



MDE Maryland Department of the Environment

National Pollution Discharge Elimination System (NPDES) Permits



**Carroll County
Environmental Advisory
Council (EAC)**





Basic NPDES Permit Requirements

- NPDES Permits are issued with requirements intended to protect waters of the US.
- Maryland Department of the Environment issues NPDES permits in the State.
- Permits issued may have limits, may have required practices or controls, may stipulate penalties.



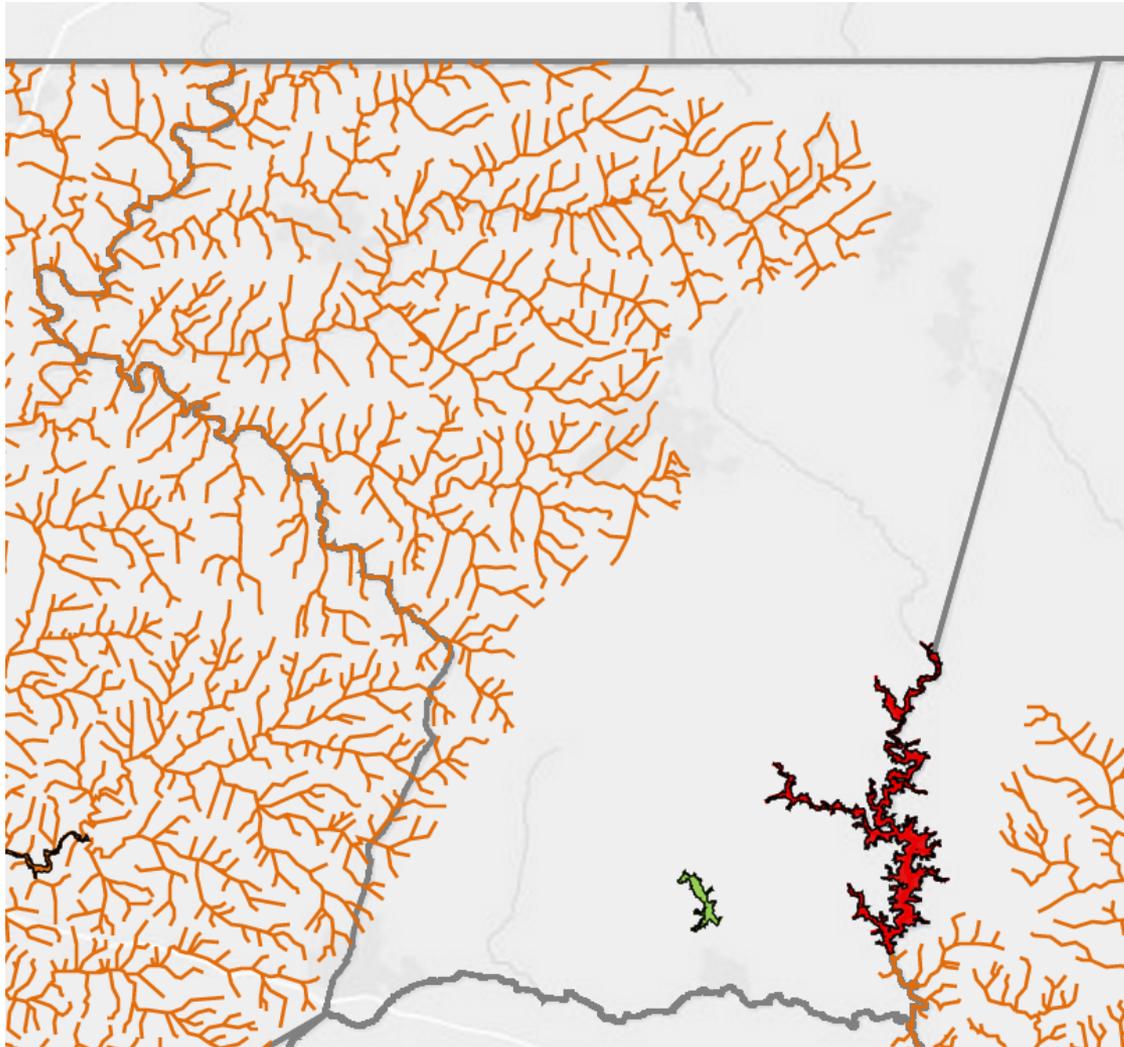


Impaired Waters

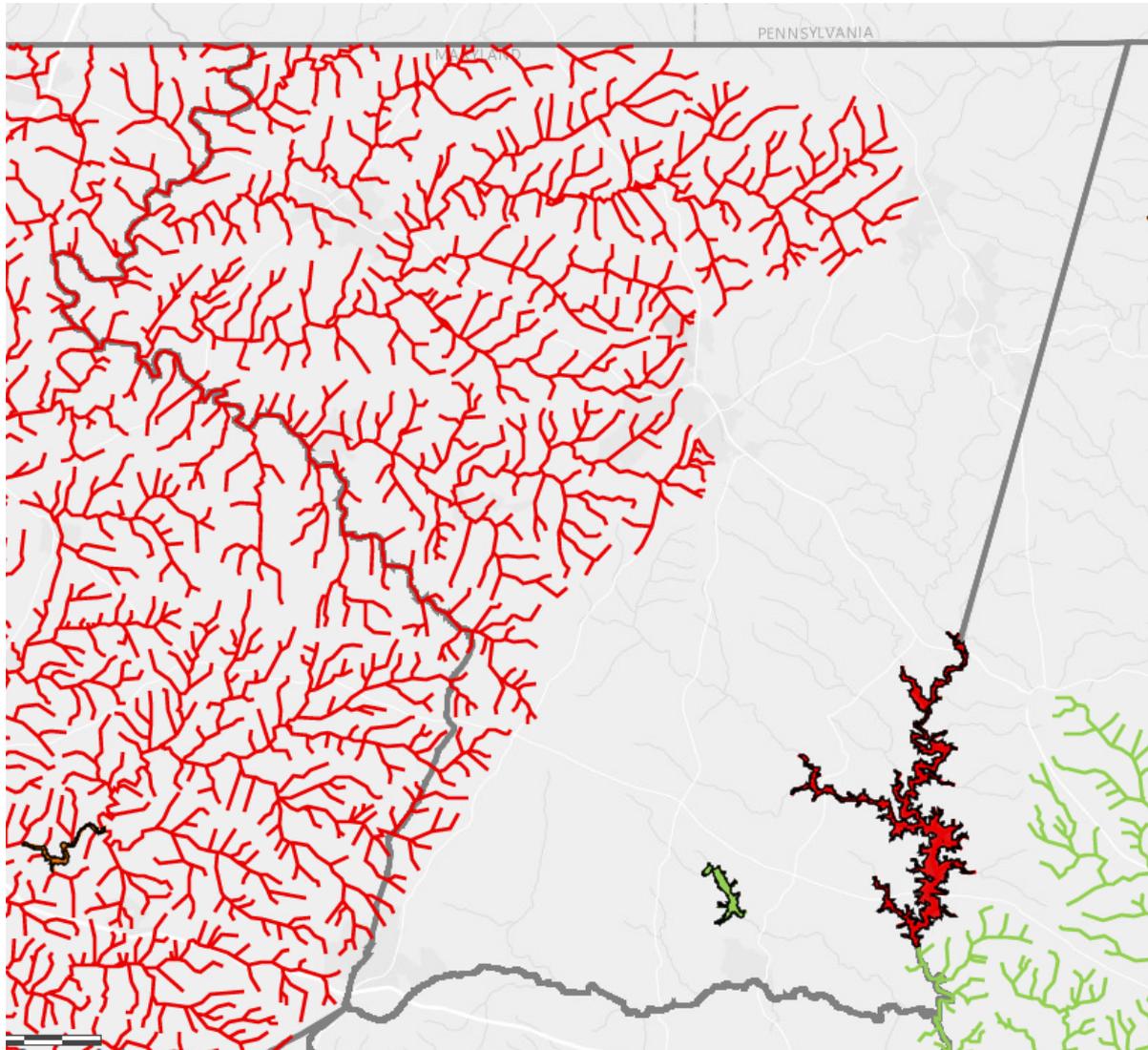
- Where waters don't meet the basic 'fishable and swimmable' requirements (or uses), the waters are considered impaired.
- Maryland has local and regional impairments.
- Permits must address impairments.



