National Pollutant Discharge Elimination System (NPDES)

& The Business Community

WHAT IS THE STORMWATER REGULATION ALL ABOUT?

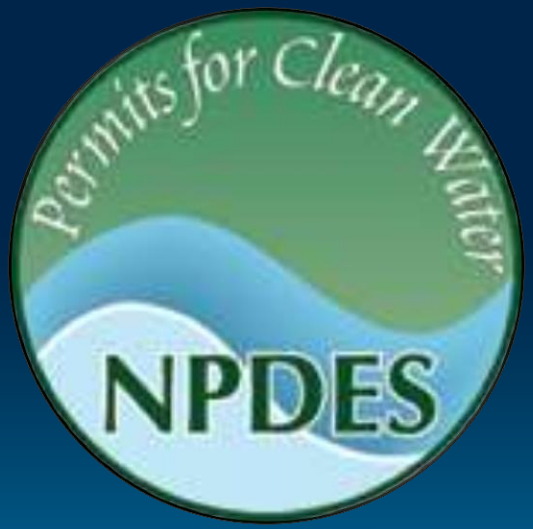
1972 FEDERAL WATER POLLUTION CONTROL ACT
a.k.a. CLEAN WATER ACT (CWA)

Recognition that water pollution was causing degradation of surface waters making them unsafe for drinking, fishing, swimming, and other activities.

WHAT IS THE STORMWATER REGULATION ALL ABOUT?

National Pollutant Discharge Elimination System

NPDES Permit Program



The 1972 amendments to the Federal Water Pollution Control Act (known as the Clean Water Act or CWA) provide the statutory basis for the NPDES permit program and the basic structure for **regulating the discharge of pollutants from point sources to waters of the United States.**

WHAT IS THE STORMWATER REGULATION ALL ABOUT?

The CWA gives EPA the authority to set effluent limits on an industry-wide (technology-based) basis and on a water-quality basis that ensure protection of the receiving water.

The CWA requires anyone who wants to discharge pollutants to first obtain an NPDES permit, or else that discharge will be considered illegal. Example: WWTP's

WHAT IS THE STORMWATER REGULATION ALL ABOUT?

WHO IS THE PERMITTING AUTHORITY?

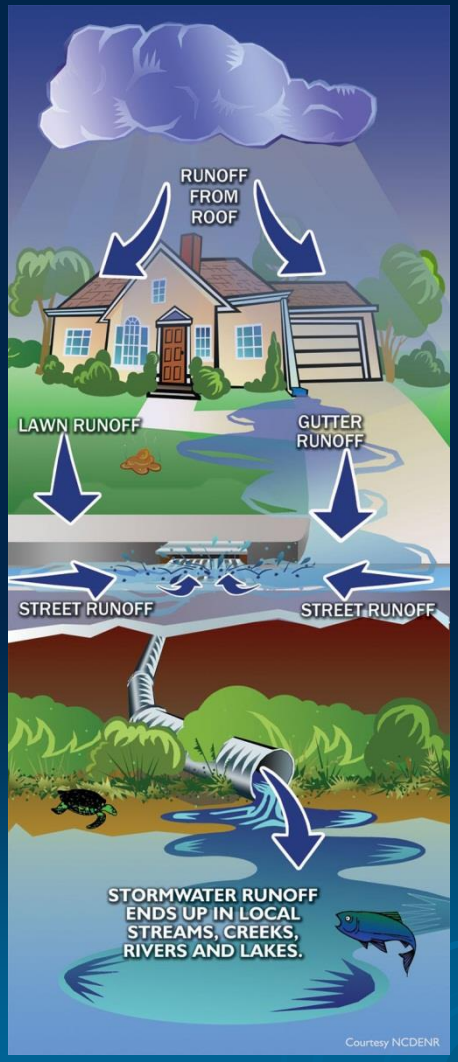
The CWA allowed EPA to authorize the NPDES Permit Program to state governments, enabling states to perform many of the permitting, administrative, and enforcement aspects of the NPDES Program. In states that have been authorized to implement CWA programs, EPA still retains oversight responsibilities.

WHAT IS THE STORMWATER REGULATION ALL ABOUT?

1990 (CWA) Stormwater Rule

US EPA developed regulations aimed at decreasing the pollution of stormwater runoff known to be a major contributor to pollution of surface waters.

WHAT IS THE STORMWATER REGULATION ALL ABOUT?



