

Stormwater Pollution Prevention Plan

For:

University of Maryland
1101 Main Administration Building
7901 Regents Drive
College Park, MD 20742
(301) 405-1000



SWPPP Contact:

University of Maryland,
Department of Environmental Safety, Sustainability & Risk
Jason Baer, Assistant Director, Office of Environmental Affairs
Seneca Building
4716 Pontiac Street
College Park, MD 20742
(301) 405-3163
jbaer123@umd.edu

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SECTION 1: FACILITY DESCRIPTION AND CONTACT INFORMATION

1.1 Facility Information

Facility Information

Name of Facility: University of Maryland, College Park

Street: 1101 Main Administration Building, 7901 Regents Dr.

City: College Park

State: MD

ZIP Code: 20742

County: Prince George's County

State Discharge Permit Registration Number: 08-DP-2618

State Municipal Separate Storm Sewer System Permit: 13-SF-5501

State Stormwater Discharge Permit: 20-SW-3281

Latitude:

38.9847 ° N (decimal)

Longitude:

- 76.9662 ° W (decimal)

Estimated area of industrial activity at site exposed to stormwater: 22.5 acres

Primary SIC Code or 2-letter Activity Code: 8221 (Colleges, Universities, and Professional Schools)

Identify your applicable sector and subsector: AD.b: School Bus Maintenance Facilities (primary)

Name and 8-digit identifier of the receiving water body: 02140205 (Anacostia River)

Are any of your discharges directly into any segment of an "impaired" water? Yes No

If Yes, identify name of the impaired water (and segment, if applicable): Anacostia River

Identify the pollutant(s) causing the impairment: Heptachlor Epoxide, Chloride, and Sulfate

For pollutants identified, which do you have reason to believe will be present in your discharge? None

For pollutants identified, which have a completed TMDL? BOD, Debris/Floatables/Trash, Enterococcus, Nitrogen, Phosphorus, PCBs, Total Suspended Solids (TSS).

Do you discharge into a high-quality receiving water designated as a Tier 2 water? Yes No

1.2 Contact Information/Responsible Parties

Facility Operator (s):

Name: University of Maryland, College Park
Address: 1101 Main Administration Building, 7901 Regents Drive
City, State, Zip Code: College Park, MD 20742

Facility Owner (s):

Name: University of Maryland – Carlo Colella
Vice President and Chief Administrative Officer

University of Maryland – Maureen Kotlas
Executive Director, Department of Environmental Safety, Sustainability & Risk
Address: Seneca Building, 4716 Pontiac Street
City, State, Zip Code: College Park, MD 20742
Telephone Number: 301-405-3960
Email address: mkotlas@umd.edu

SWPPP Contact:

Name: Jason Baer, Assistant Director, Office of Environmental Affairs
Telephone number: 301-405-3163
Email address: jbaer123@umd.edu

1.3 Stormwater Pollution Prevention Team

Table 1: P2 Team Responsibilities and Contact Information

Staff Names	Individual Responsibilities	Contact Info
Jason Baer, Assistant Director, Office of Environmental Affairs, UMD	Regulatory point of contact; Signatory for NetDMR submissions; Verify that the SWPPP is up to date; Internal compliance auditing	301-405-3163; jbaer123@umd.edu
Kaitlyn Peterson, Environmental Regulatory Compliance Manager, UMD	Verify that the SWPPP is up to date; modify the SWPPP to reflect any facility changes; Data management for benchmark sampling; Internal compliance auditing	301-405-8604; Kpeter13@umd.edu
Kristofer Bird, Environmental Specialist, UMD	Verify that the SWPPP is up to date; Quarterly visual and benchmark monitoring, Site inspections; SWPPP updates; and	301-405-7016; kbird@umd.edu

	Annual pollution prevention (P2) team training.	
Charles Curtis, Regulated Waste Program Manager, UMD	Ensure that all permit requirements and BMPs are being correctly implemented at the Environmental Services Building and all of DA-1.	301-405-3162; ccurtis@umd.edu
Karen Petroff, Acting Director of B&LM, Arboretum, and Landscaping Services	Ensure that all permit requirements and BMPs are being correctly implemented within DA-2 and DA-7	301-405-8952 kpetroff@umd.edu
Michael Carmichael, Stormwater Management & Maintenance Inspector, UMD	Ensure that all permit requirements and BMPs are being correctly implemented at the UMD Landscaping Vehicle and Equipment Storage, Salt Dome, Vehicle and Equipment Maintenance in DA-2.	301-314-1824; mmcarmic@umd.edu
Peter Agustin, Manager, UMD	Ensure that all permit requirements and BMPs are being correctly implemented at the University Bus Facility Parking, Fueling, and Maintenance area in DA-3.	301-314-7267; pedawg@umd.edu
Jay Carter Smith, Solid Waste Manager, UMD	Ensure that all permit requirements and BMPs are being correctly implemented at the source separated recycling area in DA-4.	301-405-5253; jsmith76@umd.edu
Richard Scott Rupert, Manager - Landscape Services, UMD	Ensure that all permit requirements and BMPs are being correctly implemented at the landscape material storage area in DA-4.	301-405-4177; srupert@umd.edu
David Beall, Warehouse Manager, UMD	Ensure that all permit requirements and BMPs are being correctly implemented at the Severn Building in DA-5 apart from vehicle fueling & maintenance.	301-405-7082; dbeall@umd.edu
Christopher Sharpe, Supervisor – Vehicle Repair Shop, UMD	Ensure that all permit requirements and BMPs are being correctly implemented in regard to vehicle fueling & maintenance in DA-5.	301-405-5490; csharpe@umd.edu
Anthony Grancitelli, Operations Manager, College Park Energy LLC	Ensure that all permit requirements and BMPs are being correctly implemented at the Steam Electric Plant and Oil Storage in DA-6.	734-770-9951; anthony.grancitelli@engie.com

1.4 Activities at the Facility

The University of Maryland (UMD) is located at College Park, Maryland 20742 within Prince George's County. UMD is approximately 4 miles from the northeast border of Washington, D.C. The campus core is generally bounded by University Boulevard to the north and west, Baltimore Avenue (Route 1) to the east, and Knox Road to the south. Baltimore Avenue bisects the southeastern portion of the campus. The campus consists of over 350 buildings on 1,335 acres of land. The campus consists of paved, unpaved, and construction areas. Accordingly, a significant portion of the campus is considered impervious. The campus is located in a suburban area surrounded by light commercial and residential areas. A site vicinity map is attached as Appendix A.

The UMD campus maintains a Phase II Municipal Separate Storm Sewer System (MS4) that operates under General Discharge Permit No. 13-SF-5501. UMD is exempt from the 20-SW Chesapeake Bay Restoration requirements since it is subject to this requirement under the MS4 permit. This exemption is described in Part III.A of the 20-SW permit.

The University is permitted by State Discharge Permit No. 08-DP-2618 (NPDES permit MD0063801) to discharge contact and non-contact cooling water, boiler blowdown, condensate, and stormwater runoff from twelve (12) outfalls. These outfalls discharge to Campus Creek, Guilford Run and Paint Branch creek. Water from these discharge points ultimately flows to the Anacostia River and to the Chesapeake Bay. A site map is attached as Appendix B. UMD treats some of its stormwater discharges using various BMPs, including oil-water separators, retention ponds, swales, and stormceptors which are available in Appendix C.

The site is broken into six (6) regulated drainage areas that are covered by the 20-SW permit and contains twenty-two (22) sheet flow outfalls for their SWPPP monitoring. Runoff from the drainage areas is conveyed into stormwater inlets across campus and is discharged off site to the aforementioned waterways. UMD has approximately eighty (80) stormwater outfalls, that discharge to waters of the State or discharge beyond the property boundaries. We have identified twenty-two (22) internal outfalls or monitoring points that are subject to the requirements of the 20-SW permit. It is noteworthy that most of the "outfalls" subject to the 20-SW stormwater permit are not true "outfalls," by definition, rather they are the locations where stormwater runoff discharges from the boundary of the facility or activity covered by the 20-SW permit. In most cases, the 20-SW "outfalls" discharges to other stormwater conveyances prior to leaving the UMD property or discharging to waters of the State.

UMD's primary classification under the permit is industrial Sector AD.b: School Bus Maintenance Facility. Other applicable sectors include Sector K: Hazardous Waste Treatment, Storage, or Disposal Facilities; Sector N: Scrap Recycling and Waste Recycling Facilities; Sector O: Steam Electric Generating Facilities; Sector P: Land Transportation and Warehousing; and Sector AD.a: Department of Public Works and Highway Maintenance Facilities. The following subsections describe each drainage area including their general activities and potential contributors to stormwater pollution.

1. Drainage Area 1

Facility:	Environmental Services Facility
Primary Activities:	Hazardous Waste Storage and Transportation
Industrial Activity:	Sector K: Hazardous Waste Treatment, Storage, or Disposal Facilities
Imperviousness:	High
Associated Outfalls:	Outfall #001 SW
Outfall Monitoring:	Visual / Benchmark
Acreage:	~0.55

Drainage Area 1 (DA-1) is situated on the northwestern side of the UMD campus and encompasses the Environmental Service Facility (Building #344), an employee parking zone, a designated loading and unloading area, and storage for new and empty 55-gallon drums. DA-1 is bounded to the south by Drainage Area 2 (DA-2). The Environmental Service Facility serves as both an indoor storage location for hazardous waste generated on campus and houses offices for personnel employed by the Department of Environmental Safety, Sustainability, and Risk (ESSR). This facility operates under the Resource Conservation and Recovery Act (RCRA) permit number MDD980829873, which governs hazardous waste storage and treatment activities.

The new and unused 55-gallon drums stored outside to the east of the Environmental Service Building are securely held within a three-sided enclosed area within DA-1. As such, they are not anticipated to be a source of pollutants or susceptible to stormwater exposure. Hazardous waste generated from the UMD campus, particularly from university laboratories, undergoes collection, transportation, and onsite storage in accordance with UMD's RCRA permit. The hazardous waste remains on-site until it is eventually transported off-site for proper disposal or destruction. Loading and unloading procedures for hazardous materials at the Environmental Service Facility are carried out at designated areas located on the southern or southeastern ends of the building. To protect the hazardous waste from stormwater, awnings extend over both loading and unloading areas. All hazardous waste is delivered in sealed containers and kept within secondary containment during handling and transportation.

Stormwater within DA-1 flows in a southeast direction through sheet flow, ultimately draining towards Outfall #001SW, located at the southeastern edge of the drainage area. BMPs implemented for this drainage area include the indoor storage, secondary containment, and the use of absorbent materials inside the secondary containment, as well as the provision of a spill kit at the loading and unloading areas.

2. *Drainage Area 2*

Facility:	Building & Landscape Maintenance Facility
Primary Activities:	UMD Landscaping Vehicle and Equipment Storage, Salt Dome, Vehicle and Equipment Maintenance
Industrial Activity:	AD.a: Department of Public Works and Highway Maintenance Facilities
Imperviousness:	High
Associated Outfalls:	Outfall #002SW, Outfall #003SW and #004SW (Substantially Identical)
Outfall Monitoring:	Visual
Acreage:	~2.55

Drainage Area 2 (DA-2) is located on the northwestern side of the UMD campus and includes the Wye Oak Building (Building #428), Grounds Material & Equipment Building (Building #124), Grounds Operations & Maintenance Building (Building #328), Heavy Equipment Building (Building #426), Ground Storage Building (Building #327), vehicle and equipment storage, chemical storage, sand/gravel stock piles, a salt storage dome, and a small yard waste storage area. DA-2 is bound to the northwest by DA1, to the north by Landscape Lane, and to the south and east by Terrapin Trail.

DA-2 encompasses a set of aboveground storage tanks (ASTs) consisting of a 1,000-gallon double-walled gasoline AST, a 1,500-gallon double-walled diesel fuel AST, a 280-gallon waste oil AST, and a 521-gallon double-walled diesel fuel generator AST. The diesel generator is located next to Building #428, while the remaining three ASTs are adjacent to Building #328. All four ASTs are equipped with spill kits and undergo routine inspections in adherence to the UMD Spill Prevention, Control, and Countermeasure (SPCC) Plan.

Within the drainage area, the southern section serves as the storage area for landscaping equipment, including lawnmowers, which are typically maintained outdoors unless precipitation occurs, in which case they are relocated to the shelter of Building #328. Adjacent to and inside Building #426, heavy equipment storage and maintenance operations take place. Positioned in the southwestern corner, the salt dome safeguards the approximately 600 tons of rock salt from stormwater, featuring three (3) enclosed sides and a single open entrance fortified with a berm to minimize drag-out of salt, as well as minimize the ingress of stormwater. The salt is typically delivered in the autumn for storage until required during the winter months, with additional orders placed as necessary. Presently implemented BMPs at the salt dome involve conducting loading and unloading activities within the dome structure and sweeping any surplus rock salt back into the dome. Gravel and sand stockpiles are located on the northern side of Building #124, accompanied by a small area designated for green waste storage (e.g., tree branches and leaves). BMPs currently in place for the gravel and sand stockpiles and green waste storage include the strategic placement of hay bales to impede sediment entry into the stormwater system, complemented by concrete walls enclosing three sides to contain the stockpiles. Chemicals and small equipment are housed indoors within enclosed structures, encircling the perimeter of DA-2.

The stormwater within DA-2 drains by sheet flow and is directed towards three stormwater inlets situated within the drainage area, through which it enters UMD's stormwater conveyance system. Specifically, Outfall #002SW is positioned adjacent to the inlet in the southeastern corner of the salt dome; Outfall #003SW is located in the northeastern portion of the drainage area; and Outfall #004SW is situated at the southeastern corner of the drainage area. As the effluent from this drainage area exhibits similarities, Outfalls #002SW, #003SW, and #004SW are deemed substantially identical, necessitating their monitoring in compliance with Part III.C.5.b.iv of the 20-SW Permit (Appendix D).

3. *Drainage Area 3*

Facility:	Shuttle Bus Facility
Primary Activities:	University Bus Facility Parking, Fueling, and Maintenance
Industrial Activity:	AD.b: School Bus Maintenance Facility
Imperviousness:	High
Associated Outfalls:	Outfall #005SW and #006SW (Substantially Identical)
Outfall Monitoring:	Visual
Acreage:	~3.0

Drainage Area 3 (DA3) is situated on the northeastern side of the UMD campus and encompasses the Shuttle Bus Facility (Building #424), University Bus parking and maintenance areas, and fueling operations. To the west, it is bounded by Paint Branch Drive, and to the south, by the University's Field Hockey and Lacrosse Complex (Building #414). Wooded areas surround DA3 to the north and east, with a stormwater pond located at the southeastern corner of the drainage area. Additionally, a stormwater retention pond is positioned just east of DA3.

Within DA3, various storage facilities and equipment are present. These include a 20,000-gallon double-walled diesel aboveground storage tank (AST) located in the southeast corner of the drainage area, a 550-gallon used oil AST in secondary containment on the east side of Building #424, and multiple 55-gallon drums stored both inside and outside of Building #424. Furthermore, two 55-gallon drums of used antifreeze, one 330-gallon Intermediate Bulk Container (IBC) tote of diesel exhaust fluid, and additional 55-gallon drums are contained outside of Building #424. The quantity of 55-gallon drums fluctuates daily due to the ongoing work within DA3.

Two 1,600-gallon oil/water separators are installed within DA3. The oil/water separator in the southeast corner drains into the stormwater pond adjacent to the 20,000-gallon double-walled diesel AST, while the one south of Building #424 drains into the sanitary sewer lines. One spill kit is strategically placed within DA3, and the ASTs undergo inspections in accordance with the UMD's SPCC plan. Furthermore, a small scrap metal storage area is located in the northeast corner of DA3, and current BMPs involve covering the materials with a tarp to prevent contact with stormwater.

Activities such as university bus washing and maintenance operations are carried out within DA3. The parking lot serves as the storage space for university buses, with BMPs including the placement of drip pans underneath buses during storage, adherence to proper fueling procedures, and the utilization of oil-absorbing booms at Outfall #005SW and #006SW. Additionally, a stockpile of tires is stored along the south perimeter, adjacent to the drainage area's fence. To prevent stormwater contact, the current BMPs for tire storage involve covering the materials with a tarp. Zipper drains surround Building #424, and a stormwater drain inlet is situated adjacent to the 20,000-gallon double-walled diesel AST within DA3.

Stormwater within DA3 either drains offsite through sheet flow or enters the stormwater drain system. Outfall #005SW is located in the southeast corner of the drainage area, while Outfall #006SW is positioned in the northeastern corner. Since the effluent of the stormwater leaving this drainage area is consistently similar, Outfalls #005SW and #006SW are considered substantially



identical. Consequently, monitoring activities will be conducted in accordance with Part III.C.5.b.iv of the 20-SW Permit (Appendix D).