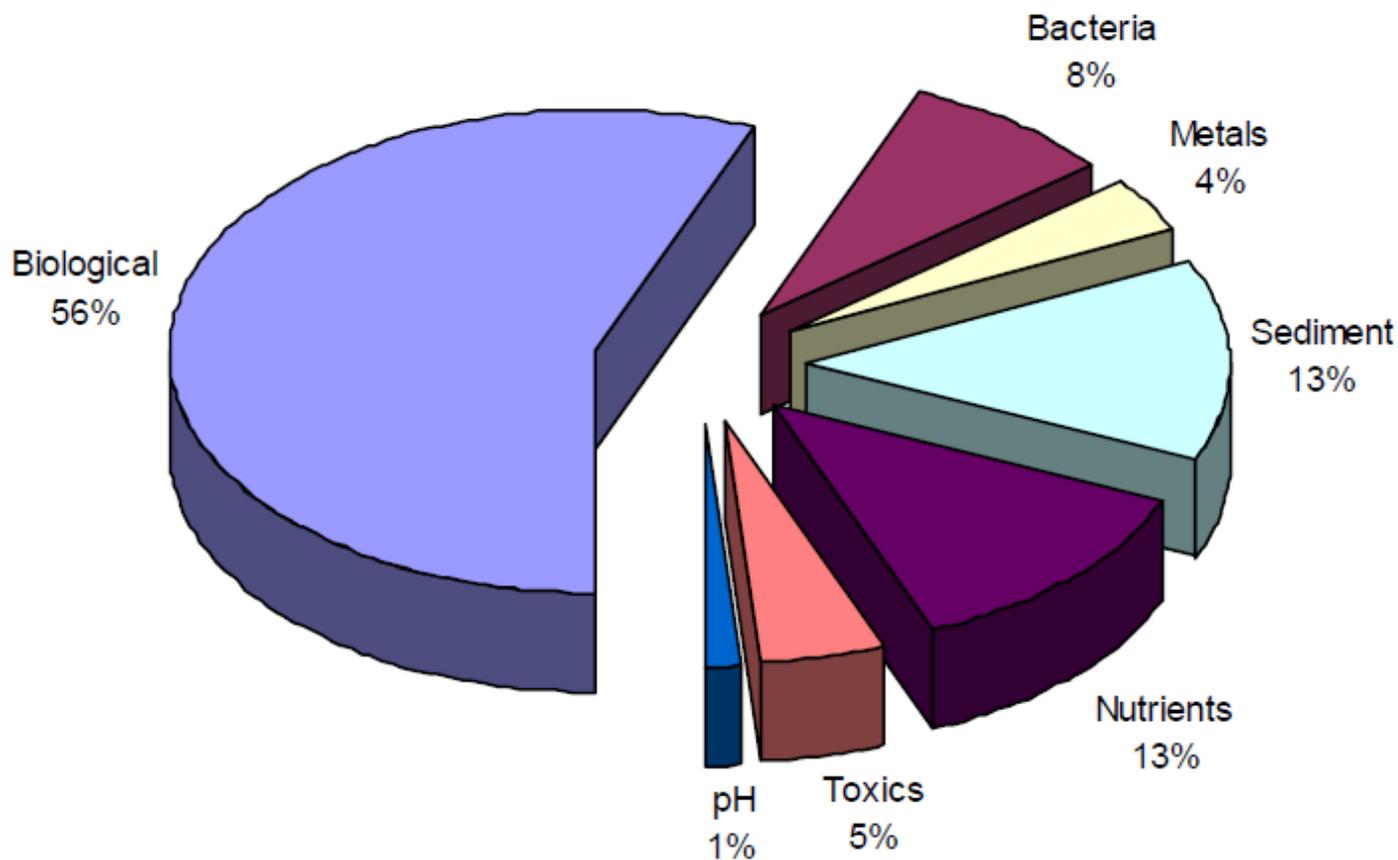
Sediment Impairments



Nutrient Assessments



Distributions among MD TMDLs



* 556 TMDLs developed as of 3/1/2015.



Chesapeake Bay Watershed- By the Numbers

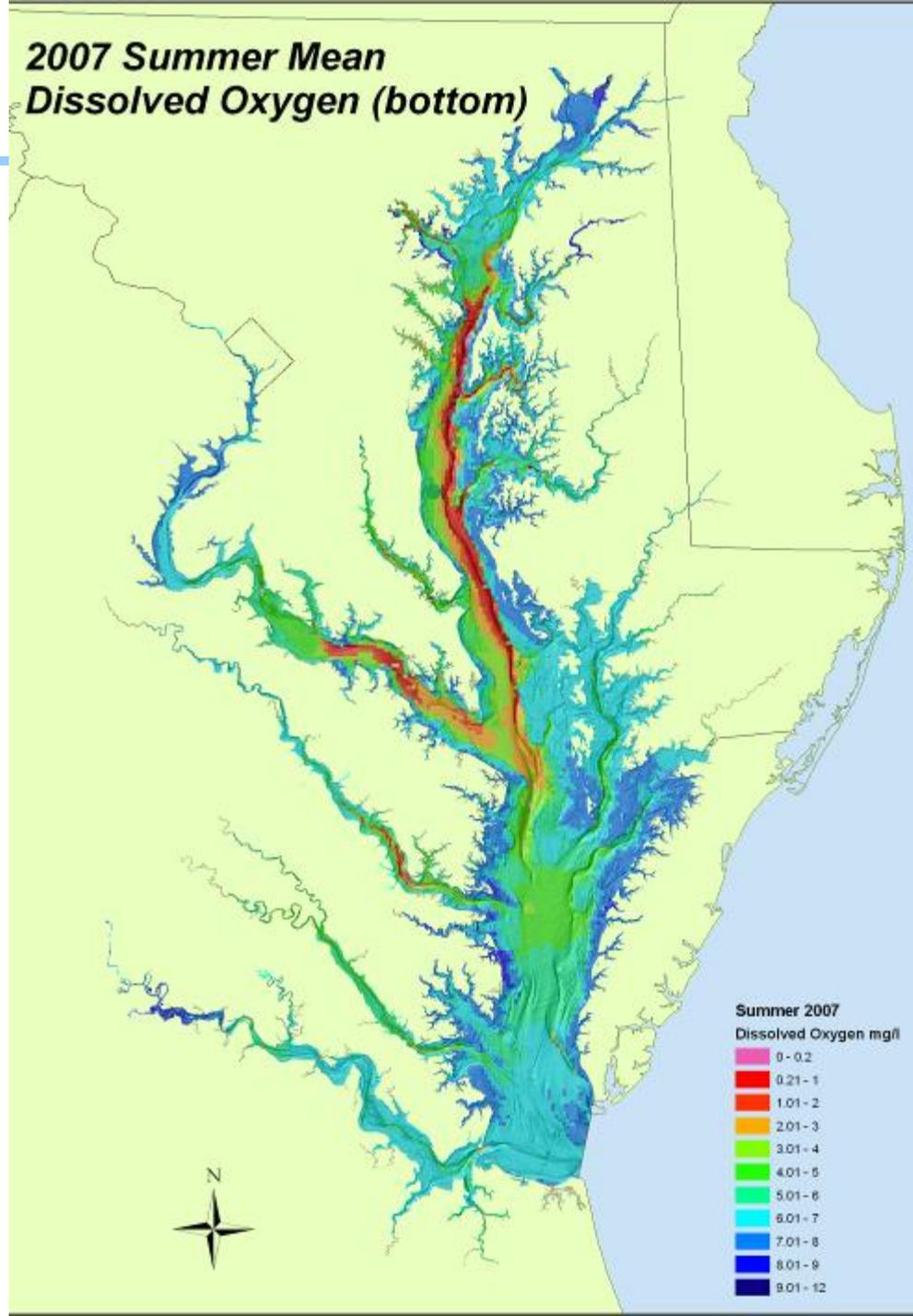
- Largest U.S. estuary
- Six-state, 64,000 square mile watershed
- 10,000 miles of shoreline (longer than entire U.S. west coast)
- Over 3,600 species of plants, fish and other animals
- Average depth: 21 feet
- \$750 million contribution annually to local economies
- Home to 17 million people (and counting)
- 77,000 principally family farms
- Declared “national treasure” by President Obama



