, and individuals to control and minimize pollutants in state waters. The program was developed by the state in 1975 in response to the federal Clean Water Act, which requires a permit for point source pollution discharge into waters of the United States.

What is Point Source Pollution?

A point source is often (but not always) a pipe, ditch, channel or similar conveyance that releases water or treated waste. Pollution from point sources can be chemical, sewage, agricultural and other wastes.

What's in a Permit?

A permit for point source discharge identifies pollutants of concern for the type of activity and the receiving water body and specifies acceptable pollutant levels. Permits develop acceptable discharge conditions based on federal, state and local standards and often require monitoring and reporting to ensure compliance.

Permitting point source discharges to state waters helps ensure public health and safety, environmental health and promotes beneficial use of North

Dakota's water resources. The Permits Program manages a wide range of permit types, including stormwater runoff, municipal and industrial facilities, animal feeding operations, pesticide applications, industrial pretreatment, septic pumping and temporary discharges.

Municipal Wastewater

The Permits Program works with municipalities to ensure proper collection, treatment and discharge of treated wastewater to state waters. Treatments can include physical, biological and chemical processes to



Hettinger, ND, waste stabilization ponds. Image source: broszengineering.com.



Example of point source discharge. Image source: nationalgeographic.com.

remove or break down pollutants such as bacteria and debris. Most wastewater treatment systems in North Dakota serve remote rural communities using waste stabilization ponds, or lagoons, as part of their treatment process.

Septic Pumping

Other waste management tools in rural areas include septic systems. Septic tanks receive and pretreat wastewater before disposal. Septic systems require periodic maintenance, including removing solids (sludge) that settle in the tank. To ensure proper disposal or land application of sewage sludge, the Permits Program trains and certifies septic service providers.

Industrial Wastewater

Wastewater discharge regulations are specific to industry or commercial activity, such as mining, food processing or metal finishing. Standards and guidelines are developed by the U.S. Environmental Protection Agency and are applied in permits based on North Dakota's water quality standards.

Industrial Pretreatment

When industrial wastewater discharges to a public wastewater treatment plant, the Permits Program works with the industry and the treatment plant to identify industrial wastewater pollutants. Assigning industrial treatment standards helps protect the health and safety of workers and helps prevent pollutants from passing through treatment plants and into state waters.

Pesticides

Biological or chemical pesticides are used to reduce certain aquatic plants, algae, animals and insects (mosquitoes and black flies, for example). The Permits Program regulates pesticide applications to ensure proper certification and handling to protect state waters.

Stormwater Runoff

Stormwater runoff occurs when rain and snowmelt flow over the land surface

rather than soaking into the ground. Stormwater has the potential to pick up and carry pollutants such as trash, chemicals and sediment directly into our waterways. The Permits Program helps construction sites, industrial facilities, and municipalities plan for and manage materials and areas exposed to stormwater to minimize pollutants in runoff.



North Dakota manure composting operation. Image source: ndsu.edu.

Animal Feeding Operations

Livestock facilities in North Dakota can be considered Animal Feeding Operations (AFOs) or Concentrated Animal Feeding Operations (CAFOs), depending on site conditions and the type and number of animals. These facilities produce a resource that, when used properly, is highly valuable – manure.

When used appropriately, manure can enhance soil fertility by adding nutrients and organic matter to the soil. However, stormwater containing manure can pollute water bodies. The Permits Program works with North Dakota farmers operating AFOs and CAFOs to ensure such wastes are not discharging to state waters.



Stormwater drain stencil. Image source: deq.nd.gov.

Temporary Discharges

Other activities, such as hydrostatic testing, potable water line disinfection, and dewatering, are often temporary but could potentially pollute waters of the state. The Permits Program works with temporary dischargers to ensure they are not contributing non-conventional or toxic pollutants to state waters.

North Dakota has specific water quality standards to ensure the health and safety of citizens and the environment. These standards support beneficial use of water resources.

The Permits Program helps facilities and individuals discharging to state waters protect and support water quality standards through permit compliance.

For more information on the Permits Program, visit https://deq.nd.gov/WQ/2_NDPDES_Permits/ or contact Marty Haroldson with the North Dakota Department of Environmental Quality at mharolds@nd.gov or 701-328-5234.



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