4. *Drainage Area 4*

Facility:	Former Metzerott Landfill
Primary Activities:	Source Separated Recycling
Industrial Activity:	Sector N: Scrap Recycling and Waste Recycling Facilities
Imperviousness:	Low to Medium
Associated Outfalls:	Outfall #007SW; Outfall #008SW, #009SW, and #010SW (Substantially Identical)
Outfall Monitoring:	Visual
Acreage:	~2.15

Drainage Area 4 (DA4) is separated from the main UMD campus by University Blvd. DA4 is bound south by Metzerott Road and east by Adelphi Road adjacent to the Astronomy Lecture Building (#219) and the Astronomical Observatory (#221), and the south by the University of Maryland Gold Course. DA 4 encompasses the former Metzerott Landfill, which is a former landfill site located in College Park, Maryland, that operated from the 1950s until the mid-1980s. The landfill received waste including soil, rocks, tree debris, and construction/demolition rubble in the early 1950s and closed in 1986. At the southern base of this landfill, there are two (2) retention ponds that collect stormwater from the landfill. In 2006, samples were taken from the ponds to assess the presence of contaminants originating from the landfill. The results indicate that only minimal levels of metals and volatile organic compounds were detected, therefore no additional corrective measures were required. Currently, the landfill is capped with a soil/clay cover and is used as a storage yard for maintenance equipment and supplies, in addition to source separated recycling activities. The drainage area is surrounded by a locked fence with restricted access.

At UMD, two departments - Landscape Services and Recycling & Solid Waste Management Operations - have access to and utilize a shared drainage area for their respective operations. Landscape Services is responsible for maintaining bulk storage of materials within the southern portion of drainage area, while Recycling & Solid Waste Management Operations operate their source-separated recycling activities in the northern portion of the drainage area. In addition, the drainage area is also used for the bulk storage of dumpsters. The materials recycled on-site include construction and demolition waste, as well as scrap metal.

Stormwater in DA4 is directed off-site through sheet flow. Outfall #007SW is situated at the northeastern extremity of the drainage area, below the source separated recycling area. Outfall #008SW is positioned beneath the bulk storage containers, discharging to the southeast, while Outfall #009SW and #010SW are located at the southern end of the drainage area, below the empty dumpster roll-off storage area. Considering the similarity in effluent composition from the central region of the drainage area, Outfalls #008SW through #010SW are regarded as substantially identical and will be subject to monitoring as per Part III.C.5.b.iv of the 20-SW Permit (Appendix D).

5. *Drainage Area 5*

Facility:	Severn Building
Primary Activities:	Loading and Unloading of Materials, University Vehicle Fueling
Industrial Activity:	Sector P: Land Transportation and Warehousing
Imperviousness:	High
Associated Outfalls:	Outfalls #011SW, #012SW, and #013SW (Substantially Identical); Outfalls #014SW, #015SW, and #016SW (Substantially Identical); Outfall #017SW; Outfalls #018SW and #019SW (Substantially Identical);
Outfall Monitoring:	Visual
Acreage:	~16.5

Drainage Area 5 (DA5) is situated approximately half a mile away from the main UMD campus, with Baltimore Avenue and residential properties serving as its boundaries. DA5 is bounded to the north by Route 193 (Greenbelt Road), to the east by a train track right-of-way, and to the west and south by residential properties. The Severn Building (Building #810) is located within DA5, featuring a fueling area housing two 10,000-gallon double-walled gasoline ASTs and one 10,000-gallon double-walled E-85 gasoline AST in the northeastern section. A zipper drain system is present in the fueling area, leading to a 1,600-gallon oil-water separator before draining into the stormwater system. An additional 1,600-gallon oil/water separator is located outside of the Motor Pool maintenance facility located in the northwestern portion of the facility.

In the southeastern portion of the drainage area, there is a 12,000-gallon double-walled fuel oil AST. Additionally, DA5 includes four (4) portable storage tanks: a 110-gallon diesel fuel tank mounted on a truck for mobile refueling of diesel-fired emergency generators; a 200-gallon diesel fuel portable generator; an 80-gallon diesel fuel portable generator; and a 468-gallon portable generator. These portable ASTs are stored beneath a covered concrete pad adjacent to the X1 parking lot at the Severn Building (#210) when not in use. To prevent oil from reaching the stormwater system, a spill sock is placed at the low point of the concrete pad where it drains to the parking lot.

Spill kits are located at the fuel island, next to the 12,000-gallon double-walled fuel oil AST, and within the mobile refueler parked at the covered concrete pad. Furthermore, the ASTs undergo inspections in accordance with the UMD's SPCC plan. Multiple loading and unloading docks are present along the north side of the Severn Building, with a maintenance shop located at the northernmost portion of the facility for conducting vehicle maintenance. Scrap metal and construction and demolition debris (C&D) dumpsters are situated outside the north and south sides of Building #810, and additional material storage occurs periodically on the northwestern side. BMPs for metal and C&D involve covering the materials with tarps to prevent stormwater contact.

Stormwater in DA5 drains via sheet flow into various stormwater drains, with several outfalls receiving the runoff. Outfall #0011SW is located in the southwestern portion of the southern parking lot, receiving runoff from the parking lot, material storage, and portable AST parking. Outfall #012SW is positioned in the southeasternmost corner, collecting runoff from the southern loading and unloading area for the 12,000-gallon fuel oil tank, material storage, and a small parking

lot. The northern loading/unloading area, material storage, and an additional parking lot drain to Outfall #013SW, located in the northeastern corner. These three outfalls, namely #011SW, #012SW, and #013SW, are deemed substantially identical in terms of effluent and will be monitored according to Part III.C.5.b.iv of the 20-SW Permit (Appendix D).

The fueling area at the northern end of the facility drains to three different outfalls: Outfalls #014SW, #015SW, and #016SW. Similarly, these three outfalls are considered substantially identical in effluent and will be monitored in accordance with the designated permit regulations. Outfall #017SW is located at the northwestern corner of Building #812, receiving drainage from the parking lot and the indoor maintenance shop, with an oil-water separator treating the shop's discharge. Outfalls #018SW and #019SW, situated along the western boundary of DA5, receive drainage from adjacent parking areas. Again, these two outfalls are deemed substantially identical in effluent and will be monitored as per Part III.C.5.b.iv of the 20-SW Permit (Appendix D).

6. *Drainage Area 6*

Facility:	Combined Heat & Power Facility
Primary Activities:	Steam Electric Plant, Oil Storage
Industrial Activity:	Sector O: Steam Electric Generating Facilities
Imperviousness:	High
Associated Outfalls:	Outfall #020SW; Outfall #021SW and #022SW (Substantially Identical)
Outfall Monitoring:	Visual
Acreage:	~2.95

Drainage Area 6 (DA6) is located on the opposite side of Route 1 (Baltimore Avenue) from the main UMD campus. It is bounded by Rossborough Lane to the south, Baltimore Ave. to the west, and Campus Drive to the east, with Diamondback Drive cutting through the area. DA6 encompasses employee parking, the Service Building (Building #003), the Energy Plant (Building #001), the Plant Operations and Maintenance Shops (Building #006), and a fuel unloading area housing an 8,000-gallon diesel AST within a diked containment area. The fuel unloading area is equipped with two zipper drains that leads to a 1,000-gallon oil/water separator within the dike before draining into the stormwater system.

In the southern part of DA6, there are two 252,000-gallon fuel oil ASTs situated within a diked containment area. Additionally, there is a 250-gallon and a 280-gallon used oil AST located in the southernmost section of the area.

At the eastern corner of the Energy Plant (Building #001), there is a 300-gallon diesel AST dedicated to a generator. In the northwestern corner of the Energy Plant, there is a 250-gallon AST specifically designed for storing used oil. The used oil AST is enclosed within a roll-top hardcover secondary containment structure.

Typically, a roll-top hardcover secondary containment area adjacent to the 250-gallon used oil AST contains an average of six 55-gallon drums storing used oil and oil-contaminated rags. The ASTs within DA6 undergo inspections in accordance with the UMD's SPCC plan and Oil Operations Permit #2014-OPT-3522. Steam electric generation operations are conducted within the Energy Plant, with additives for the steam stored in 55-gallon drums outside the plant on a contained pad situated on the northwestern end of the facility.

Stormwater in DA6 drains either off-site or into the stormwater drains via sheet flow. Outfall #020SW is positioned at the southeastern end of the drainage area, just below the fuel unloading area. Outfalls #021SW and #022SW are located on either side of the Energy Plant (Building #001). Since the stormwater leaving the central part of the drainage area exhibits similar effluent characteristics, Outfalls #021SW and #022SW are considered substantially identical and will be monitored in accordance with Part III.C.5.b.iv of the 20-SW Permit (Appendix D).

1.5 General Location Map

A general location map showing the vicinity of the entire site in respect to the surrounding area is located in Appendix A.

1.6 Site Map

A site map, included as Appendix B, shows the topographic features of the whole site including, but not limited to, buildings, drainage areas, outfalls, associated features, and drainage arrows.

SECTION 2: POTENTIAL POLLUTANT SOURCES

Based on the site visit and discussions with facility personnel, UMD has the potential to discharge pollutants from the following activities:

- Accidental Spills and Leaks
- Fueling Activities
- Loading and Unloading of Materials
- Hazardous Waste Loading and Unloading, Storage, and Transportation
- Storage of Scrap Metal
- Storage of Oil Products (Aboveground Storage Tanks (ASTs))
- Steam & Electric Generation
- Source Separated Recycling
- Storage of Rolloffs & Dumpsters
- Vehicle and Equipment Maintenance

2.1 *Industrial Activity and Associated Pollutants*

The United States Environmental Protection Agency (USEPA) SWPPP Guidance defines “significant materials” from 40 CFR 122.26(b)(12) as substances related to industrial activities such as process chemicals, raw materials, fuels, pesticides, and fertilizers. A copy of the 20-SW permit can be found in Appendix D and the UMD’s Notice of Intent (NOI) can be found in Appendix E. An inventory of significant materials exposed to weather (i.e., located outdoors) was developed and is included in Appendix F. This list is primarily based upon visual inspections conducted during the development of this plan.

Table 2: Industrial Activity and Associated Pollutants

Industrial Activity	Associated Pollutants
Accidental Spills and Leaks	Diesel Fuel, Gasoline, Hazardous Waste, Hydraulic Oil, Motor Oil, Paints, Solvents, Transmission Fluid, Used Oil
Fueling Activities	Diesel Fuel, Fuel Oil, Gasoline, Hydraulic Oil
Loading and Unloading Materials	Sediments, Metal
Hazardous Waste Loading and Unloading, Storage, and Transportation	Associated Hazardous Pollutants, Solvents, Paints
Storage of Scrap Metal	Metal, Sediment
Storage of Oil Products (ASTs)	Diesel Fuel, Motor Oil, Used Oil, Gasoline
Steam/Electric Plant	Chlorine, Boiler Additives, Sulfuric Acid, Used Oil, Diesel Fuel
Source Separated Recycling	Trash and Debris, Metal, Sediment, Leachate
Roll-off/Dumpster Storage	Metal, Sediment, Leachate
Vehicle and Equipment Maintenance	Diesel Fuel, Gasoline, Hydraulic Oil, Motor Oil, Transmission Fluid, Used Oil

2.2 Spills and Leaks

Table 3: Areas of Site Where Potential Spills/Leaks Could Occur

Location	Outfalls (SW)
Equipment and Vehicle Maintenance (DA2, DA3, DA5)	002, 003, 004, 005, 006, 011, 012, 013
Fueling Areas (DA2, DA3, DA5, DA6)	002, 003, 004, 005, 006, 014, 020
Hazardous Materials (DA1, DA6)	001, 021, 022
UMD Recycling Vehicle Traffic (DA4)	007
UMD Bus/Vehicle Traffic and Parking	All Outfalls

Table 4: Historical Outdoor Spills/Leaks Over Prior 3 Year Period

Date	Description	Outfalls	Drainage Area
08/05/2019	An unknown employee overfilled the waste oil AST at the shuttle bus facility. Approx 1.5-2 gallons of oil spilled onto the surrounding concrete and a small patch of soil. None was observed entering the stormwater system. There were already oil sorbent pads deployed prior to the notification of the spill. Loose oil absorbent was used (1 bag) and all cleaning materials in addition to one (1) 55-gallon drum of soil was removed and disposed of through the University's TSDF.	#006SW	DA-3
12/09/2020	A nozzle on the fuel dispenser failed to shut off and resulted in an overflow of diesel fuel during the refueling of one of the buses at the Shuttle Bus facility. All fuel was contained on the containment pad at the fueling site. No fuel entered the environment. OEA deployed absorbent materials to the ground surface. A vacuum truck was used to pump water and fuel from the containment OWS in the middle of the fuel pad.	#005SW	DA-3
03/03/2021	An alert went out about a small spill that occurred at the Shuttle Bus fuel island. The alert mentioned that the spill was from the dispenser nozzle and that all the fuel spilled had been contained to the containment pad and oil/water separator. Upon investigation, it was noted the pump house had fuel pooled in the bottom of the structure and that some had leaked out into the adjacent ground. Absorbent material was used on the ground surface and roughly 4-in of contaminated soil was removed.	#005SW	DA-3

<p>06/14/2021</p>	<p>Greentech was fuel polishing the diesel fuel at the portable generator located in the loading docks near Terp Trader. During the process, the line disconnected and spilled approximately two (2) gallons of diesel fuel. Greentech immediately shut off the fuel and deployed pig absorbent pads to the affected area. A small amount of fuel did enter the zipper drain down the side but did not pool or enter the stormwater system. The pig absorbent mats collected all standing fuel in the affected areas. Two oil socks were deployed into the zipper drain to collect any fuel that would be washed into the stormwater system via a storm event.</p>	<p>#010SW</p>	<p>DA-5</p>
<p>08/06/2021</p>	<p>Approximately 10 gallons of oil overflowed from the used oil tank while transferring oil from a portable oil tank into the used oil tank. Two technicians from the Shuttle Bus facility immediately used loose absorbent to contain and absorb the spill. UMD Fire Marshall and 3 shuttle bus technicians finished cleaning up the spill using the absorbent dust and pads from the spill kit next to the tank. All the spilled oil was contained within the impervious area around the oil tank.</p>	<p>#006SW</p>	<p>DA-3</p>
<p>11/22/2021</p>	<p>The Fire Marshal's Office was dispatched to the Shuttle Bus Facility for a diesel fuel spill. JRP Fueling was delivering diesel fuel to the Shuttle Bus Facility when a seal between the tank and a discharge valve failed. After containing the initial spill of approximately 8 gallons, the contractor (JRP Fueling) called in another tanker to pump the initial leaking fuel tanker out. After the tanker was fully emptied to the best of their abilities, the initial tanker started his tanker to leave UMD. However, once the tanker was put into gear, diesel began to spill again from the same discharge valve (approximately an additional 4 gallons).</p>	<p>#005SW</p>	<p>DA-3</p>
<p>12/06/2021</p>	<p>A call was placed to the University of Maryland CRC of a spill being formed under a vehicle at the Severn Building. The CRC contacted the UMD Fire Marshall's who, in turn, sent out a message to those on call. Once on site, it was discovered that a vehicle was leaking its transmission fluid onto the pavement below.</p>	<p>#0019SW</p>	<p>DA-5</p>

08/10/2022	IRU responded to a fuel leak at the Severn fuel island. An employee was fueling at the E85 ethanol tank when the handle got stuck when trying to remove it from the vehicle and a small amount spilled on the fuel pad. By the time IRU arrives, the fuel had dissipated.	#014SW	DA-5
04/19/2023	The UMPD and The Office of the Fire Marshal were dispatched to the Shuttle Bus Facility (424) for a spill of an unknown product and quantity. Upon arrival, Shuttle Bus Facility personnel informed us that approximately three (3) gallons of hydraulic fluid/oil mix had spilled over approximately 50 - 60 yards. The cause of the spill appeared to be from the failure of an oil feed line to the clutch fan of a shuttle bus. The shuttle bus was at the fuel pump when the failure of the line occurred. A good portion of the product spilled in the area of the fuel pump. Some of the product flowed naturally into the oil/water separator located at the pump. The bus then drove to the opposite end of the lot causing a trail of this mixture to cover an estimated area of 50 - 60 yards. There did not appear to be any contamination to the environment as everything was contained to the parking lot and the oil/water separator. Shuttle Bus Facility personnel recovered as much of the product as possible using 8 bags of Dry Loose Absorbent and brooms.	#005SW	DA-3

2.3 *Non-Stormwater Discharges Documentation*

The 20-SW Permit requires the completion of an annual “Non-Stormwater Discharges Evaluation” in order to identify and eliminate any non-stormwater discharges. The list below summarizes the previous evaluations performed and describes procedures for future evaluations.

- Date of evaluation:** 05/04/2023, 05/11/2023, 05/18/2023
Future evaluations are to be done and logged with the Comprehensive Annual Inspection by a member of the P2 team or other authorized party.
- Description of the evaluation criteria used:** Visual inspections of components of the stormwater conveyance system are performed during periods of no precipitation. These inspections are performed to ascertain the existence and possible sources of non-stormwater discharges. The visual inspection is to be done annually with the comprehensive evaluation. Areas of interest include possible sources of contamination (i.e., fueling area, scrap metal storage, equipment storage, etc.).