Source: www.chesapeakebay.net

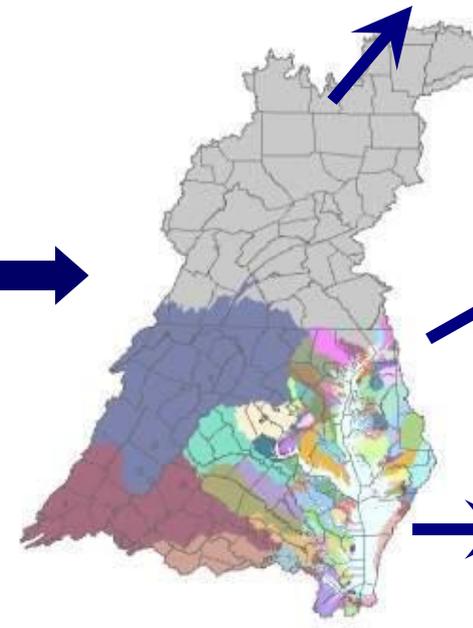
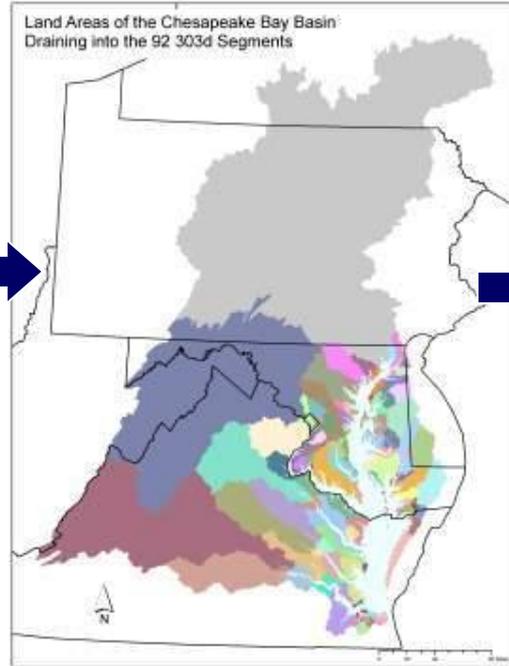
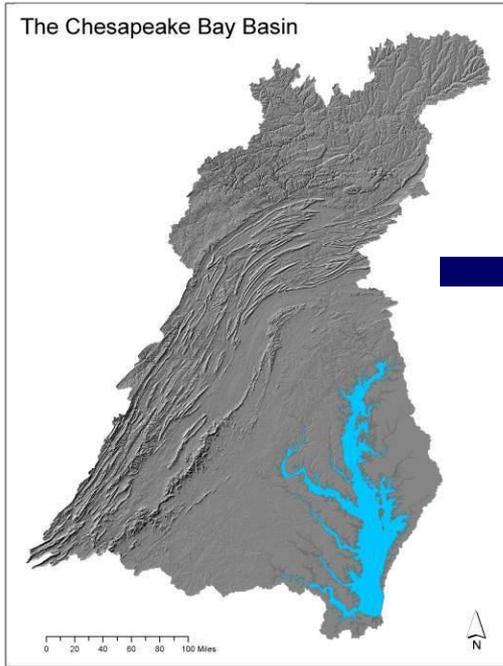


**Low to no
dissolved
oxygen in the
Bay every
summer**



Warning Signs in the Bay





Identify basinwide target loads

EPA, States, DC

Identify major basin by jurisdiction target loads

EPA, States, DC

Identify tidal segment watershed, county and source sector target loads

States, DC, local governments & local partners



“Bay TMDL”

- The Chesapeake Bay is considered impaired.
- To deal with the impairment, a Total Maximum Daily Load (TMDL) was established.
- All sources of pollutants involved were evaluated from all states in the drainage, and Implementation Plans were developed.
- Permits are used to implement these plans.





History of Stormwater Permit

- The **Clean Water Act** of 1972 establishes a comprehensive program
 - “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”
 - “also seeks to attain ‘water quality which provides for the protection and propagation of fish, shellfish and wildlife.’”
- The **Water Quality Act** of 1987 directed the EPA to develop a phased approach to regulate stormwater discharges under the NPDES permit program.
- EPA published a final regulation on November 16, 1990, establishing permit application requirements for “**stormwater discharges associated with industrial activity**” and for MS4 Phase I sources
 - EPA issues industrial stormwater permits for many states, which is referred to as the Multi-Sector General Permit (MSGP).
 - Maryland is a delegated state with its own state program for issuing permits.