Stormwater Runoff is generated when precipitation from rain and snowmelt events flows over land or impervious surfaces and does not percolate into the ground. As the runoff flows over the land or impervious surfaces (paved streets, parking lots, and building rooftops), it accumulates debris, chemicals, sediment or other pollutants that could adversely affect water quality if the runoff is discharged untreated.

WHAT IS THE STORMWATER REGULATION ALL ABOUT?

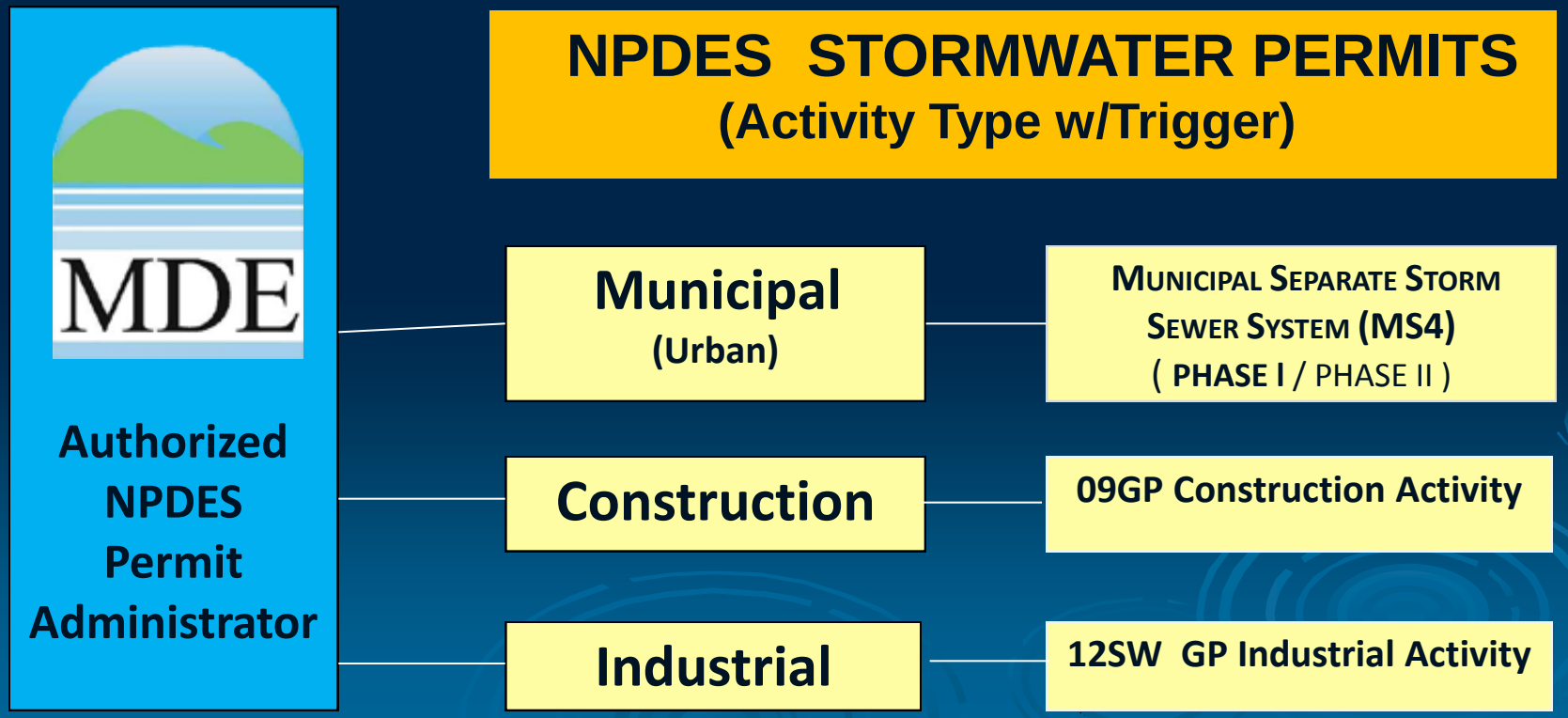
National Pollutant Discharge Elimination System

NPDES Permit Program "Areas"

Animal Feeding Operations
Combined Sewer Overflows
Pesticides
Pretreatment
Sanitary Sewer Overflows and Peak Flows
Vessel Discharges
Stormwater