- **List of the outfalls or onsite drainage points that were directly observed during the evaluation:**
 - Outfalls #001 through #005, #007, #010, #012, #014, #016, #018, and #019 associated with NPDES Permit No. MD0063801.
 - SWPPP Outfalls #001SW through #022SW.
 - Annually, the University monitors approximately 60% of all outfalls within the MS4 jurisdiction, including NPDES permit and SWPPP-related ones as part of our Outfall Reconnaissance Monitoring Program.
- **List of the outfalls or onsite drainage points that will be directly observed during future evaluations:**
 - Outfalls #001 through #005, #007, #010, #012, #014, #016, #018, and #019 associated with NPDES Permit No. MD0063801.
 - SWPPP Outfalls #001SW through #022SW.
 - Additionally, at least 50% of all outfalls onsite will be screened annually as part of the MS4 Illicit Discharge Detection and Elimination (IDDE) Plan.
- **Different types of non-stormwater discharge(s) and source locations:** None were observed outside of those authorized by UMD's State Discharge Permit No. 08-DP-2618 (NPDES Permit No. MD0063801).
- **Action(s) taken, such as a list of control measures used to eliminate unauthorized discharge(s), if any were identified. For example, a floor drain was sealed, a sink drain was re-routed to sanitary, or an NPDES permit application was submitted for an unauthorized cooling water discharge:** Several actions have been taken as part of the University's IDDE Plan. These records are stored in the IDDE Plan at the Environmental Services Facility.

2.4 *Salt Storage*

The salt storage facility is located in DA2 and can be seen on the site map in Appendix B. A description of the salt storage area as well as BMPs in place there can be found in Section 1.4 of this plan.

2.5 *Visual Monitoring Summary*

See Appendix G for a history of visual monitoring and summary of potential problems related to stormwater during the previous term.

2.6 *PFAS and PCB Source Identification*

The inclusion of Per- and Polyfluoroalkyl (PFAS) and Polychlorinated Biphenyls (PCBs) monitoring in the 20-SW system highlights the recognition of the environmental risks associated with these chemical groups. PFAS compounds, extensively used in everyday products such as non-stick cookware, stain-resistant fabrics, and firefighting foam, are persistent and highly toxic pollutants that can accumulate in organisms, including humans, leading to adverse health effects. Similarly, PCBs, once widely utilized in industrial applications, were banned due to their persistence and toxicity. These chemicals are known to bioaccumulate and can cause severe health issues, including cancer, reproductive problems, and developmental delays. Contaminating water sources, they pose a significant threat to both human health and the environment.

PCBs can stem from diverse sources, such as electrical transformers, hydraulic fluids, paints, adhesives, and industrial and municipal waste. Transformers containing PCBs were eliminated from the University campus approximately 30 years ago. It has been established that the primary source of PCBs at the University is the exterior caulking utilized in older buildings on campus. However, through collaborative restoration efforts involving FM and ESSR, the caulk is extracted from the buildings, carefully packed into drums, and disposed of in compliance with applicable disposal regulations.

On the other hand, PFAS can potentially be derived from firefighting foams, non-stick cookware, stain-resistant materials, food packaging, and certain industrial processes. Following a thorough investigation into the possible presence of PFAS at the Maryland Fire and Rescue Institute (MFRI) in College Park, Maryland, as well as the artificial athletic turf within the University, it has been determined that neither location utilizes, nor has a history of using, any materials that contain PFAS.

SECTION 3: STORMWATER POLLUTION CONTROL MEASURES

As required by the 20-SW permit for the facility, UMD has developed and implemented a series of stormwater management pollution controls. The purpose of the stormwater management pollution controls is to minimize the potential for stormwater to become contaminated as a result of activities performed on-site.

The following set of stormwater management pollution controls has been developed and implemented regarding the activities at University of Maryland.

1. Minimizing Exposure
2. Good Housekeeping
3. Preventive Maintenance
4. Spill Prevention and Response Procedures
5. Erosion and Sediment Controls
6. Management of Stormwater Runoff
7. 20-SW Sector-Specific Non-Numeric Effluent Limit Controls
8. Elimination of Non-Stormwater Discharges

3.1 *Minimize Exposure*

Structural BMPs and practices are utilized to minimize the exposure of industrial activities to rain, snowmelt, and runoff. All scrap metal, recycling activities, roll-offs, and hazardous materials should be covered during precipitation events to the greatest extent possible in order to minimize exposure. Vehicles and equipment stored on site should have drip pans deployed underneath them to catch any leaks or spills. Appendix C contains a BMP fact sheet.

Vehicle maintenance takes place primarily within the confines of the maintenance shops at UMD. All hazardous materials associated with daily operations, such as oils and chemicals, are stored indoors or, when stored outdoors, are covered and within secondary containment. There are zipper drains located along the entrance to the maintenance bays that drain to oil water separators prior to discharging to the sanitary sewer.

The fueling infrastructure within the DA2 site consists of a fueling area located in the eastern section. This area accommodates a 1,000-gallon AST for gasoline and a separate 1,500-gallon AST for diesel fuel. Moving to the southeastern corner of the DA3 facility, there is a 20,000-gallon diesel fuel AST accompanied by a fuel pump.

In the western portion of the DA5 site, a fuel island is situated, featuring multiple storage tanks. This includes two 10,000-gallon ASTs for gasoline and one AST specifically designed for E85 gasoline, with a capacity of 10,000 gallons as well. Additionally, positioned at the southern end of this area is a 12,000-gallon AST dedicated to #2 fuel oil.

Within the DA6 facility, a diked containment system has been implemented to house an assortment of storage tanks. This containment setup comprises one 8,000-gallon diesel above-ground storage tank (AST) and two 252,762-gallon ASTs intended for #2 fuel oil. Adjacent to the containment area is a designated fueling area consisting of three zipper drains.

It is important to note that all the ASTs are double-walled and listed in the Spill Prevention, Control, and Countermeasure (SPCC) Plan. Regular inspections are conducted in accordance with the UMD SPCC Plan. Additionally, apart from the fueling areas, there are several waste oil ASTs located within the drainage areas.

3.2 Good Housekeeping

Good housekeeping requires the maintenance of a clean, orderly facility. A clean work environment reduces the potential for pollution sources to contact stormwater. Good housekeeping practices include material management (such as storing materials indoors), limiting inventories kept in stock, storing materials according to manufacturers' directions and storing them away from heavy traffic areas. Good housekeeping also includes waste management measures such as sweeping, regular pickup and disposal of waste materials, and routine cleaning. Leak/spill prevention and response measures are also incorporated into a good housekeeping plan. Avoiding, controlling, and cleaning a spill will reduce the opportunity of stormwater contamination. As part of spill prevention effort, good housekeeping measures also include awareness measures such as posting signs with instructions for facility practices such as fueling or waste disposal.

The University of Maryland practices good housekeeping with respect to:

- Upkeep of facility roads and regular sweeping;
- Hazardous material storage areas and loading/unloading within DA1;
- Salt storage in DA2;
- Fuel system and loading/unloading areas within:
 - DA2
 - one (1) 1,000-gallon gasoline AST;
 - one (1) 1,500-gallon diesel fuel AST;
 - DA3
 - One (1) 20,000-gallon diesel fuel AST;
 - DA6
 - two (2) 10,000-gallon gasoline ASTs;

- one (1) E85 10,000-gallon gasoline AST;
- one (1) 10,000-gallon diesel AST;
- Maintenance of vehicles and equipment in DA2 and DA3;
- Vehicle maintenance within DA3 and DA5;
- Chemical storage within DA2 and DA6;
- Source-separated recycling activities within DA4;
- Bulk landscaping material storage within DA 2 and DA4;
- Training employees about good housekeeping practices;
- Regularly inspecting of all ASTs and drums per SPCC plan; and
- Regularly picking up and disposing of waste materials in all drainage areas throughout the campus.

3.3 Preventative Maintenance

A preventive maintenance program involves timely inspection and maintenance of stormwater management devices, in addition to inspecting facility equipment and systems to uncover conditions that could potentially cause breakdowns or failures resulting in discharges of pollutants to surface waters.

The facility's preventive maintenance program includes the following elements:

- Visual inspections of the stormwater management systems;
- Visual inspections of mechanical equipment and systems;
- Routine inspections of the facility following the Routine Inspection Checklist included in Appendix H;
- Annual Comprehensive Site Inspection following the Annual Inspection Checklist included in Appendix I. The previous years' inspections can be found in Appendix J;
- Routine inspections of ASTs and other storage tanks per the SPCC Plan;
 - Seven (7) of the ASTs at UMD require additional integrity inspections in accordance with STI SP001;

- Two (2) of the ASTs at UMD were originally built to API 650 standard and are inspected in accordance with the API 653 standard;
- Records documenting inspections; all inspection records are maintained at the UMD Environmental Affairs office.
- Records documenting maintenance and repairs; all maintenance and repair records are completed and stored by the individual maintenance shops.

3.3.1 DELIVERY VEHICLES

UMD strives to minimize contamination of stormwater runoff from delivery vehicles while on campus. This includes occasionally inspecting delivery vehicles arriving at the site and ensuring overall integrity of the body or container and maintaining response procedures to deal with leaks or spills from vehicles or containers (such as those contained within the UMD SPCC plan). The University also maintains 24-hour spill response capabilities to deal with any leaks from delivery vehicles, as well as buses, cars, and other non-UMD vehicles on the campus.

3.3.2 FUEL OIL UNLOADING AREAS

The University actively minimizes contamination of precipitation or surface runoff from fuel oil unloading areas. Several control measures are used, including: (a) using containment curbs in unloading areas; (b) having personnel familiar with spill prevention and response procedures present during deliveries to ensure that any leaks or spills are immediately contained and cleaned up; and (c) using spill and overflow protection devices (e.g., drip pans, drip diapers, or other containment devices placed beneath fuel oil connectors to contain potential spillage during deliveries or from leaks at the connectors). The primary UMD fueling facilities include the Severn Building, the Combined Heat & Power Plant, and the Shuttle Bus Facility; all of which have oil water separators that receive the drainage from the fueling areas in order to prevent the discharge of fuel or oil.

3.3.3 CHEMICAL LOADING AND UNLOADING

UMD minimizes contamination of precipitation or surface runoff at chemical loading and unloading areas by one or more of the following strategies: (a) using containment curbs and/or spill kits at chemical loading and unloading areas to contain spills; (b) having personnel familiar with spill prevention and response procedures present during deliveries to ensure that any leaks or spills are immediately contained and cleaned up; (c) loading and unloading in covered areas and storing chemicals indoors; and (d) using vehicles stocked with spill kits to transport chemicals onsite.

3.3.4 MISCELLANEOUS LOADING AND UNLOADING AREAS

UMD minimizes contamination of precipitation or surface runoff at loading and unloading areas by one or more of the following strategies: (a) covering the loading area; grading, berming, or curbing around the loading area to divert run-on; (b) locating the loading and unloading equipment

and vehicles so that leaks are contained in existing containment and flow diversion systems; or (c) loading and unloading in covered areas.

3.3.5 LIQUID STORAGE TANKS

UMD minimizes contamination of surface runoff from aboveground liquid storage tanks by one or more of the following options: (a) protective guards around tanks, containment curbs, secondary containment, spill and overflow protection; (b) access to dry cleanup methods, and (c) regular inspections and maintenance following the schedule within UMD's SWPPP and SPCC plan.

3.3.6 LARGE BULK FUEL STORAGE TANKS

UMD minimizes contamination of surface runoff from large bulk fuel storage tanks by the use of containment dikes (or their equivalent), and by complying with applicable State and Federal laws, including the UMD SPCC plan requirements.

3.3.7 SPILL REDUCTION MEASURES

UMD minimizes the potential for an oil or chemical spill by following the UMD SPCC plan and scheduled inspections. The scheduled inspections include visually inspecting the structural integrity of all aboveground tanks, pipelines, pumps, and related equipment that may be exposed to stormwater. Necessary repairs identified during the inspection are initiated immediately.

There are seven (7) of the ASTs at UMD that require additional integrity inspections in accordance with STI SP001 and are required to have a formal external inspection once every twenty (20) years:

- One (1) 6,000-gallon double-walled diesel fuel tank at Lab for the Physical Sciences (#796)
- One (1) 8,000-gallon diked double-walled diesel fuel tank at the Plant Operations and Maintenance (#006)
- Two (2) 10,000-gallon double-walled gasoline fuel tanks at the Severn Building (#810)
- One (1) 10,000-gallon double-walled E-85 fuel tank at the Severn Building (#810)
- One (1) 12,000-gallon double-walled #2 fuel oil tank at the Severn Building (#810)
- One (1) 20,000-gallon double-walled diesel fuel tank at the Shuttle Bus Facility (#424)

Additionally, there are two (2) of the ASTs at UMD were originally built to API 650 standard and are inspected in accordance with the API 653 standard:

- Two (2) 252,762-gallon #2 fuel oil bulk storage tanks at the Plant Operations and Maintenance (#006) are required to have monthly routine in-service inspections, a formal external inspection once every five (5) years and an internal inspection once every twenty (20) years (or sooner based on the inspection results). API 653 standard dictates the internal

inspections shall not exceed 10 years unless the tank has one of more leak prevention, detection, corrosion mitigation or containment safeguards.

3.3.8 RESIDUE-HAULING VEHICLES

UMD strives to inspect all residue-hauling vehicles for proper covering over the load, adequate gate sealing, and overall integrity of the container body.

3.3.9 VEHICLE AND EQUIPMENT STORAGE

UMD minimizes the potential for stormwater exposure to leaky or leak-prone vehicles/equipment awaiting maintenance. One or more of the following strategies are used: (a) use of drip pans under vehicles/equipment; (b) indoor storage of vehicles and equipment; (c) installation of berms or dikes; (d) use of absorbents, roofing or covering storage areas; and (e) cleaning pavement surfaces to remove oil and grease.

3.3.10 FUELING AREAS

UMD minimizes contamination of stormwater runoff from fueling areas as well as fueling loading and unloading areas by following one or more of the following strategies: (a) covering the fueling area; using spill/overflow protection and cleanup equipment; (b) minimizing stormwater run-on/runoff to the fueling area; (c) using dry cleanup methods; and (d) treating (i.e., with oil water separators) and/or recycling collected stormwater runoff.

3.3.11 MATERIAL STORAGE CONTAINERS

UMD maintains all material storage containers (e.g., for used oil/oil filters, spent solvents, hydraulic fluids) to prevent contamination of stormwater and plainly label them (e.g., “Used Oil,” “Spent Solvents,” etc.). One or more of the following strategies are used: (a) storing the materials indoors; (b) installing berms/dikes around the areas; (c) minimizing runoff of stormwater to the areas; (d) using dry cleanup methods; and (e) treating and/or recycling collected stormwater runoff.

3.3.12 VEHICLE AND EQUIPMENT CLEANING AREAS

UMD minimizes contamination of stormwater runoff from all areas used for vehicle/equipment cleaning by one or more of the following strategies: (a) performing cleaning operations indoors when possible; (b) covering the cleaning operation, ensuring that all washwater drains to a proper collection system (i.e., not the stormwater drainage system); (c) transporting the collected wash water offsite for treatment; and (d) treating and/or recycling collected washwater.

3.3.13 VEHICLE AND EQUIPMENT MAINTENANCE AREAS

UMD minimizes contamination of stormwater runoff from all areas used for vehicle/equipment maintenance by: (a) performing maintenance activities indoors; (b) keeping an organized inventory of materials used in the shop; (c) draining all parts of fluid prior to disposal; and (d) using dry cleanup methods.

3.3.14 INBOUND RECYCLABLE MATERIAL CONTROL

UMD minimizes the chance of accepting nonrecyclables (e.g., hazardous materials) that could be a significant source of pollutants by conducting inspections of inbound materials. Following are some control measure options: (a) providing information and education measures to inform suppliers of recyclables about acceptable and non-acceptable materials, (b) training drivers responsible for pickup of recycled material, (c) clearly marking public drop-off containers regarding which materials can be accepted, (d) rejecting nonrecyclable wastes or household hazardous wastes at the source, and (e) establishing procedures for handling and disposal of nonrecyclable material.

3.3.15 OUTDOOR STORAGE

UMD minimizes exposure of recyclables to precipitation and runoff. Use good housekeeping measures to prevent accumulation of particulate matter and fluids, particularly in high traffic areas. Following are some control measure options (a) provide totally enclosed drop-off containers for the public; (b) install a sump and pump with each container pit and treat or discharge collected fluids to a sanitary sewer system; (c) provide dikes and curbs for secondary containment (e.g., around bales of recyclable waste paper); (d) divert surface water runoff away from outside material storage areas; (e) provide covers over containment bins, dumpsters, and roll-off boxes; and (f) store the equivalent of one day's volume of recyclable material indoors.