MDE NPDES Permits

- Individual Permits (Industrial & Municipal)
- Municipal Separate Storm Sewer System
- Construction Activity Stormwater
- Groundwater
- Industrial General Permits





Individual Industrial Permits

Facility Name	Address	City
BTR Hampstead, Inc.-Black & Decker WWTP	626 Hanover Pike	Hampstead
City Of Westminster - Koontz Well	64 John St	Westminster
Congoleum Corporation	2700 Emory Rd	Finksburg
Lehigh Cement Company LLC	675 Quaker Hill Rd	Union Bridge





Individual Municipal Permit

Facility Name	Address	City
Cranberry WTP	632 Old Manchester Rd	Westminster
Freedom District Water Treatment Plant	5631 Oakland Rd	Sykesville
Freedom District WWTP	1301 Raincliff Rd	Sykesville
Gaither Manor Apartments WWTP	Bethway Drive, off 7300 Block Gaither Rd	Sykesville
Hampstead WWTP	4455 Northwoods Trail	Hampstead
Manchester WWTP	3286 Beaver St	Manchester
Mount Airy WWTP	7245 Ridge Rd	Mount Airy
New Windsor WWTP	Water St	New Windsor
Pheasant Ridge WWTP	7348 East Hill Rd	Mount Airy
Pleasant Valley WWTP	2206 Halter Rd	Westminster
Runnymede WWTP	3000 Langdon Dr	Westminster
Silver Oak Academy	999 Crouse Mill Rd	Keymar
South Carroll High School WWTP	1290 W Old Liberty Rd	Sykesville
Taneytown Wastewater Treatment Plant	3200 Whippoorwill Dr	Taneytown
The City of Westminster WWTP	1161 Old New Windsor Pike	Westminster
Union Bridge WWTP	115 W Locust St	Union Bridge





MS4 SW Permits

- Eleven Phase I permits
 - Anne Arundel, Baltimore City, Baltimore, Carroll, Frederick, Cecil, Charles, Harford, Howard, Montgomery, and Prince Georges Counties and State Highways.
- Multiple Phase II permits for City, State and Federal facilities.

NPDES municipal stormwater permits require the jurisdictions to develop comprehensive programs to reduce storm drain system pollution to the MEP.





MS4 – Phase 2

Municipality

Hampstead

Manchester

Mount Airy

New Windsor

Sykesville

Taneytown

Union Bridge

Westminster

County Name

Carroll

Carroll

Carroll

Carroll

Carroll

Carroll

Carroll

Carroll





Construction General Permit

- Required for any disturbance of one acre or more.
- A sediment and erosion control plan, approved by the authority having jurisdiction, is required for any activity that results in an earth disturbance greater than or equal to 5000 square feet or 100 cubic yards.





Individual Groundwater Permits

Facility Name	Address	City
ESAB Welding & Cutting Products	5099 Allendale Lane	Taneytown
FINCH SERVICES	1127 Littlestown Pike	Westminster
Gerstell Academy	2500 Old Westminster Pike	Finksburg
Herbert R. Shipley, Inc.	255 Adam Smith St	Sykesville
Lakeview Mobile Home Park	4600 Sykesville Rd	Finksburg
Liberty Crossing	2515 W Liberty Rd	Westminster
Martin Construction, Inc	4219 Hanover Pike	Manchester
Rills Bus Service/pond	218 Dutrow Rd	Westminster
River Valley Ranch	4443 Grave Run Rd	Manchester
South Carroll Swim Club	1900 Liberty Rd	Sykesville
Todd Village Mobile Home Park	2636 Old Westminster Pike	Finksburg





Industrial Stormwater Permits

- 12-SW Industrial Stormwater
- 10-MM Mineral Mine, Asphalt and Concrete Plants
- 11-CM Coal Mine
- 10-MA Marina
- Individual Permit
 - May include stormwater with its discharge.





Carroll County General Permits

- 41 Industrial Stormwater Permits
 - 10 with Chesapeake Bay Restoration
- 12 Mineral mine, concrete or asphalt plant
- 11 Swimming Pools Permits
- 11 Hydrostatic Testing Permits





Industrial Stormwater Permits

- The permits for industrial stormwater are for the operation of the facility after construction.
- The permittee must notify the MS4 if they are discharging within their jurisdiction.
- The permittee must develop a Stormwater Pollution Prevention Plan (SWPPP).
- A facility may be subject to the Chesapeake Bay restoration requirements.
- A facility may be eligible for a No Exposure exemption under certain conditions.
- Some industrial sectors have benchmark monitoring.