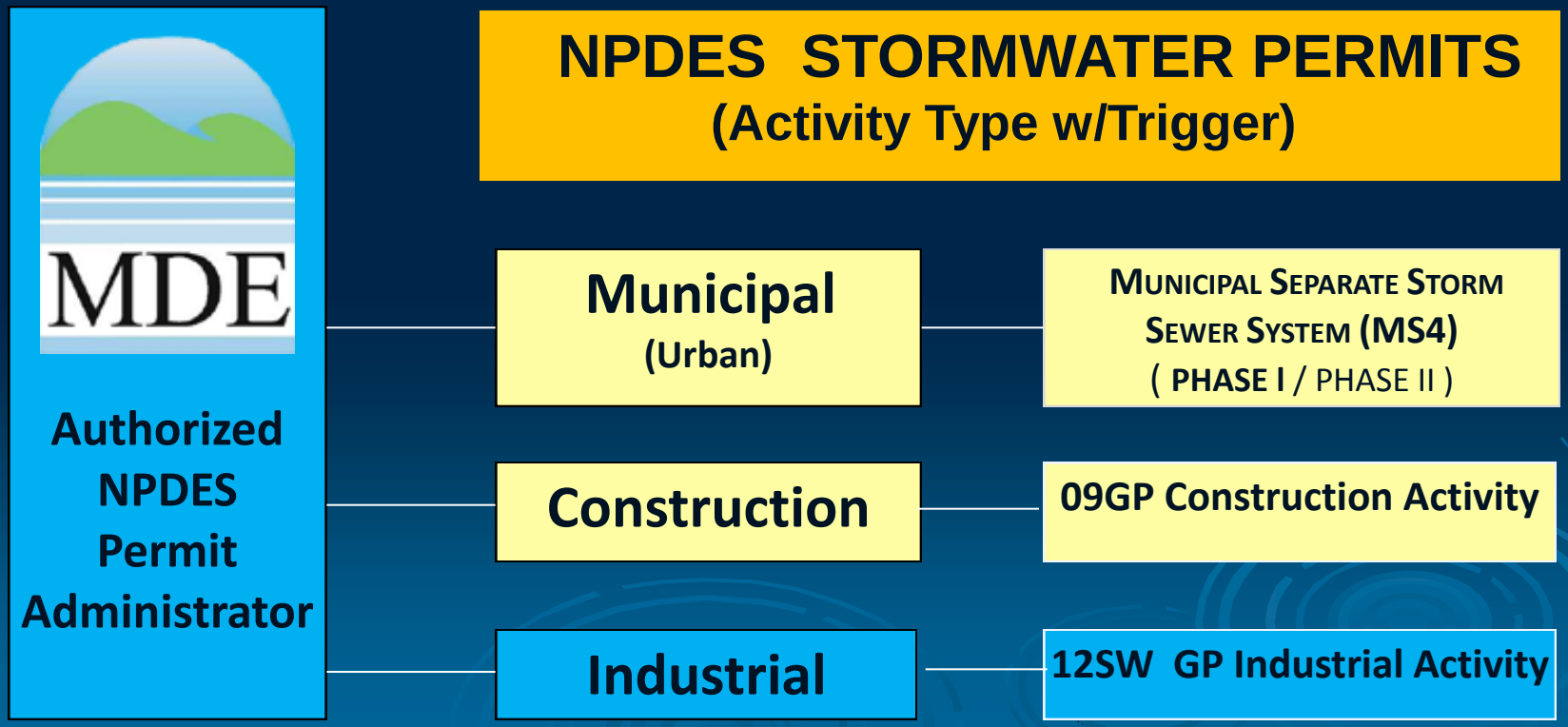
WHAT IS THE STORMWATER REGULATION ALL ABOUT?