3.3.16 VEHICLE AND EQUIPMENT MAINTENANCE

UMD implements control measure for areas where vehicle and equipment maintenance could occur outdoors including but not limited to (a) prohibit vehicle and equipment washwater from discharging to the storm sewer system, (b) minimize or eliminate outdoor maintenance areas whenever possible, (c) establish spill prevention and clean-up procedures in fueling areas, (d) avoid topping off fuel tanks, (e) divert runoff from fueling areas, (f) store lubricants and hydraulic fluids indoors, and (g) provide employee training on proper handling and storage of hydraulic fluids and lubricants.

3.4 Spill Prevention and Response

Spill prevention and response measures focus both on spill prevention and on providing adequate measures to respond to leaks or spills to prevent surface water contamination. Areas most at risk for leaks and spills include fueling areas, equipment maintenance areas, and areas where vehicles and equipment are stored.

Spill prevention measures include:

- Proper storage practices;
- Routine inspections of potential pollutant sources;
- Regular inspections and maintenance of spill response kits, materials, and devices;

- Routine maintenance of equipment containing oil or hazardous materials; and

Spill containment and cleanup measures include:

- Identification and training of a Spill Response Team – the Office of Environmental Affairs performs 24/7 incident response;
- Maintaining spill cleanup materials in designated areas for immediate treatment;
- Using absorbent to control spills and promptly removing and properly disposing used absorbent;
- Blocking access to stormwater drainage systems;
- Contacting a licensed spill response contractor, if the spill cannot be immediately contained; the fire department may also provide containment response in emergencies;
- Contacting state, federal, and appropriate local agencies;
- Repairing equipment or tanks which caused a leak or spill to occur; and
- Maintaining records of spill occurrences for three years.

Specific spill response, notification and reporting procedures are provided in Appendix K and in the facility's SPCC Plan.

3.5 Erosion and Sediment Controls

Erosion concerns can be divided into two broad categories: (1) Erosion due to active construction projects and (2) chronic or nuisance eroding areas due to inadequate conveyance, steep slopes, or insufficient vegetative stabilization.

The first category of erosion potential is associated with various development projects being actively constructed or planned on campus areas. For construction projects disturbing more than 5,000 square feet, the Maryland Department of the Environment (MDE) will be contacted to establish an approved sediment and erosion control plan. These plans will be developed by a professional engineer and identify the specific control measures that will be in place during construction to minimize erosion and sedimentation. UMD is also responsible for obtaining a General Discharge Permit for Stormwater Associated with Construction Activity (20-CP) from MDE for projects that will disturb one or more acres of earth.

The second category of erosion or sedimentation problems involves areas that may experience nuisance erosion due to inadequate conveyance, steep slopes, or insufficient vegetative stabilization. Areas of erosion will be identified during the Quarterly Routine Facility Inspection and Annual Inspection. All inspection and evaluation forms are included in the appendices of this SWPPP. Maintenance will be conducted on an as needed basis.

3.6 Management of Stormwater Runoff

While the UMD SWPPP focuses primarily on six (6) smaller drainage areas within the campus, the SWPPP is applicable to stormwater runoff that is managed throughout the entire campus. UMD maintains a system of devices to manage stormwater runoff. This system includes, but is not limited to grass swales, bioretention areas, stormwater ponds, stormwater inlets and conveyances, oil/water separators, direct connections to sanitary sewer systems, and outfalls. A considerable number of the stormwater inlets at UMD have inlet protection to minimize particulates or materials from being discharged. The stormwater management system is depicted on the Site Map in Appendix B.

In conjunction with UMD's system of stormwater management, UMD implements the following: an individual permit that is specifically tailored to controlling the University's discharge of industrial wastewater to surrounding surface waters (State Discharge Permit No. 08-DP-2618); a NPDES Phase II MS4 general permit which covers the discharge of stormwater run-off from land, pavement, building rooftops and construction sites on campus (Permit No. 13-SF-5501); a permit for the discharge from the application of pesticides (Permit No. 17-PE-0195); a SPCC Plan; an IDDE Plan; and, as required, various 14-GP and 20-CP permits, as well as site-specific Sediment & Erosion Control Plans. BMPs associated with the additional permits are located in Appendix C.

3.7 Salt Storage Piles or Piles Containing Salt

As described in Section 1.4, UMD maintains a salt storage facility within DA2. The circular structure is enclosed by walls on all sides, with the exception of the open entrance that allows access for loading/unloading salt equipment. Approximately 600 tons of rock salt are stored within the salt dome and is typically delivered in the fall for storage until it is needed in the winter months. Re-fill orders are placed on an "as-needed" basis. The salt dome has structural BMPs in place in order to divert and redirect stormwater from entering the storage area.

3.8 20-SW Sector-Specific Non-Numeric Effluent Limits

For purposes of the 20-SW Permit, UMD is primarily classified as industrial Sector AD.b: School Bus Maintenance Facilities. The other sectors associated with UMD include Sector K: Hazardous Waste Treatment, Storage, or Disposal Facilities; Sector N: Scrap Recycling and Waste Recycling Facilities; Sector O: Steam Electric Generating Facilities; Sector P: Land Transportation and Warehousing; and Sector AD.a: Department of Public Works and Highway Maintenance Facilities.

These sectors require additional control measures and/or technology-based effluent limits, outlined in Appendix D of the 20-SW. These control measures include:

- Good Housekeeping has been addressed in Section 3.3 of the SWPPP;
- O.4.2 Delivery Vehicles has been addressed in Section 3.3.1 of the SWPPP;
- O.4.3 Fuel Oil Unloading Areas has been addressed in Section 3.3.2 of the SWPPP;
- O.4.4 Chemical Loading and Unloading has been addressed in Section 3.3.3 of the SWPPP

- O.4.5 Miscellaneous Loading and Unloading Areas has been addressed in Section 3.3.4 of the SWPPP;
- O.4.6 Liquid Storage Tanks has been addressed in Section 3.3.5 of the SWPPP;
- O.4.7 Large Bulk Fuel Storage Tanks has been addressed in Section 3.3.6 of the SWPPP;
- O.4.8 Spill Reduction Measures has been addressed in Section 3.3.7 of the SWPPP;
- O.4.10 Residue-Hauling Vehicles has been addressed in Section 3.3.8 of the SWPPP;
- P.3.1.1 Vehicle and Equipment Storage Areas has been addressed in Section 3.3.9 of the SWPPP;
- P.3.1.2 Fueling Areas has been addressed in Section 3.3.10 of the SWPPP;
- P.3.1.3 Material Storage Areas has been addressed in Section 3.3.11 of the SWPPP;
- P.3.1.4 Vehicle and Equipment Cleaning Areas has been addressed in Section 3.3.12 of the SWPPP;
- P.3.1.5 Vehicle and Equipment Maintenance Areas has been addressed in Section 3.3.13 of the SWPPP;
- N.3.3.1 Inbound Recyclable Material Control has been addressed in Section 3.3.14 of the SWPPP;
- N.3.3.2 Outdoor Storage has been addressed in Section 3.3.15 of the SWPPP; and
- N.3.3.4 Vehicle and Equipment Maintenance in Section 3.3.16 of the SWPPP.

3.9 Employee Training

Pollution prevention training is necessary to ensure that employees are aware of how to minimize or mitigate their impact to stormwater, their responsibilities to prevent pollution, and methods for controlling pollution releases. Training sessions are held annually or as needed for UMD's P2 team members.

Training topics include the following:

- Spill response
- Good housekeeping practices
- Material management practices

All training is organized and coordinated by the UMD Office of Environmental Affairs. SPCC training will be performed as outlined in the UMD SPCC Plan. Other training sessions will be held as needed to address specific topics of interest.

The training materials for UMD stormwater pollution prevention training sessions are included in Appendix L.

3.10 Potable Water Discharges

UMD maintains an extensive life safety program through its Facilities Management Department. Life Safety staff are responsible for the maintenance and NFPA inspections/testing of fire protection equipment including fire hydrants, fire pumps and fire sprinkler systems. However, the UMD Piped Services group of Facilities Management handles all maintenance and repairs of the fire hydrants and University owned water distribution system. The NFPA testing requires flushing of the hydrants to remove accumulated solids and to ensure the equipment is operating at required pressures. As part of the required testing, Life Safety tests one third of the campus hydrants annually and will calculate flow from these discharges and maintain records of the flow rates.

In addition to the hydrant testing/maintenance, Life Safety tests sprinkler systems and their associated pumps on an annual basis. Moreover, Piped Services also perform periodic maintenance of water mains, which includes periodic flushing as part of system maintenance.

The NPDES permit #08-DP-2618 authorizes UMD to discharge potable water from the testing/maintenance of its fire protection equipment. The permit requires the implementation of a pollution prevention plan with technology-based best management practices (BMPs). This SWPPP will satisfy the pollution prevention plan requirement and the BMPs that will be implemented include:

- Water dechlorination and/or aeration prior to discharge.
- Direct the discharge in a manner that it will not cause soil erosion.
- Prior to discharging, clean any paved area that will come in contact with the discharged water in order to reduce the amount of pollutants picked up by the discharge.
- Maintain records of all discharges, including the dates, quantity of water discharged and BMPs implemented.

A BMP fact sheet describing the details of these practices is included in Appendix C.

3.11 Non-Stormwater Discharges

Non-stormwater discharges are strictly prohibited as per sector-specific regulations, unless covered by an additional NPDES/State discharge permit. The University of Maryland operates under State Discharge Permit No. 08-DP-2618 (NPDES permit MD0063801), allowing the discharge of contact and non-contact cooling water, boiler blowdown, condensate, and stormwater runoff through twelve designated outfalls. Additionally, the university holds a Phase II MS4 NPDES Permit (Permit No. MD0063801 or 13-SF-5501) and has implemented an Illicit Discharge Detection and Elimination (IDDE) plan to identify and eliminate unauthorized discharges and connections to the university's MS4 system.

The IDDE program incorporates activities such as storm sewer mapping, policy development, public education, reporting, recordkeeping, and staff training. Additionally, the Phase II MS4 NPDES Permit requires that the University inspect, at a minimum, 50% of all their outfalls

annually. The purpose of the inspections is to screen for any source of an illicit discharge and to eliminate any improper connection or illicit discharge to the storm drain system.

Please reference the non-stormwater inspection report for further information located in Section 2.3.

SECTION 4: SCHEDULES AND PROCEDURES FOR MONITORING

UMD is required to perform sector specific benchmark monitoring only for Sector K (20-SW permit, Appendix D, Sector AD.a, AD.b, K, O, and P). Visual and benchmark monitoring will begin on the first full monitoring period after the registration acceptance of the 20-SW permit. A copy of the chain of custody (COC) is provided in Appendix M. If the visual or benchmark monitoring parameters indicate the need for a corrective action, then the Office of Environmental Affairs will review the selection, design, installation, and implementation of BMPs and stormwater controls to determine if modifications are necessary to meet the effluent limits in the 20-SW Permit.

4.1 Sample Location(s)

- Outfall #001SW is subject to benchmark monitoring in accordance with Part V.B.1 of the 20-SW permit (Appendix D).

4.2 Pollutant Parameters and Numeric Limitations:

In compliance with 20-SW Part V.B and the applicable sector requirements, the following sectors have numeric limitations:

Table 5: Subsector K1 Benchmarks

Sector	Drainage Area	Outfall	Pollutants (Freshwater)	Benchmark	Units
K	DA-1	#001SW	Ammonia	2.14	mg /L
			Chemical Oxygen Demand (COD)	120.0	mg /L
			Total Recoverable Arsenic	150	µg /L
			Recoverable Cadmium	1.8	µg /L
			Recoverable Cyanide	22	µg /L
			Total Lead*	0.082	mg /L
			Total Recoverable Mercury*	1.4	µg /L
			Total Recoverable Selenium*	3.1	µg /L
			Total Silver*	4.6	µg /L

*The determination of water hardness in the receiving water must be conducted as per Appendix C, as it is dependent on these parameters.

4.3 Impaired Water Monitoring

As per the 20-SW requirements, facilities that discharge to impaired waters, as defined by Clean Water Act Section 303(d), must undergo additional monitoring for pollutants that are not addressed

by the established Total Maximum Daily Load (TMDL), or Waste Load Allocation (WLA) set by MDE or the EPA. The established TMDLs for the Anacostia watershed and the Paint Branch include heptachlor epoxide, chloride, and sulfate, with chloride being the potential pollutant relevant to covered industrial activities. Outfall #002SW will be monitored annually to comply with the impaired water monitoring requirement, as a result of the salt storage facility in DA2.

4.4 Monitoring Schedules.

- Once per outfall, per quarter.

4.5 Procedures.

The following procedures are in place for the different monitoring and sampling requirements with the 20-SW Part III.B.2

- A. Visual Monitoring:** Qualified personnel will collect visual monitoring samples from each outfall within 30 minutes of a measurable storm event during each quarter. These samples will be rotated between substantially identical outfalls to ensure accuracy. A measurable storm event is defined as one that follows a preceding storm event by at least 72 hours and results in an actual discharge from the site. The monitoring procedures used must be consistent with 20-SW Part V.C (Appendix D) and USEPA's Industrial Stormwater Monitoring and Sampling Guide (Appendix N). Additional training, including mandatory and sampling-specific training, is provided in Appendix L.
- B. Benchmark Sampling:** Qualified personnel are responsible for conducting benchmark monitoring samples at Outfall #001SW each quarter, in accordance with the relevant sampling and analysis requirements at 40 CFR Part 136. To ensure accuracy, these samples must be collected within 30 minutes of a measurable storm event. A measurable storm event is defined as one that follows a preceding storm event by at least 72 hours and results in an actual discharge from the site. The sampling procedures used will be consistent with 20-SW Part V.C (Appendix D) and USEPA's Industrial Stormwater Monitoring and Sampling Guide (Appendix N). Additional training, which includes mandatory and sampling-specific training, is provided in Appendix L.
- C. Impaired Water Monitoring:** Qualified personnel are responsible for conducting the annual impaired water monitoring from Outfall #002SW.

4.6 Substantially Identical Outfalls:

Section 1.4 of the SWPPP outlines the drainage areas that have similar outfalls and includes the details of their exemption from the monitoring requirements in accordance with Part III.C.5.b.iv of the 20-SW Permit.

4.7 Inactive and Unstaffed Sites Exception

There are currently no inactive or unstaffed sites at the University of Maryland.

SECTION 5: INSPECTIONS

5.1 Routine Facility Inspections (Quarterly Site Inspection)

Routine site inspections are to be conducted quarterly, with at least one inspection in a calendar year occurring during a stormwater discharge. Routine inspections are to be completed by ESSR and problem areas are identified on the inspection sheets. P2 Team members supplement these inspections by evaluating the effectiveness of stormwater management controls in their work areas. Routine inspections review the effectiveness of the SWPPP and help to maintain best management practices.

The inspection sheets include a signed certification that the Site is in compliance with this SWPPP and the 20-SW permit or else a corrective actions report (Appendix O) is to be prepared and submitted with the inspection.

A member of the Office of Environmental Affairs will conduct quarterly inspections of the six (6) regulated drainage areas at UMD to ensure stormwater management controls are in place and functioning. In addition to the documented inspections, personnel at UMD will conduct visual inspections as part of their daily job functions to ensure areas are clean and maintained. Documentation of all Quarterly and Annual inspections is maintained in the SWPPP by the Office of Environmental Affairs and stored at the Environmental Services Building (Building #344). Sample routine inspections are available in Appendix H.

See Section 5.4 and Appendix O for further information regarding corrective actions.

5.2 Quarterly Visual Inspection (Quarterly Water Sampling)

Visual inspections of stormwater at UMD will be performed quarterly. Once each quarter, a member of the Office of Environmental Affairs will collect a stormwater sample from each regulated stormwater outfall and the sample will be visually assessed. A Quarterly Visual Monitoring Form is to be completed for each sample.

Samples will be taken from each outfall within 30 minutes of a measurable storm event by a member of the Office of Environmental Affairs. In the case of snowmelt, samples are taken during a period of measurable discharge. The completed Quarterly Visual Monitoring Forms and a time stamped photograph of each sample are to be updated and maintained in the SWPPP in Appendix F. A sample Quarterly Visual Monitoring Form and Visual Monitoring Procedures are found in Appendix G.

See Section 5.4 and Appendix O for further information regarding corrective actions.

5.3 Comprehensive Site Compliance Evaluation (Annual Site Inspection)

In addition to routine inspections, a Comprehensive Site Compliance Evaluation will be conducted annually to verify that the description of potential pollutant sources is accurate, the drainage map has been updated to reflect current conditions (Appendix B), and the controls to reduce pollutants identified in the SWPPP are being implemented and are adequate. The annual comprehensive site compliance evaluation can replace one routine quarterly inspection. Office of Environmental Affairs personnel will conduct annual written site compliance evaluations to verify the accuracy of the information contained within this document and the effectiveness of stormwater controls. The inspection will be completed by filling out the EPA Comprehensive Site Investigation sheet attached in Appendix I.

The Annual EPA Comprehensive Site Compliance Evaluation includes a signed certification that the Site is in compliance with this SWPPP and the 20-SW permit or else a corrective actions report (Appendix O) is to be prepared and submitted with the inspection. The Non-Stormwater Discharge Evaluation will be performed, as described in Section 2.3, at the same time as the annual Comprehensive Site Compliance Evaluation.