12-SW Industrial Activity Sectors

Sector A – Timber Products	Sector P – Land Transportation
Sector B – Paper and Allied Products Manufacturing	Sector Q – Water Transportation
Sector C – Chemical and Allied Products Manufacturing	Sector R – Ship and Boat Building or Repairing Yards
Sector D – Asphalt Paving and Roofing Materials Manufactures and Lubricant Manufacturers	Sector S – Air Transportation Facilities
Sector E – Glass, Clay, Cement, Concrete, and Gypsum Product Manufacturing	Sector T – Treatment Works
Sector F – Primary Metals	Sector U – Food and Kindred Products
Sector G – Not currently covered in this permit.	Sector V – Textile Mills, Apparel, and other Fabric Products Manufacturing
Sector H – Not currently covered in this permit.	Sector W – Furniture and Fixtures
Sector I – Oil and Gas Extraction and Refining	Sector X – Printing and Publishing
Sector J – Not currently covered in this permit.	Sector Y – Rubber, Miscellaneous Plastic Products, and Miscellaneous Manufacturing Industries
Sector K – Hazardous Waste Treatment Storage or Disposal	Sector Z – Leather Tanning and Finishing
Sector L – Landfills and Land Application Sites	Sector AA – Fabricated Metal Products
Sector M – Automobile Salvage Yards	Sector AB – Transportation Equipment, Industrial or Commercial Machinery
Sector N – Scrap Recycling Facilities	Sector AC – Electronic, Electrical, Photographic and Optical Goods
Sector O – Steam Electric Generating Facilities	Sector AD –Designated by the Department





Restoration in Maryland

- Industrial Stormwater General Permit has requirements to address impervious surfaces.
- Requirements are based on models which estimate pollution loads and what reductions will result in a restored Bay. The benefits also extend to local stream impairments.
- The requirement is to restore 20% of untreated impervious surfaces.





NOI Requires - Chesapeake Bay Specific

IF your facility meets ALL of these criteria :

- within the Chesapeake Bay Watershed;
- is 5 acres or greater in size;
- if “any portion of your facility is located within a Phase I or Phase II municipal separate storm sewer system (MS4) jurisdiction”; and
- is not owned by or leased from an entity that is permitted as an MS4.

THEN you must provide:

- the total impervious surface area (square feet),
- the untreated impervious surface area (in square feet) and
- the impervious surface area subject to 20% restoration requirement (in acres).