NPDES STORMWATER PERMITTING



NPDES STORMWATER REGULATIONS & THE BUSINESS COMMUNITY

NPDES STORMWATER PERMITTING



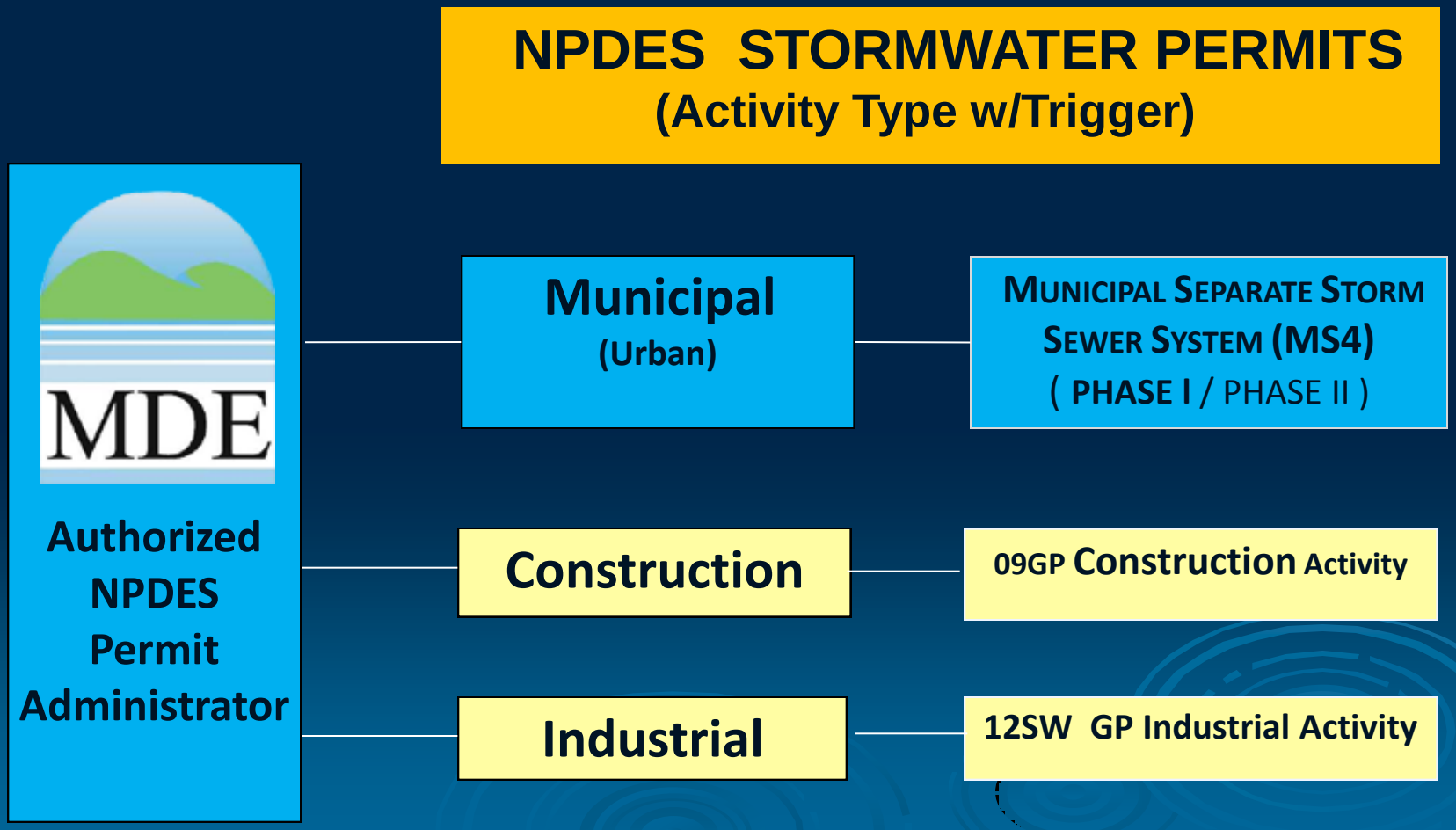
NPDES STORMWATER REGULATIONS & THE BUSINESS COMMUNITY

NPDES Industrial Permits

NPDES program includes an industrial stormwater permitting component that covers 11 categories of industrial activity that require authorization under an NPDES industrial stormwater permit for stormwater discharges.

Activity Driven: Industrial Activity (SIC Code)
Some Sectors: Land Transportation & Warehousing ~ Landfills ~ Wastewater Treatment Facilities ~ Mineral Mining ~ Air Transportation

NPDES STORMWATER REGULATIONS & THE BUSINESS COMMUNITY



NPDES STORMWATER REGULATIONS & THE BUSINESS COMMUNITY

WHAT IS AN MS4?

Municipal Separate Storm Sewer System

- An MS4 is a conveyance or system of conveyances that is:
- Owned by a state, city, town, village, or other public entity that discharges to waters of the U.S.
- Designed or used to collect or convey stormwater (including storm drains, pipes, ditches, etc.)

NPDES STORMWATER REGULATIONS & THE BUSINESS COMMUNITY

Stormwater Discharges and Municipal Separate Storm Sewer Systems (MS4s)

Polluted stormwater runoff is commonly transported through Municipal Separate Storm Sewer Systems (MS4s), from which it is often discharged untreated into local waterbodies.

Each regulated MS4 is required to develop and implement a stormwater management program to reduce the contamination of stormwater runoff and prohibit illicit discharges.

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Best Management Practices

The primary method to control stormwater discharges is the use of Best Management Practices (BMPs).