Section 5.4 of the document provides a detailed account of the corrective action triggers and associated procedures. Should a benchmark monitoring event, as outlined in Section 5.4, result in the activation of an AIM during the duration of the 20-SW, a Comprehensive Annual Report will be required to be appended to the electronic discharge monitoring report (DMR). We assume that electronic DMRs will be required to be submitted through the online NetDMR portal. Corrective Action Reports will be maintained within the SWPPP at the Environmental Services Building. For additional guidance on corrective actions, please refer to Section 5.4 and Appendix O.

5.4 Corrective Actions and Additional Implementation Measures (AIM)

Corrective Actions are mandatory modifications that are made to stormwater controls and BMPs to improve stormwater management to meet 20-SW permit conditions on-site. The 20-SW Permit Part IV requires that Corrective Actions be performed and reported when any of the following triggering conditions occurs:

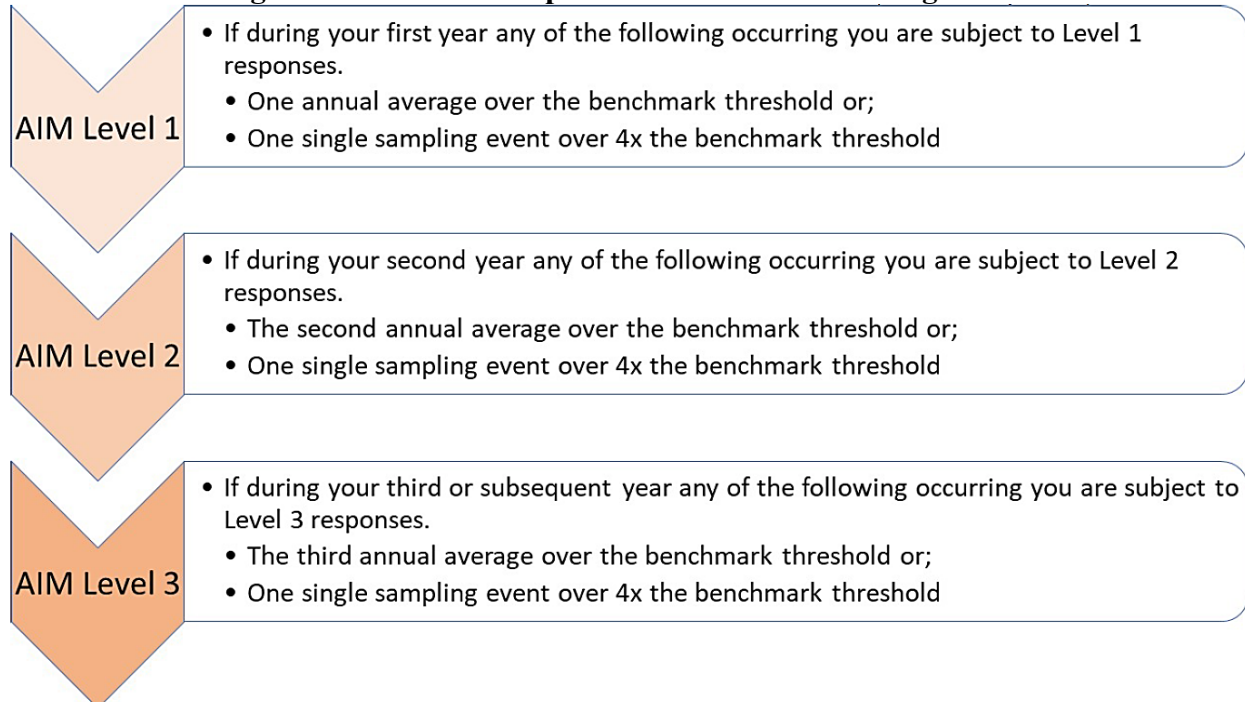
- A.** An unauthorized release or discharge (e.g., spill, leak, or discharge of non-stormwater not authorized by this or another NPDES permit) occurs at your facility;
- B.** A discharge violates a numeric effluent limit;
- C.** Your control measures are not stringent enough for the discharge to meet applicable water quality standards or the non-numeric effluent limits in this permit;
- D.** A required control measure was never installed, was installed incorrectly, or not in accordance with Parts III.A, III. B and/or in Appendix D, or is not being properly operated and maintained; or
- E.** Whenever a visual assessment (Part V.A.3) shows evidence of stormwater pollution (e.g., color, odor, floating solids, settled solids, suspended solids, foam).

For Corrective Action overview, deadlines, and reporting see Appendix O.

The Additional Implementation Measures (AIM) established by the 20-SW are mandatory increasingly robust responses to a benchmark exceedance depending on the nature, duration, and magnitude. There are three levels, broken into action levels, with increasing levels of requirements based on a facility's potential environmental impact and level of risk. Each action level is triggered by either:

1. One Annual Average Over the Benchmark Threshold. This can occur if the average of four quarterly samples for a parameter is over the benchmark threshold, or if less than four samples have been taken but the results are such that an exceedance is mathematically certain (i.e., if the sum of quarterly sample results to date is already more than 4 times the benchmark threshold); Or
2. One Single Sampling Event Over 4 Times the Benchmark Threshold. This can occur if a single sampling event for a parameter is over 4 times the benchmark threshold.

Figure 1. Additional Implementation Measures Progression



The action level responses are based on the year the triggering event occurs.

Benchmark Action Level 1 (AIM Level 1): During the first year when subjected to benchmarks (Year 1), the following responses must be implemented:

1. Review Stormwater Control Measures. Immediately review the selection, design, installation, and implementation of your control measures to determine if modifications are necessary to meet the benchmark threshold for the applicable parameter (Examples include review sources of pollution, spill and leak procedures, and/or non-stormwater discharges; conducting a single comprehensive clean-up, making a change in subcontractor, implementing a new control measure, and/or increasing inspections.) and



2. **Implement Additional Measures.** After reviewing your control measures, you must implement additional implementation measures to ensure the effectiveness of your control measures to bring your exceedances below the parameter's benchmark threshold; or if you determine nothing further needs to be done with your control measures, you must document per Part III.C and include in your annual report why you expect your existing control measures to bring your exceedances below the parameter's benchmark threshold; and
3. **Continue Quarterly Benchmark Monitoring.** After compliance with (i) and (ii) in this Part, you must continue quarterly benchmark monitoring into the next year. You must also attach your updated Comprehensive Annual Report to your next DMR.

Benchmark Action Level 2 (AIM Level 2): During the second year when subjected to benchmarks (Year 2), the following responses must be implemented within 30 days of the occurrence of the triggering event:

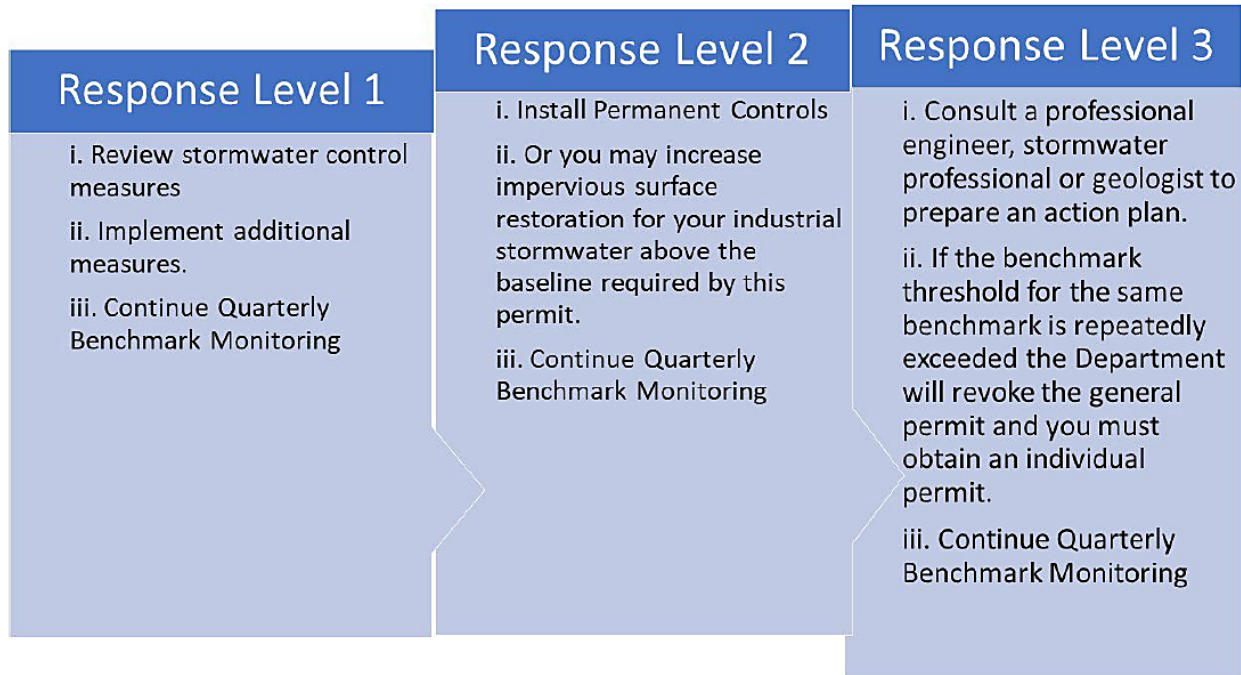
1. All response at Level 1;
2. **Install Permanent Controls.** Install structural source controls (e.g., permanent controls such as permanent cover, berms, and secondary containment), and/or treatment controls (e.g., sand filters, hydrodynamic separators, oil-water separators, retention ponds, the use of Chemical Additives (Part I.E.,5), and infiltration structures), except as provided in Part IV.B.5 (AIM Exceptions). The treatment technologies or treatment train you install must be appropriate for the pollutants that triggered AIM Tier 2 and must be more rigorous than the pollution prevention-type measures employed under AIM Level 1 in Part IV.B.1. You must select controls with pollutant removal efficiencies that are sufficient to bring your exceedances below the benchmark threshold. You must have a professional engineer, stormwater professional or geologist assist with the installation of such controls for the discharge point in question and for substantially similar discharge points, unless you individually monitor those substantially similar discharge points and demonstrate that AIM Level 2 requirements are not triggered at those discharge points; and/or
3. **Alternative Option:** As an alternative or adjunct to structural source controls and/or treatment controls, you may increase impervious surface restoration for your industrial stormwater about the baseline required by this permit, if such an approach is appropriate and feasible for your site-specific conditions. If this approach is feasible, the execution must be compliant with regulations for ground water protection and underground injection control (UIC). The analysis that shows infiltration/retention is appropriate for your site-specific conditions must be provided to the Department BEFORE you can choose this option and the Department must concur with your conclusions. Successful compliance with the provisions in this part may allow the Department to waive benchmark monitoring requirements (if this removes an outfall) and may generate marketable credits (refer to Part III.A); and
4. **Continue Quarterly Benchmark Monitoring.** After compliance with (i) and/or (ii) (if the Department approves) in this Part, you must continue quarterly benchmark monitoring into the next year. You must also attach your updated Comprehensive Annual Report to your next DMR.

Benchmark Action Level 3+ (AIM Level 3): If you are subject to benchmarks for the third year or more (Year 3+), you will be categorized under AIM Level 3. Facilities falling under this level must

conduct monitoring more frequently and submit annual reports to MDE. It is recommended that you seek the assistance of a professional engineer, stormwater professional, or geologist to prepare an action plan. Within 30 days of the occurrence of the triggering event, the facility must choose the professional, and an additional 30 days to prepare the action plan for submission to the Department. The action plan should include milestone dates and one of the two options below:

1. All response at Level 1 and 2;
2. Demonstrate the facility's discharge does not exceed water quality standards:
 - a. The facility must provide evidence to the Department within 60 days of receiving a request, which may be extended to 180 days if the Department gives notice. The evidence must include specific details such as the applicable water quality standards, the flow rate of the stormwater discharge, and the instream flow rates of the receiving water upstream and downstream of the discharge point. The proof must also include the ambient concentration of the parameters of concern, demonstrated by full-storm composite sampling, and the concentration of those parameters in the stormwater discharge, demonstrated by full-storm, flow-weighted composite sampling. The hardness of the receiving water and any relevant dilution factors are also required.
 - b. The Department will evaluate the proof for approval and make it publicly available. If the proof is rejected within 60 days, the operator must install structural source controls and/or treatment controls within 30 days of disapproval. If the installation is not feasible within 30 days, the facility may take an additional 30 days, documenting in the SWPPP why it is infeasible.
 - c. The Department may grant an extension beyond 60 days, based on an appropriate demonstration by the operator. It is advisable to work with the Department in advance to prepare for control installation if the proof is not approved. If the Department does not reject the plan within the prescribed time period or provide an extension, the operator must proceed with plan implementation, subject to additional requirements that the Department may impose.
3. The facility is required to install structural source and/or treatment control measures within 90 days of the triggering event described in Part IV.B.3.a. If it is not possible to install the measures within this timeframe, the operator may take up to an additional 30 days, provided that they explain in their SWPPP why it is not feasible to install the measures within 90 days. The Department may consider granting an extension beyond 120 days if the operator can provide an appropriate demonstration.
4. If there continues to be an exceedance of the quarterly benchmark threshold for the same parameter and the failure to show at least a 20% decrease from the previous year's performance, despite installing required structural source controls or treatment controls in Part IV.B.3.b.i, the Department will cancel the 20-SW permit coverage. This will be done by creating an individual permit to deal with water quality limits specific to the facility, or by making a final decision to refuse permit coverage, unless there is a current consent order; and
5. Continue Quarterly Benchmark Monitoring.

Figure 2. Additional Implementation Measures Response Levels



SECTION 6: SWPPP CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: Jason Baer Title: Assistant Director, Office of Environmental Affairs

Signature: *Jason Baer* Date: 7/5/2023

SECTION 7: SWPPP MANAGEMENT APPROVAL

We hereby certify that the management of UMD at College Park extends its full approval of this SWPPP and will commit the necessary resources to fully implement it as described herein. We understand that although this plan has reviewed and sent to MDE for approval; I, Carlo Colella as the Vice President and Chief Administrative Officer maintain financial responsibility for the implementation of this SWPPP and the resources required to comply with the SWPPP and 20-SW permit; and I, Maureen Kotlas, the Executive Director of Environmental Safety, Sustainability & Risk, maintain the authority to implement this SWPPP, ensure proper implementation of the provisions contained within the SWPPP, and enforce compliance with the 20-SW permit and associated regulations. We certify that this SWPPP will be reviewed and evaluated at least once every five years and updated as necessary to reflect any changes at the University.



Carlo Colella **Date**
Vice President & Chief Administrative Officer



Maureen Kotlas **Date**
Executive Director, Department of Environmental Safety, Sustainability & Risk

SECTION 8: SWPPP MODIFICATIONS

Revision	Date	Details / Comments
Revision 01	July 2017	SWPPP preparation for compliance with 12-SW
Revision 02	Oct. 2017	Update discrepancies identified during first round of quarterly inspections
Revision 03	Oct. 2018	Updated P2 Team to reflect changes in personnel. Removed Alexander Galbreath and replaced with Kaitlyn Peterson
Revision 03	May 2022	Phillip Riggs replaced with Mark Alexander for contact in P2 team
Revision 04	July 2023	SWPPP update and modification for compliance with 20-SW
Revision 05	Nov. 2023	Anthony Grancitelli replaced Mark Alexander for contact in P2 Team.
Revision 06	March 2024	Updated P2 Team to reflect changes in personnel.