Treatment of Stormwater



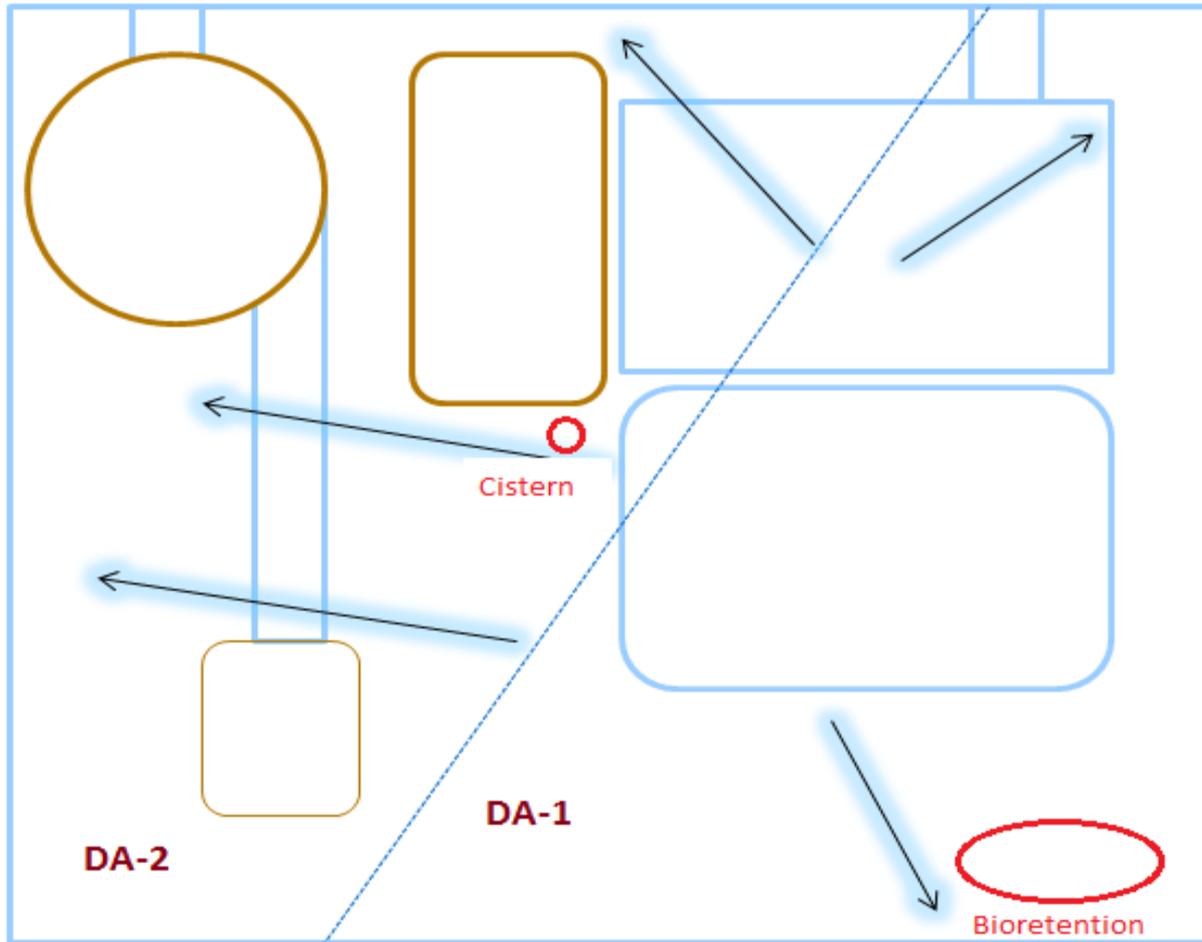


Restoration Options

- Accounting Guidance Practices (Draft or 2014)
 - Most Popular Examples: Street Sweeping, Replacing pavement with green space or Retrofitting Existing Stormwater Ponds.
- Design Manual or Proprietary Practices
 - Most Popular Examples: Bioretention, Sand Filters
 - Other Examples: Green Roof, Cisterns
- Equivalent control measures (a reduction of 5.4 lbs total nitrogen (TN) per year is equivalent to restoration of one acre of impervious surface area.
 - Controls required by the permit for erosion and sediment control, or by the reduced use of fertilizer.
 - Controls needed to achieve benchmarks for nitrogen (if applicable)
 - Reduce an existing TN load allocation (important for WWTP)
- Off-Site (not easy, unless the permittee owns offsite)



Facility SWPPP Map Example



→ Direction of runoff

Add to SWPPP:
Industrial impervious area.

Untreated impervious area.

Untreated impervious area
subject to Chesapeake Bay
restoration requirements.

Runoff Direction
Industrial Activity
Non-industrial Activity

Hotspots

Stormwater hotspots are areas which produce higher concentrations of hydrocarbons, metals or other toxics than are normally found in urban runoff. This runoff is not allowed to infiltrate groundwater.





No Exposure

- A Conditional Exclusion from 12-SW General Permit
 - If a facility conducts industrial activity regulated by the 12-SW permit, and meets the requirements for a no exposure exclusion from permitting under 40 CFR 122.26(g), the applicant may file for a No Exposure Certification. (Title 40 is Protection of the Environment.)
- Qualifying for No Exposure
 - To qualify for this certification, the applicant must verify that there is no potential for the stormwater discharged from the facility to be exposed to pollutants.
- Professional Certification
 - The applicant must also obtain written certification by either a Professional Engineer, a Certified Professional in Storm Water Quality (CPSWQ), a Registered Architect, or a Landscape Architect that the site meets the requirements of no exposure.





No Exposure Certification

**Guidance Manual for Conditional Exclusion
from MDE's Stormwater Permitting (12SW)
Based On "No Exposure" of Industrial
Activities to Stormwater**



Maryland Department of the Environment

1800 Washington Blvd., Ste. 455

Baltimore, MD 21230-1708

410-537-3323

- Guidance manual is provided on MDE website.
- The professional must (page 9 of guidance) visit the site, interview the owner, examine potential exposed materials and make a determination of No Exposure based on observations. Issue a letter, only if in agreement.





Permit Requirements

- *Select, install, and implement control measures*
- *Minimize stormwater exposure*
- *Good housekeeping*
- *Maintenance of industrial equipment and stormwater controls*
- *Develop spill prevention and response procedures*
- *Stabilize disturbed areas with erosion and sediment controls*
- *Management of runoff (reuse, divert, infiltrate, reduce)*





More Permit Requirements

- *Cover or enclose salt storage piles or piles containing salt*
- *Sector-Specific non-numeric effluent limits (check Appendix D)*
- *Provide employee training*
- *Non-Stormwater discharges must be eliminated, if not authorized by this permit*
- *Waste, garbage and floatable debris must not be discharged to receiving waters*
- *Minimize dust generation and vehicle tracking of industrial materials*





Sector Benchmarks

1. Agricultural Chemicals
2. Industrial Inorganic Chemicals
3. Soaps, Detergents, Cosmetics and Perfumes
4. Landfills and Land Application Sites
5. Automobile Salvage Yards
6. Scrap Recycling & Waste Recycling Facilities (except source separated)
7. Grain Mill Products
8. Fats and Oils Products
9. Fabricated Metal Products

Table 5 - Sector M Benchmarks (Automobile Salvage Yards)

PARAMETER	Benchmark	Units	Frequency	Sample Type
Total Suspended Solids (TSS)	100	mg/L	1/quarter	Grab
Total Aluminum	0.75	mg/L	1/quarter	Grab
Total Iron	1.0	mg/L	1/quarter	Grab
Total Lead ¹	0.082	mg/L	1/quarter	Grab

¹ The benchmark values of some metals are dependent on water hardness. For these parameters, you must determine the hardness of the receiving water per Appendix C.

**AFTER 4 QUARTERS, IF YOU HAVE MET
BENCHMARKS CONTACT COMPLIANCE TO
DISCONTINUE**





Visual Monitoring

Quarterly Samples:

1. No lab required.
2. These form part of permit.
3. Important to keep records with SWPP.

General Discharge Permit No. 12-SW
Appendix B: Page 2 of 3

Quarterly Visual Monitoring Form
Fill out a separate form for each outfall sampled.