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MS4 PERMIT

PART IV. STANDARD PERMIT CONDITIONS

C. Source Identification

Sources of pollutants in stormwater runoff countywide shall be identified and linked to specific water quality impacts on a watershed basis.

2. Industrial and commercial sources: industrial and commercial land uses and sites that the County has determined **have the potential** to contribute significant pollutants

NPDES STORMWATER REGULATIONS & THE BUSINESS COMMUNITY

CLEAN WATER IS EVERYBODY'S BUSINESS!

With a few simple steps, businesses can reduce these harmful pollutants in local waterways:

BUSINESS ACTIVITY EXAMPLES:	COMMON POLLUTANTS:					
	Bacteria	Heavy Metals	Excess Nutrients	Oil & Grease	Erosion & Debris	Toxic Chemicals
Engine Maintenance & Repair		✓		✓	✓	✓
Food Service & Production	✓		✓	✓	✓	✓
Gas Stations		✓		✓	✓	✓
Washing Vehicles, Equipment, etc.	✓			✓	✓	✓
Waste Handling	✓	✓	✓	✓	✓	✓
Landscaping		✓	✓		✓	✓
Parking Lots, Sidewalks, & Paved Areas	✓		✓	✓	✓	

Why should we keep these pollutants out of our waterways?

BACTERIA – Just as people get sick from exposure to certain bacteria, fish and wildlife can also be harmed when bacteria is present in waterways. Water treatment is effective for drinking water supplies, but costs are lower when the source of our drinking water is cleaner.

HEAVY METALS – When ingested through water, air, or food, heavy metals can cause cancer and brain damage, and impair growth and development in children. Heavy metals persist in the environment and can accumulate in humans and animals (especially fish) over time.

EXCESS NUTRIENTS – Decaying plants, manure, natural and chemical fertilizers, and some cleaning products cause an overabundance of nitrogen and/or phosphorous in local waterways. This excessive "nutrient" pollution feeds bacteria growth, decreases oxygen levels in waterways, causes algal blooms and causes massive fish kills.

OIL & GREASE – Often seen as a rainbow-colored sheen floating on top of polluted water, oil and grease act like a lid that traps heat and makes it difficult for fish and insects to breathe. Petroleum based oils are toxic to humans and animals alike.

EROSION & DEBRIS – Murky water is filled with eroded dirt, sand, and clay. These sediments trap heat and block light, making the polluted water too warm and cloudy for fish to feed, breathe, and survive. Dirt and debris-clogged stormdrain systems increase the cost of stormwater management and drinking water treatment.

TOXIC CHEMICALS – Exposure to toxic substances can cause brain damage, disease, birth defects and death. Toxins can persits in the environment for years and accumulate in both animals and humans over time.

Credit: *Clean Water Partners – Partnership for the Delaware Estuary Inc.*

D. Management Programs

3. Illicit Discharge Detection and Elimination

Carroll County shall continue to implement an inspection and enforcement program to ensure that all discharges to and from the MS4 that are not composed entirely of stormwater are either permitted by MDE or eliminated.

a. Field screening at least 100 outfalls annually for illicit discharges.

b. Conducting annual visual surveys of commercial and industrial areas as identified in PART IV.C.2 above for discovering, documenting, and eliminating pollutant sources.

c. Maintaining a program to address and, if necessary, respond to illegal discharges, dumping, and spills;

d. Using appropriate enforcement procedures for investigating and eliminating illicit discharges, illegal dumping, and spills. Significant discharges shall be reported to MDE for enforcement and/or permitting; and

e. Reporting illicit discharge detection and elimination activities as specified in PART V of this permit.

D. Management Programs

6. Public Education

Carroll County shall continue to implement a public education and outreach program to reduce stormwater pollutants. Outreach efforts may be integrated with other aspects of the County's activities.

a. Maintain a compliance hotline or similar mechanism for public reporting of water quality complaints, including suspected illicit discharges, illegal dumping, and spills.

b. Provide information to inform the general public about the benefits of stormwater pollution prevention:

c. Provide information regarding the following water quality issues to the regulated community when requested:

i. NPDES permitting requirements;
ii. Pollution prevention plan development;
iii. Proper housekeeping; and
iv. Spill prevention and response.

NPDES STORMWATER REGULATIONS & THE BUSINESS COMMUNITY

- **Stormwater Regulation Awareness**
  (NPDES Permits/MS4, Industrial)
- **Good Housekeeping/*"Best Management Practices (BMPs)* *for Stormwater Pollution Prevention"***
- **Positive/Pro-Active/Good Steward Approach**
  "Stormwater Pollution Prevention & Clean Streams is Good Business"