APPENDIX A
GENERAL LOCATION MAP

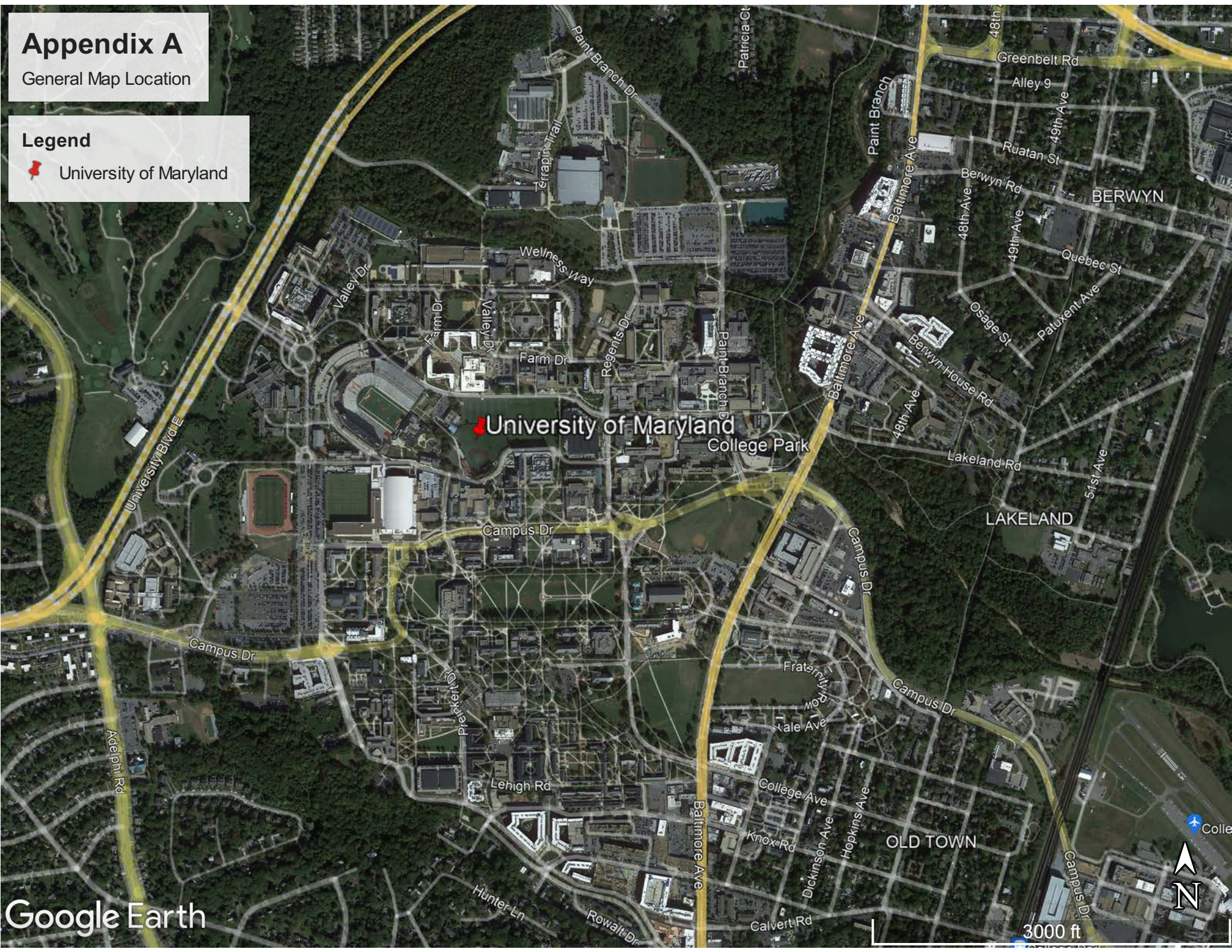
Appendix A

General Map Location

Legend

 University of Maryland

Google Earth



University of Maryland

College Park

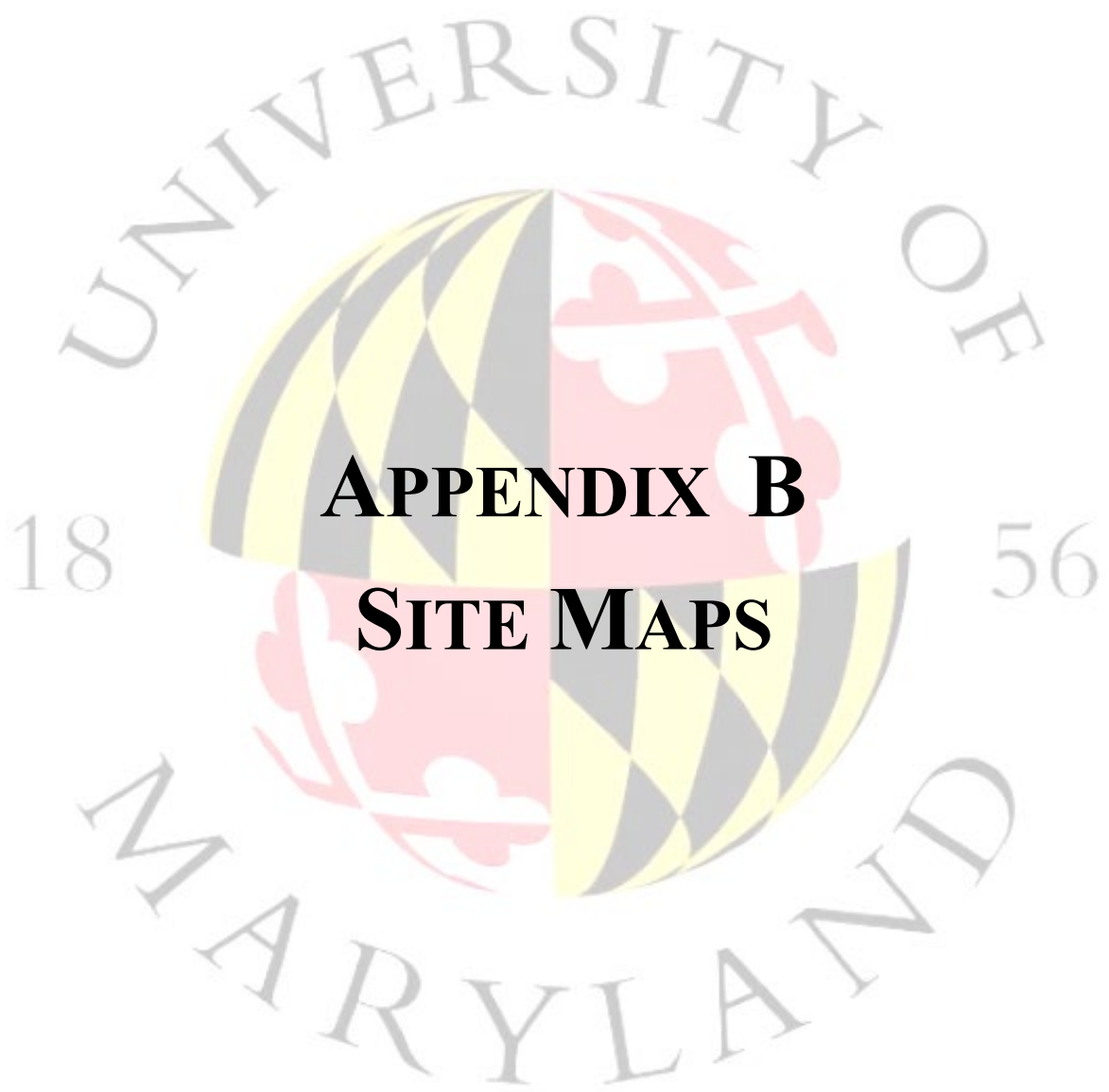
BERWYN

LAKELAND

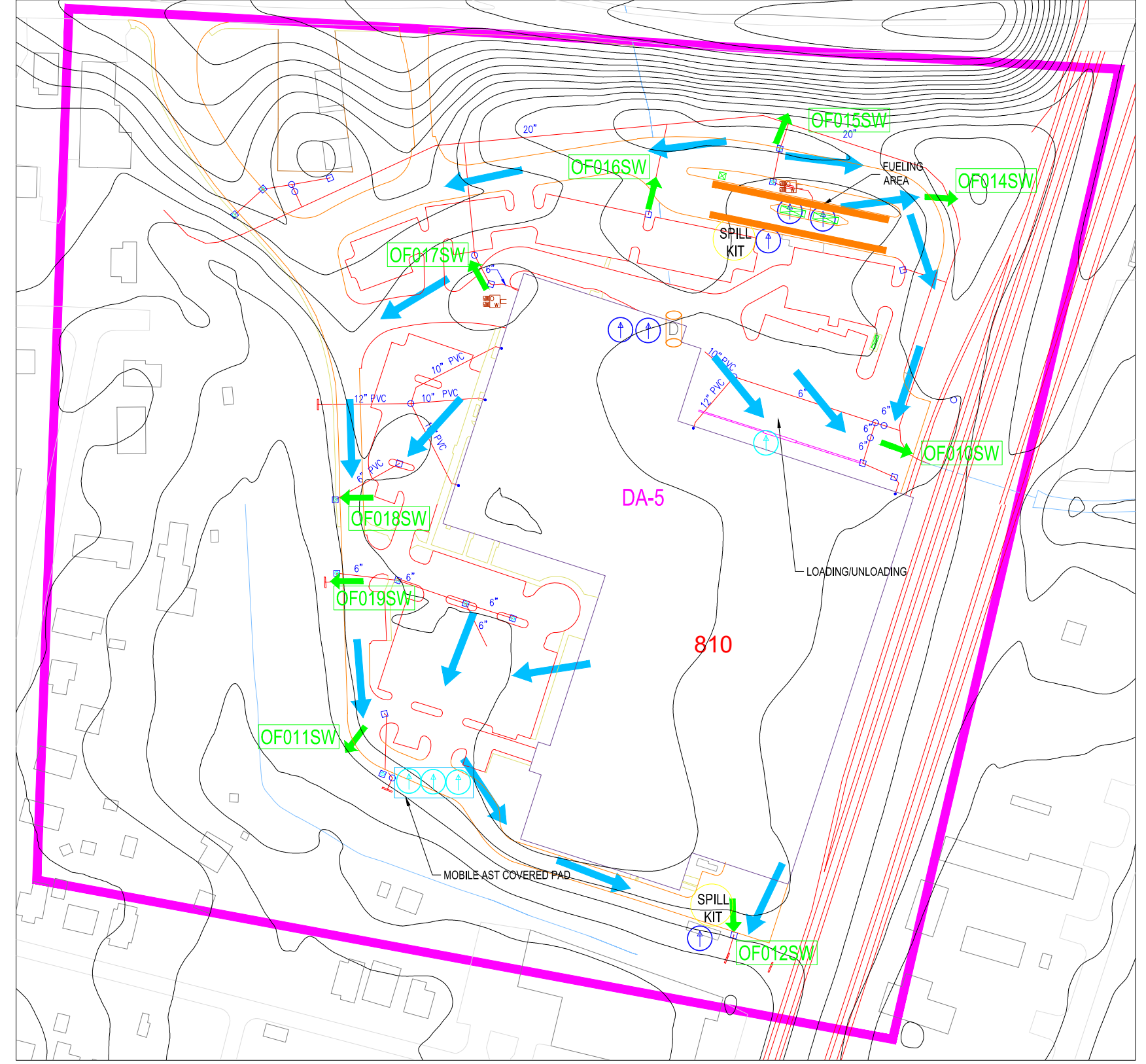
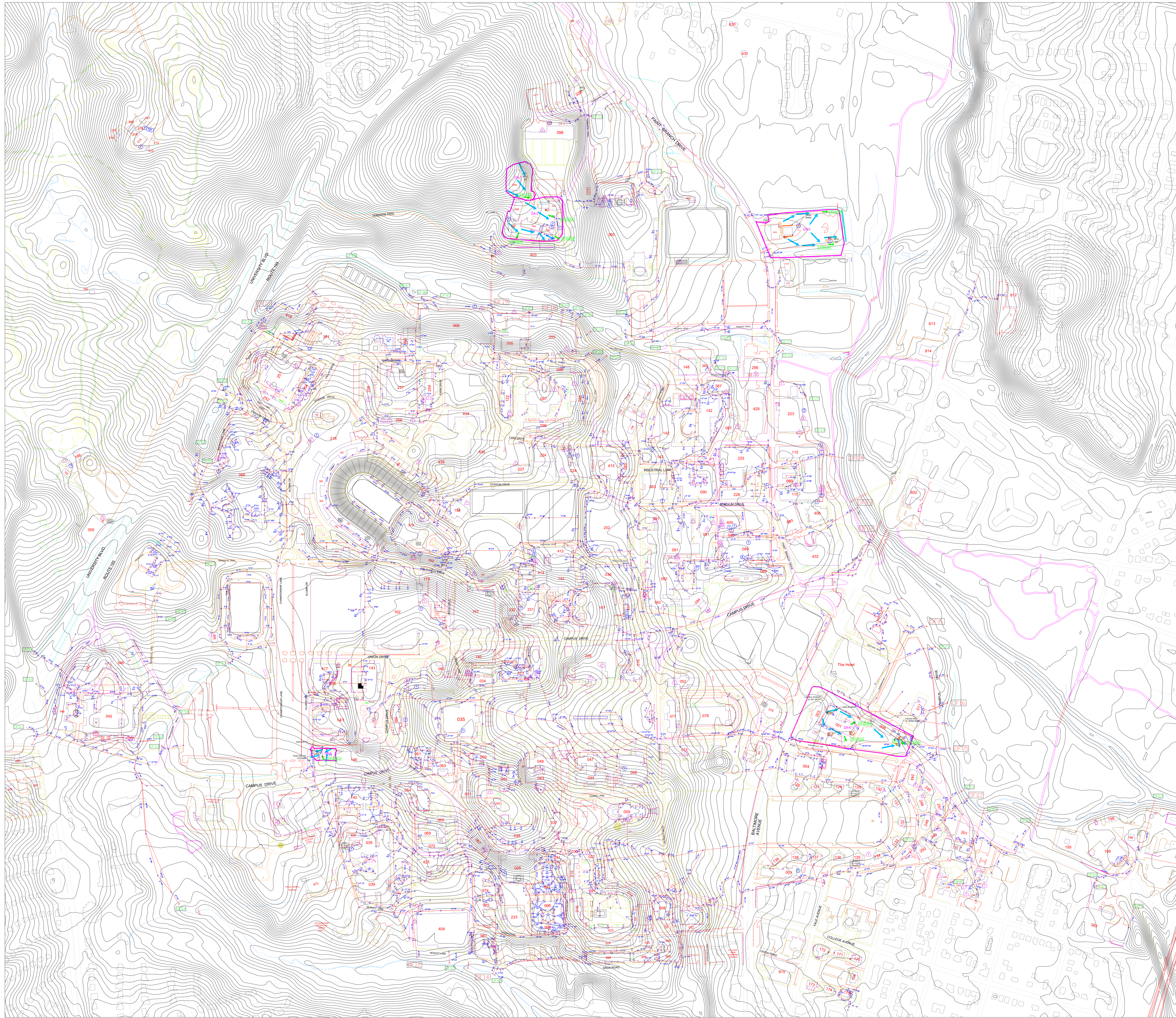
OLD TOWN

3000 ft

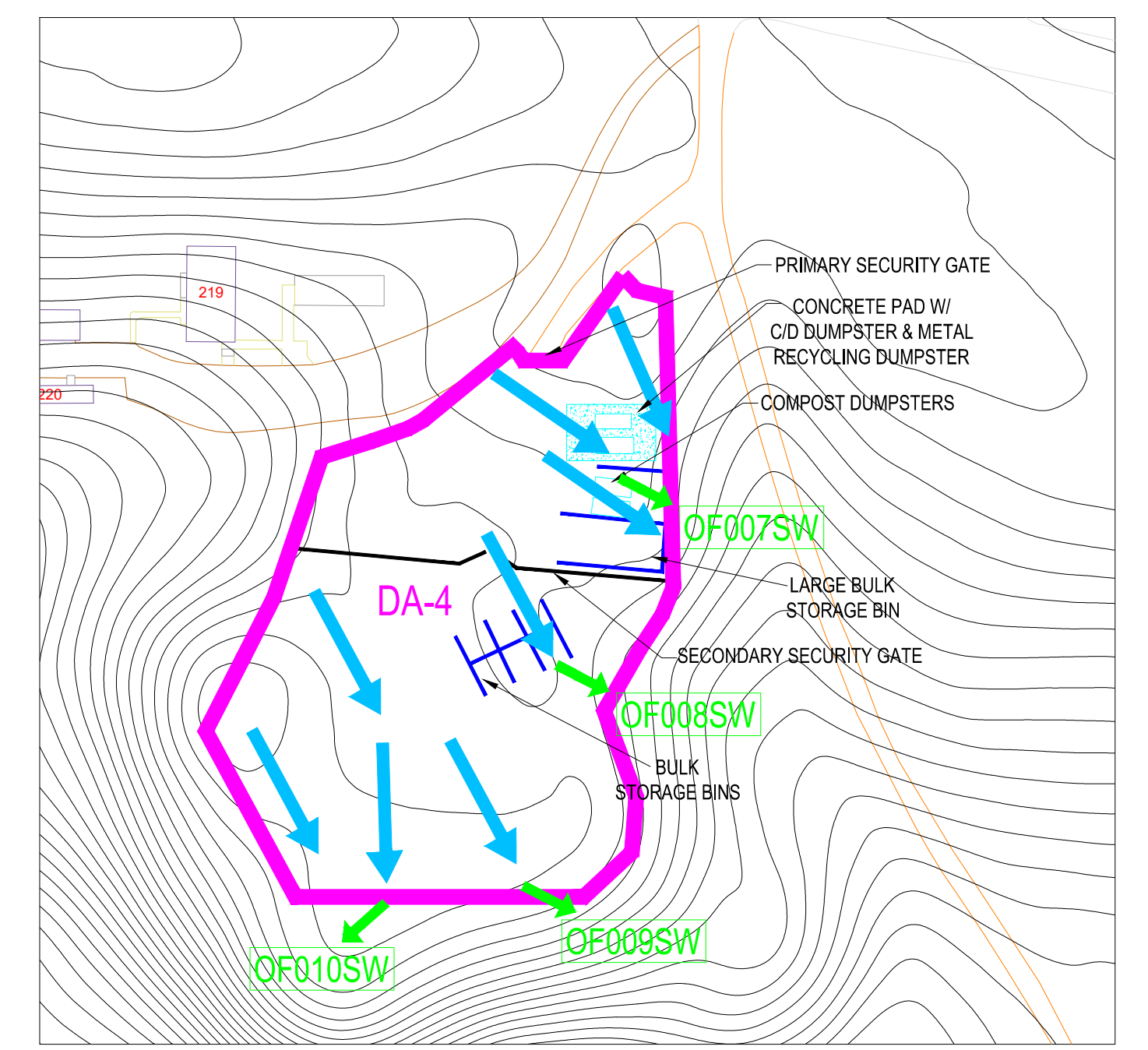




APPENDIX B
SITE MAPS












SEVERN



LANDFILL

LEGEND

-  DRUM STORAGE
-  ABOVE GROUND TANK
-  TRANSFORMER
-  OF007SW OUTFALLS
-  OIL AND WATER SEPARATOR
-  SPILL KIT
-  ZIPPER DRAINS
-  DRAINAGE FLOW
-  UNDERGROUND PIPING