Sample Location		
Quarter / Year:	Date / Time Collected:	Date / Time Examined:
Qualifying Storm Event?	Yes No	Runoff Source: Rainfall Snowmelt
Collector's Name & Title		
Examiner's Name & Title		
Parameter	Parameter Description	Parameter Characteristics
1. Color	Does the stormwater appear to have any color? Yes No (Clear)	If Yes, describe: Yellow Brown Red Gray Other:
2. Clarity	Is the stormwater clear? Yes No	If not clear, which of the following best describes the clarity of the stormwater? Suspended Solids Milky/Cloudy Opaque Other:
3. Oil Sheen	Can you see a rainbow effect or sheen on the water surface? Yes No	Which best describes the sheen? Rainbow sheen Floating oil globules Other:
4. Odor	Does the sample have an odor? Yes No	If Yes, describe: Chemical Musty Rotten Eggs Sewage Sour Milk Oil/Petroleum Other:
5. Floating Solids	Is there anything on the surface of the sample? Yes No	If Yes, describe: Suds Oily Film Garbage Sewage Water Fowl Excrement Other:
6. Suspended Solids	Is there anything suspended in the sample? Yes No	Describe:
Leave sample undisturbed for 30 minutes.		
7. Settled Solids	Is there anything settled on the bottom of the sample? Yes No	Describe: (note type, size and material after sample is not disturbed for 30 minutes)
8. Foam	Does foam or material form on the top of the sample surface if you shake it? Yes No	Describe:
9. If there are any visible indicators of pollution identify (1) where the pollution may come from and (2) any corrective actions taken.		
Stormwater Collector's Signature and Date: _____		
Stormwater Examiner's Signature and Date: _____		
<i>Note - Sample should be collected and analyzed in a colorless glass or plastic bottle.</i>		





Monitoring Exceptions

- Facility is Inactive and Unstaffed
- Adverse Weather Conditions
- Substantially Identical Outfalls
- No Discharge from Facility

EPA's Guidance Document for monitoring and sampling is provided by the Department and is also available on the Web.



EPA 832-B-09-003



Industrial Stormwater Monitoring and Sampling Guide

March 2009

Final Draft





Comprehensive Evaluation

Do a Comprehensive Site Compliance Evaluation **once a year,**
and keep it onsite with SWPPP.

Check for and document:

- Industrial materials, residue or trash
- Leaks or spills within the past three years;
- Offsite tracking where vehicles enter or exit the site;
- Tracking or blowing of raw, final, or waste materials from areas of no exposure to exposed areas;
- Evidence of pollutants entering the drainage or pollutants discharging to surface waters at facility outfalls;
- The condition of and around any outfall, including flow dissipation measures to prevent scouring;
- Training performed, inspections completed, maintenance performed, quarterly visual examinations, and effective operation of BMPs and
- Visual and analytical monitoring results from the past year.

EPA Provides a Template which is on MDE website.





Corrective Actions

When something is wrong, you must address it and document what you did.

- Within **24 hours** of discovery of any condition listed, you must document discovery.
- Within **14 days** of discovery of any condition listed, you must document your corrective action.
- Any **modifications** to your control measures must be made before the next storm event if possible, or as soon as practicable following that storm event.
- In the event that a deficiency cannot be addressed fully within 30 days, you must **call the Department Compliance Program** and make the Department aware of the situation.





Search Tool for Facilities



THE DEPARTMENT OF THE ENVIRONMENT

Maryland.gov Phone Directory State Agencies Online Services

Search

- HOME
- MARYLANDER
- BUSINESS
- RESEARCH CENTER
- NEWSROOM

email friend print page

Water Programs

Wastewater Permits Program

Wastewater Permits Interactive Search Portal

Enter or select search values in one or more text box or dropdown search fields below

Please note: Wild card characters are not supported in your search values but partial values are. It may take around 30 seconds to return results

Facility Name: Address: City:

Zip Code: State Num.: 12sr NPDES Number:

County: No Filter Watershed: No Filter

Type: No Filter Status: No Filter

[Click here for field information \(PDF\)](#)

284 facilities found

	Facility Name	Address	City	Zip Code	County	State Num.	NPDES Num.	Status
<input type="button" value="More Info."/>	A-A Recycle & Sand, Inc	8217 Baltimore Annapolis Blvd	Pasadena	21122	Anne Arundel	12SR1910	MDR001910	Issued
<input type="button" value="More Info."/>	AAI Corporation	124 Industry Lane	Cockeysville	21030	Baltimore	12SR0017	MDR000017	Issued
<input type="button" value="More Info."/>	ABC Distribution LLC	6401 Aaron Lane	Clinton	20735	Prince George's	12SR3062	MDR003062	Received
<input type="button" value="More Info."/>	Abf Freight System, Inc.	6720 Washington Blvd	Elkridge	21075	Howard	12SR0559	MDR000559	Issued
<input type="button" value="More Info."/>	Acme Biomass Reduction, Inc	21601 New Hampshire Ave	Brookeville	20833	Montgomery	12SR3052	MDR003052	Received



Registered...now what?

Keep in a binder at your facility:

- Registration letter (you need to send to MS4)
- Copy of Permit
- SWPPP (updated)
- Records of Quarterly Visual Inspections
- Training Records
- Benchmark Monitoring Records
- Comprehensive Annual Inspection Records
- Maintenance Records (Oil/Water Separator or other devices)
- Corrective Action Records



When to Notify MDE

1. Corrective Actions
2. Monitoring Reports for Benchmarks (DMRs)
3. Restoration update at end of year 4 for all registrations beginning with 12-SR
4. Illicit discharges.





When an Inspector shows up...

- Be prepared to present your SWPPP.
- Review your records with inspector.
- Staff may randomly be asked questions.
- Provide access to all stormwater controls.
- Explain any problems and what you have done to address them.