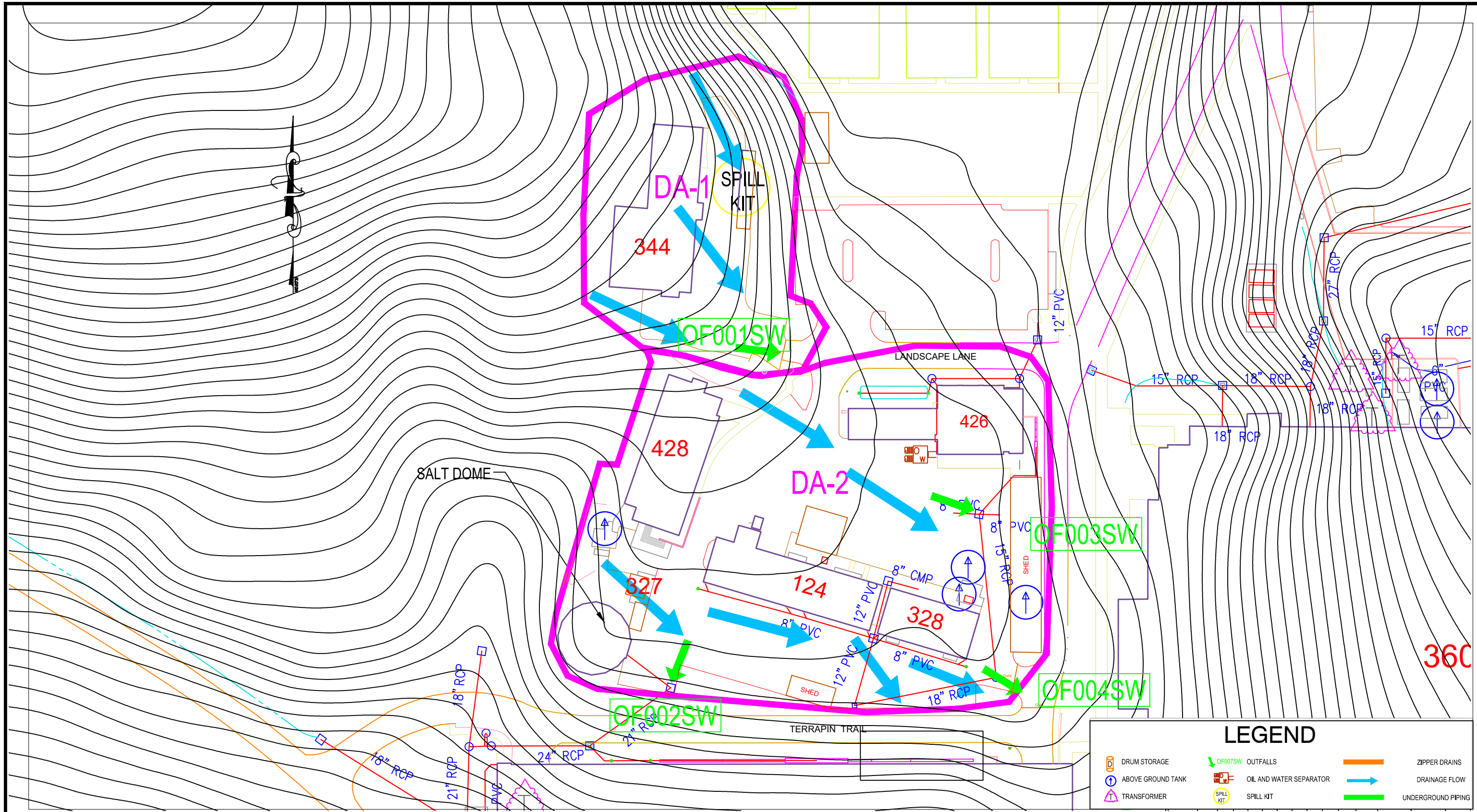
SITE PLAN
SCALE 1"=200 ft



NO.	DATE	DESCRIPTION	BY	CK

APPENDIX B SITE MAP
20-SW SWPP MAP
UNIVERSITY OF MARYLAND

PROJECT NO.
SCALE: 1"=250'
SHEET
0 OF 0
DRAWING NO.



PROJECT NAME
20-SW SWPP MAP

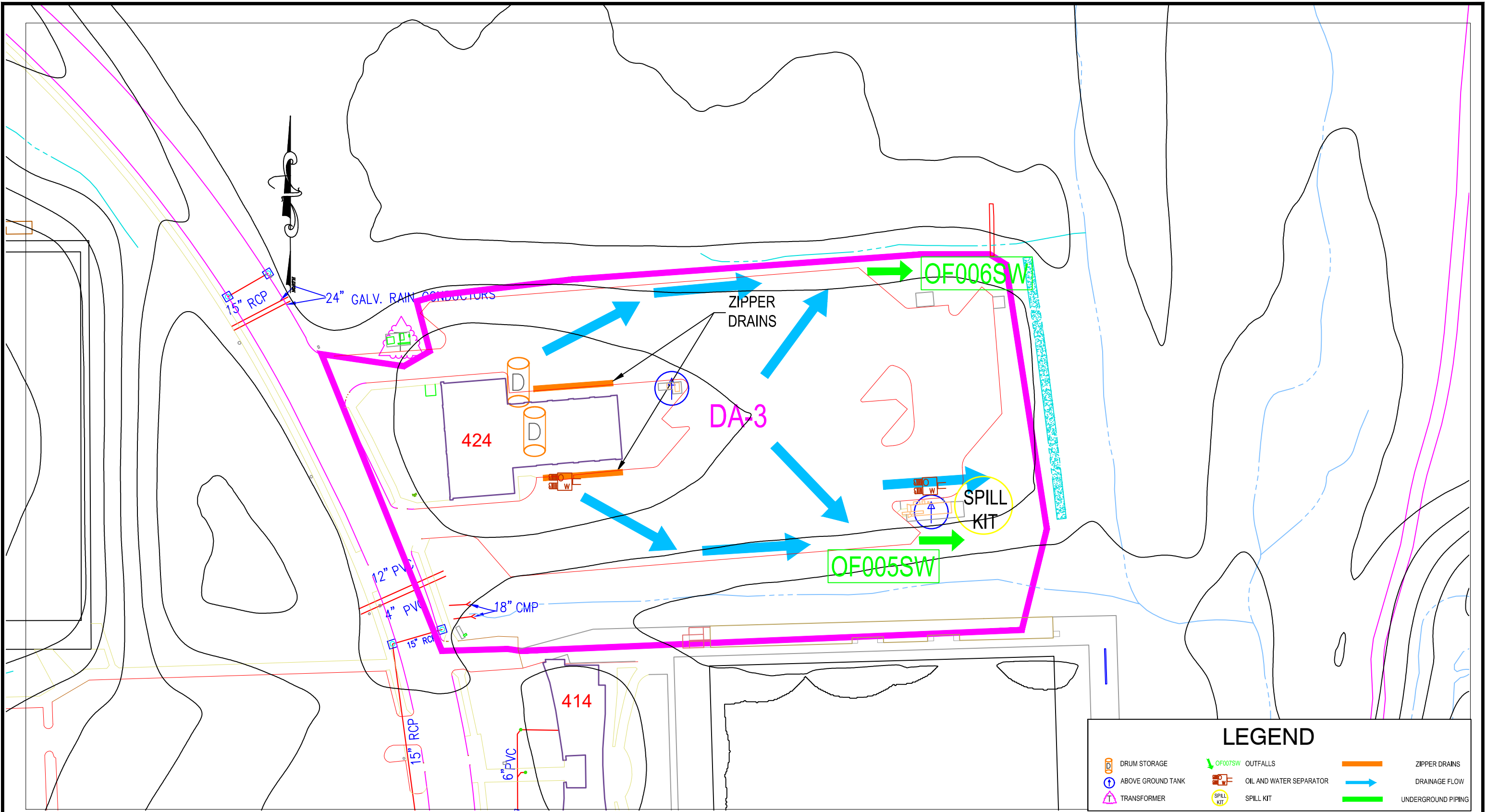
DRAINAGE AREA
DA-1 & 2

PROJECT NO.: XXXXX

DRAWN BY: RH III

DATE: 06/2023

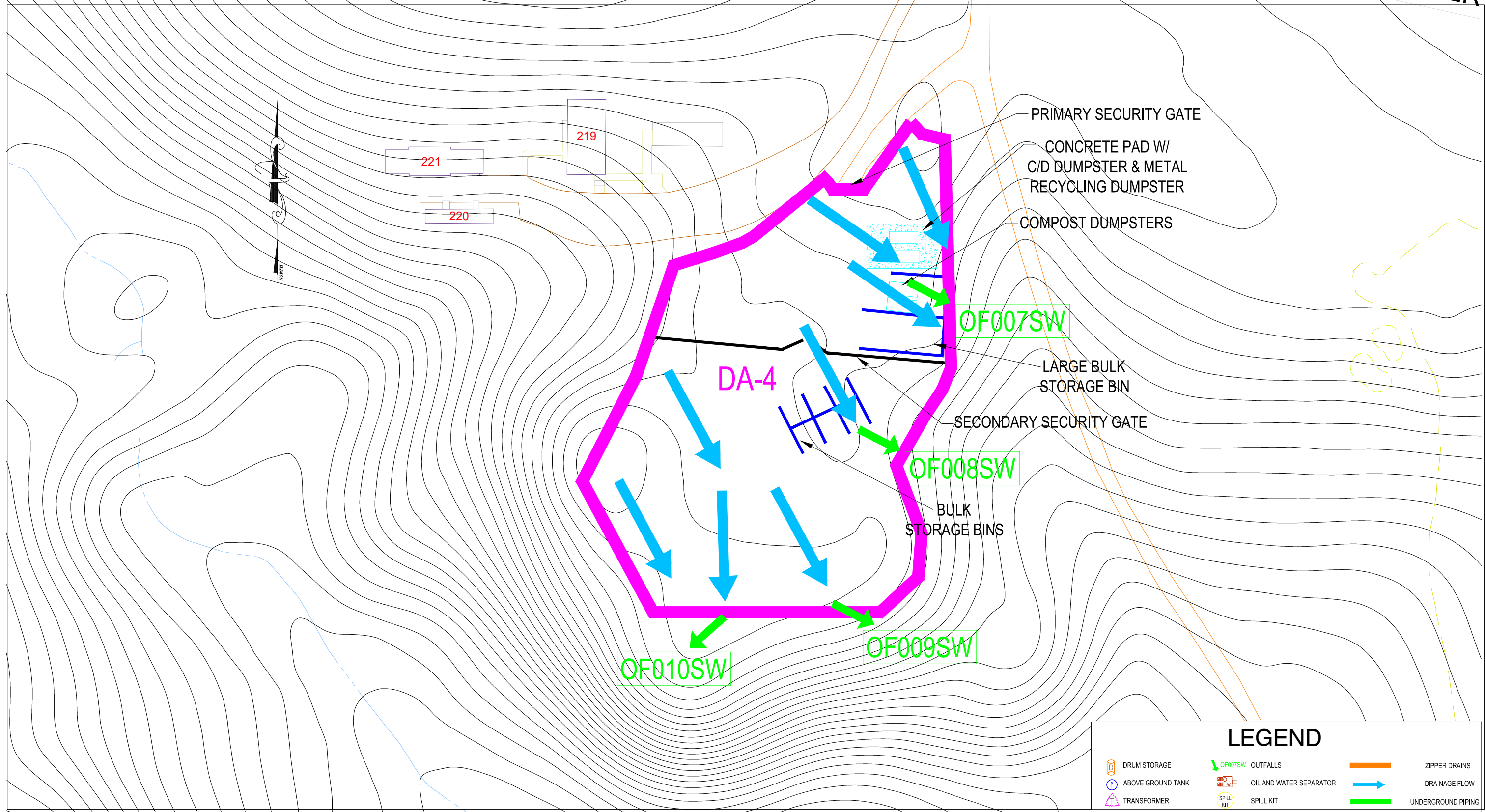
DRAWING SCALE: 1"=80'



LEGEND			
	DRUM STORAGE		OF007SW OUTFALLS
	ABOVE GROUND TANK		OIL AND WATER SEPARATOR
	TRANSFORMER		SPILL KIT
	ZIPPER DRAINS		DRAINAGE FLOW
	UNDERGROUND PIPING		

UNIVERSITY OF MARYLAND
FACILITIES MANAGEMENT
1600 Service Building
College Park, Maryland 20742-6033

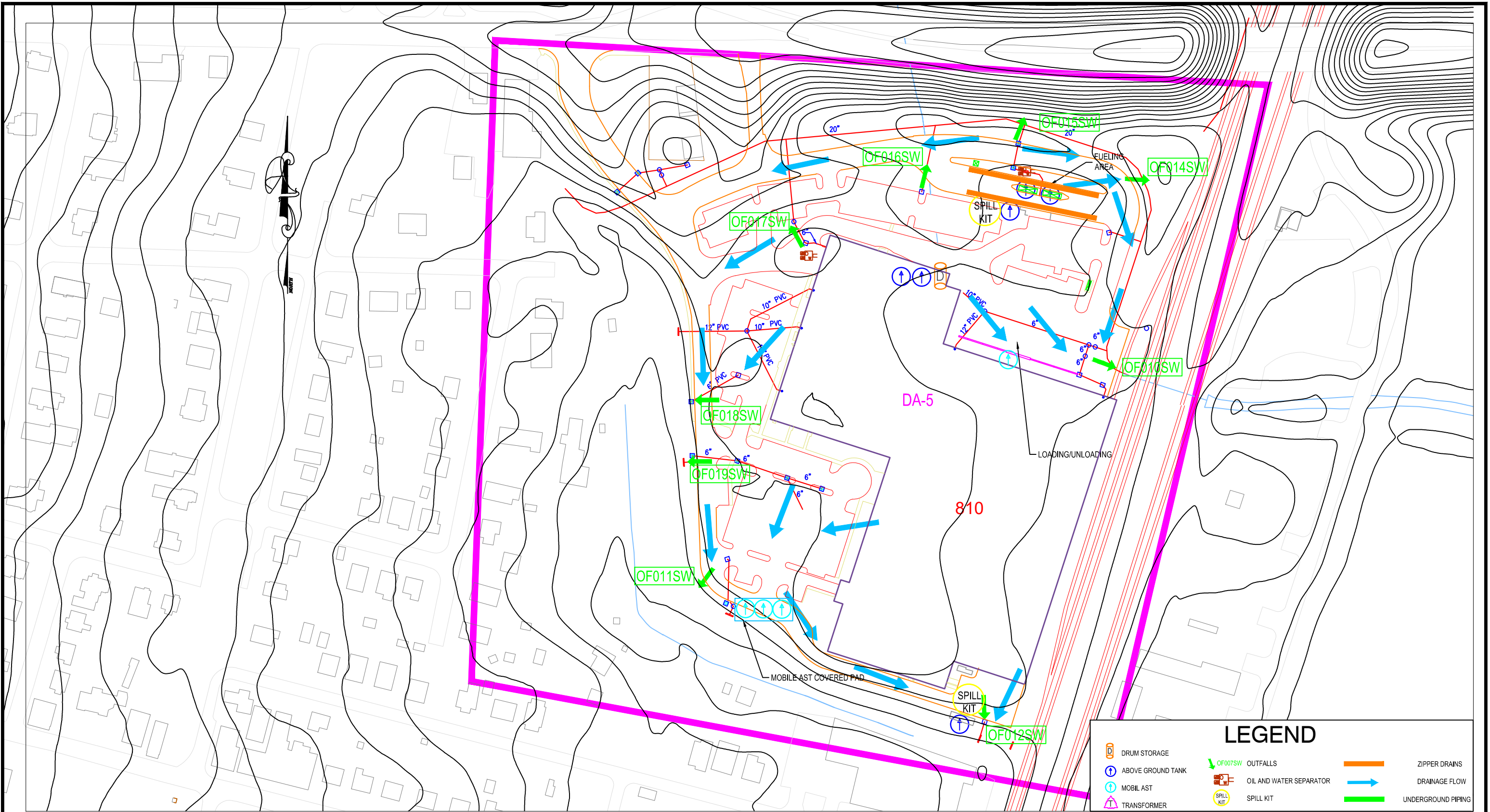
PROJECT NAME 20-SW SWPP MAP	PROJECT NO.: XXXXX
DRAINAGE AREA DA-3	DRAWN BY: RH III
	DATE: 06/2023
	DRAWING SCALE: 1"=80'



LEGEND			
	DRUM STORAGE		OUTFALLS
	ABOVE GROUND TANK		OIL AND WATER SEPARATOR
	TRANSFORMER		SPILL KIT
	ZIPPER DRAINS		DRAINAGE FLOW
	UNDERGROUND PIPING		



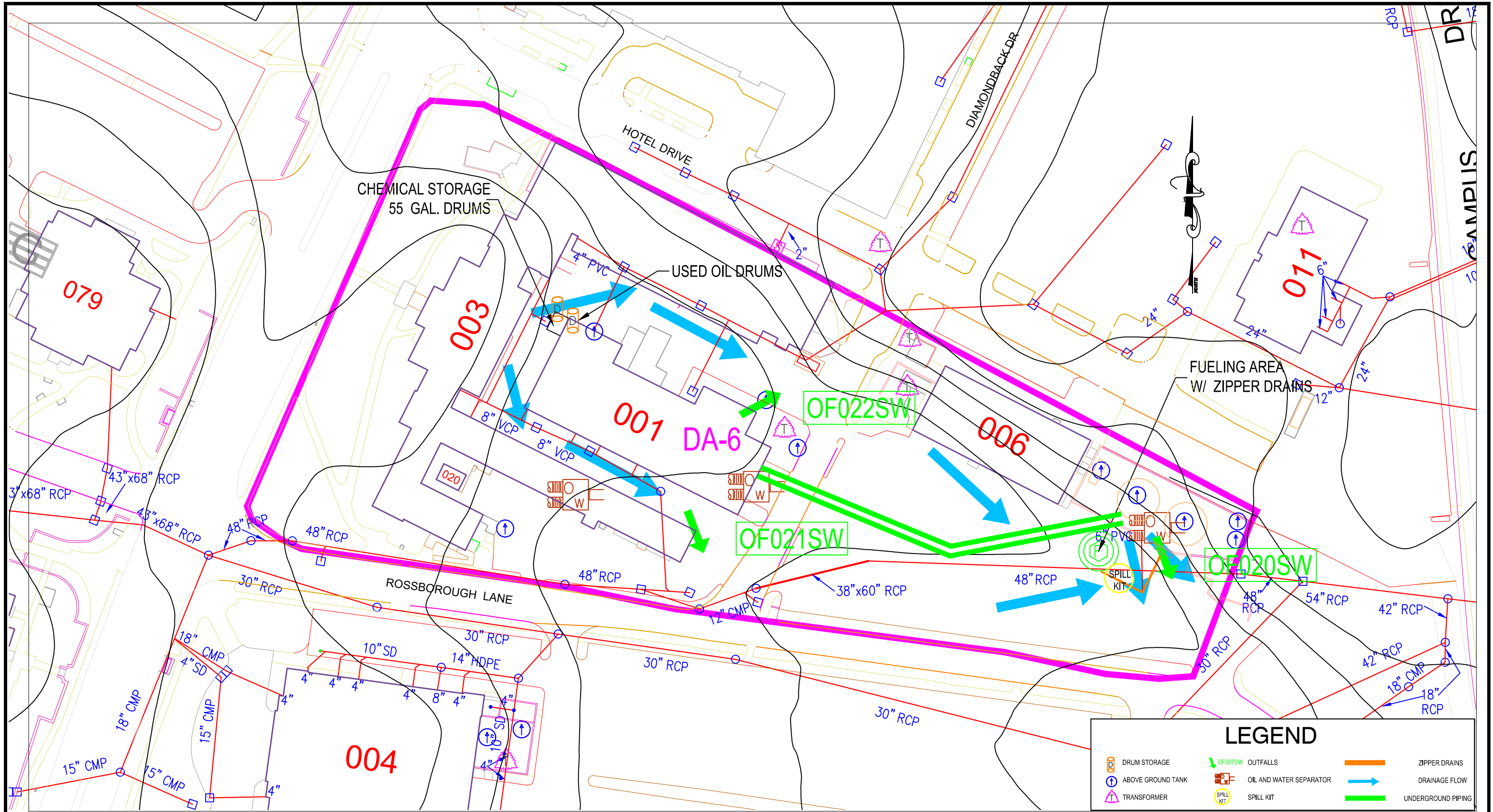
PROJECT NAME 20-SW SWPP MAP	PROJECT NO.: XXXXX
DRAINAGE AREA DA-4	DRAWN BY: RH III
	DATE: 06-2023
	DRAWING SCALE: 1"=80'



LEGEND					
	DRUM STORAGE		OUTFALLS		ZIPPER DRAINS
	ABOVE GROUND TANK		DRAINAGE FLOW		MOBIL AST
	TRANSFORMER		SPILL KIT		TRANSFORMER
	OIL AND WATER SEPARATOR				



PROJECT NAME 20-SW SWPP MAP	PROJECT NO.: XXXXX
DRAINAGE AREA DA-5	DRAWN BY: RH III
	DATE: 06/2023
	DRAWING SCALE: 1"=80'



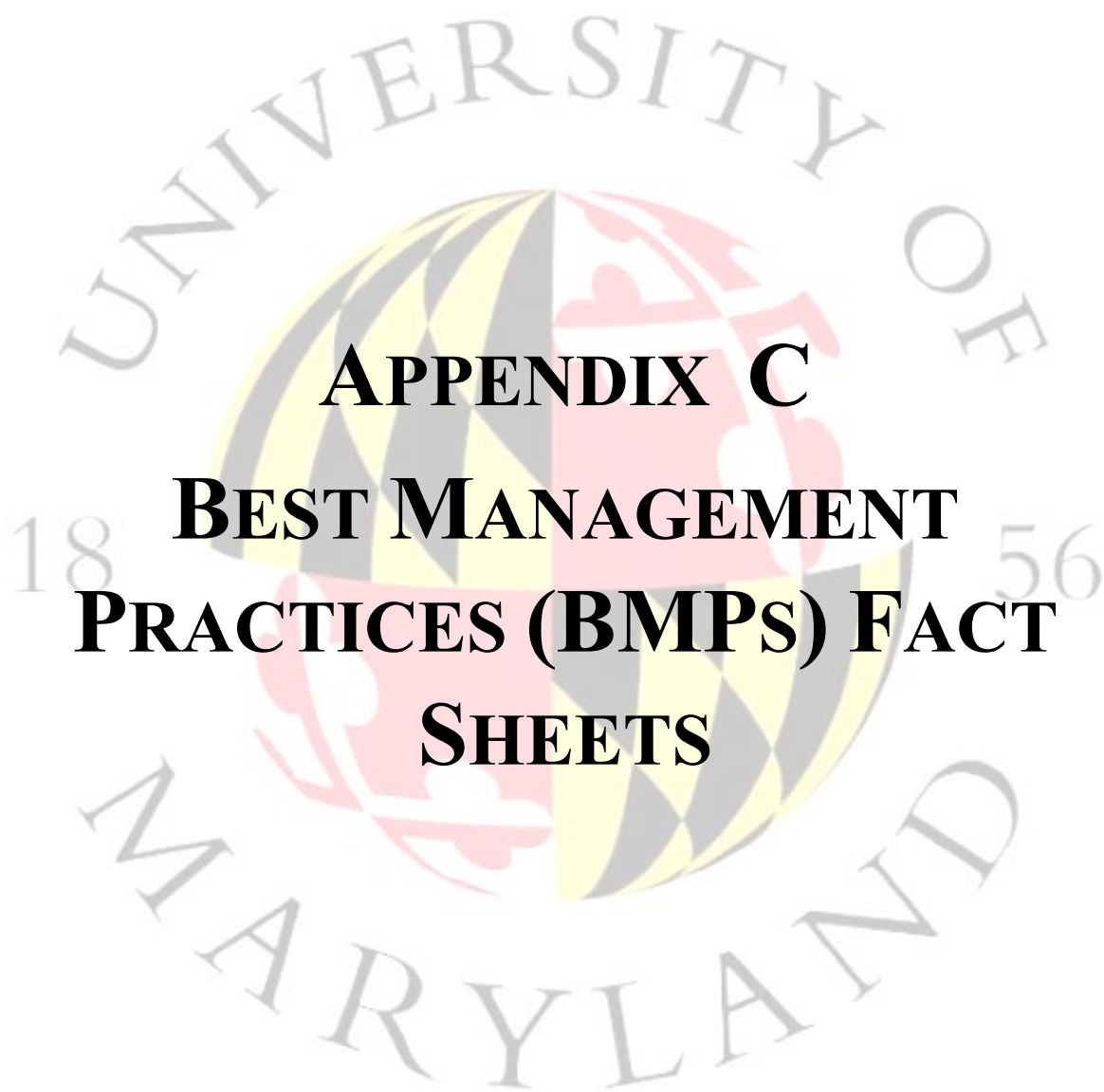
LEGEND			
	DRUM STORAGE		OF007SW OUTFALLS
	ABOVE GROUND TANK		OIL AND WATER SEPARATOR
	TRANSFORMER		SPILL KIT
	ZIPPER DRAINS		DRAINAGE FLOW
	UNDERGROUND PIPING		



PROJECT NAME	20-SW SWPP MAP
DRAINAGE AREA	DA-6

PROJECT NO.:	XXXXX
DRAWN BY:	RH III
DATE:	06/2023
DRAWING SCALE:	1"=80'

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APPENDIX C
BEST MANAGEMENT
PRACTICES (BMPS) FACT
SHEETS

<p>BMP 1</p>	<p>ABOVEGROUND STORAGE TANK MANAGEMENT</p>	
<p>PURPOSE: Prevent or reduce the discharge of pollutants to storm water from aboveground storage tanks (ASTs).</p> <p style="text-align: center;"><i>Operational Considerations</i></p> <ul style="list-style-type: none"> • Discharge collected storm water from secondary containment areas according to guidelines developed by the federal government and applicable state and local regulations. • Properly label all ASTs with their designation, contents, and capacity. Retain information regarding potential hazards, spill response and first aid procedures, and storage requirements. • Maintain copies of SDS on file for any materials stored and/or handled by the applicator. • Maintain a spill response plan and specifications near the material or waste storage area. • Maintain all necessary permits and keep them up to date. • Require adequate supplies of spill response equipment and materials in accessible locations to ASTs/dispensers. • Require on-site trained personnel during AST filling or transferring of material. • Maintain records of any testing, repairs and/or problems that have occurred with ASTs. <p style="text-align: center;"><i>Structural Controls</i></p> <ul style="list-style-type: none"> • Provide berms, double wall tanks or secondarily contain ASTs. • Install and maintain catch basin filter inserts and sumps (if applicable). <p style="text-align: center;"><i>Maintenance</i></p> <ul style="list-style-type: none"> • Damaged ASTs must be repaired/replaced immediately. • Keeps ASTs painted to reduce the risk of rust. • Inspect, clean and maintain catch basins and sumps (if applicable). Maintain ASTs used for liquid storage in good condition to prevent leaks. 	<p>TARGETED ACTIVITIES</p> <ul style="list-style-type: none"> • AST Material Filling/Transferring • AST Maintenance <p>TARGETED POLLUTANTS</p> <ul style="list-style-type: none"> • Fuel • Solvent • Liquids • Liquid Wastes <p>KEY APPROACHES</p> <ul style="list-style-type: none"> • Store materials in a covered or fully enclosed area <ul style="list-style-type: none"> • Provide secondary containment. • Implement an SPCC, if required • Perform and document inspections. • Maintain ASTs in good condition 	

Physical Site Usage

- Protect all significant materials from rainfall, run-on, runoff and wind dispersal to the maximum extent practicable. Viable options are:
 - Cover an outdoor storage area with a roof or awning where possible.
 - Minimize storm water run-on by enclosing the area, building a berm around the area, storing indoors, or completely covering the stored material.
- Reduce the quantities of material and waste stored outside (i.e., chemicals) to the minimum volume required based on variables such as release potential, usage, and shelf life.
- Make use of existing overhangs as covered storage areas.
- Provide sufficient protection for tanks from vehicles, etc. A higher degree of protection may be appropriate for non-metallic ASTs.
- Ensure that loading valves, tank drain valves, and “not in service valves” are locked shut.
- Make sure that unused pipes are blank, flanged or capped.
- Ensure hoses are in good condition prior to use and properly retract and/or store hoses after use.
- Make sure that no ignition sources are nearby flammable/combustible liquid tanks.
- Ensure that stormwater drains away from site tanks.

Contingency Response

- Develop and implement a Spill Prevention Control and Countermeasure (SPCC) Plan, if required under guidelines set forth in 40 CFR, Section 112.3(a), (b).
- Maintain adequate supplies of spill response equipment and materials in accessible locations near areas where spills may be likely to occur.
- Post signs at all chemical storage locations in clearly visible locations noting the materials stored, emergency contacts, and spill cleanup procedures.
- Ensure properly functioning level gauge or alternate means of level detection.

Inspection and Training

- Provide the appropriate level of employee training in the following areas: spill response and prevention, storm water pollution prevention education, right-to-know

BMP 1	ABOVEGROUND STORAGE TANK MANAGEMENT	
awareness training, and hazardous materials management. <ul style="list-style-type: none">• Perform and document inspections.• Perform and document annual inspections for the following:		

<p>BMP 2</p>	<p align="center">BUILDING AND GROUNDS MAINTENANCE</p>	
<p>PURPOSE: Prevent or reduce the discharge of pollutants to storm water from building and grounds maintenance.</p> <p align="center"><i>Operational Considerations</i> <i>Good Housekeeping</i></p> <ul style="list-style-type: none"> • Prevent outdoor washdown, however, if conducted collect and discharge water through a permitted connection to the sanitary sewer. • Do not flush waste into the storm drain system. • Properly dispose of landscape waste, wash water, sweepings, and sediments. • Regularly clean paved surfaces that are exposed to industrial activity. • Use “dry” cleaning techniques, such as sweeping, whenever possible. • Regularly clean up any stray debris or trash • Daily perimeter walks are highly recommended to ensure a clean site. <p align="center"><i>Structural Controls</i></p> <ul style="list-style-type: none"> • Provide vegetative stabilization as appropriate where erosion is becoming a problem. <p align="center"><i>Contingency Response</i></p> <ul style="list-style-type: none"> • Maintain adequate supplies of spill response equipment and materials in accessible locations near areas where spills may occur. <p align="center"><i>Inspection and Training</i></p> <ul style="list-style-type: none"> • Provide the appropriate level of employee training in the following areas: spill response and prevention, storm water pollution prevention education, right-to-know awareness training, and hazardous materials management. <p>LIMITATIONS:</p> <ul style="list-style-type: none"> • Alternative pest/weed controls may not be available, suitable, or effective in every case. 		<p>TARGETED ACTIVITIES</p> <ul style="list-style-type: none"> • Building Maintenance • Grounds Maintenance <p>TARGETED POLLUTANTS</p> <ul style="list-style-type: none"> • Oil and Grease • Sediment • Landscape Waste • Building Maintenance Materials (paint, roofing, etc.) <p>KEY APPROACHES</p> <ul style="list-style-type: none"> • Keep paved surfaces clean and swept.

<p>BMP 3</p>	<p>STORMWATER PONDS</p>	
<p>PURPOSE:</p> <p>Stormwater ponds are designed to manage stormwater runoff quality and/or quantity. A stormwater detention pond stores increased stormwater runoff due to a storm event and releases it at predetermined rate in order to maintain the existing hydraulic conditions of the downstream area. Detention ponds facilitate precipitation of pollutants.</p> <p><i>Operational Considerations</i> <i>Good Housekeeping</i></p> <ul style="list-style-type: none"> • Maintain pond and remove sediment as needed. Particular attention should be given to forebay areas of ponds where sediments tend to accumulate at a significantly higher rate. • Annually monitor sediment and sludge levels in ponds using a “Sludge Judge” or similar sampling device. • Properly dispose of clean out sediments. • Remove trash in and around pond periodically to prevent clogging. • Remove debris from the spillway. • Riser openings shall be adequately secured from unauthorized access. • Maintain adequate vegetative cover surrounding the pond. • Prevent animal burrowing in the pond embankments. Remove all woody vegetation from pond embankments. • Monitor ponds for algae blooms and excessive vegetation, which can cause ponds to turn anoxic. <p><i>Structural Controls</i></p> <ul style="list-style-type: none"> • Risers shall be provided with manhole covers to prevent trash accumulation. • Maintain appropriate emergency spillways. • Provide site fencing to prevent unauthorized pond access. 	<p>TARGETED ACTIVITIES</p> <ul style="list-style-type: none"> • Detention Pond Maintenance <p>TARGETED POLLUTANTS</p> <ul style="list-style-type: none"> • Sediment • Trash • Petroleum products • Metals <p>KEY APPROACHES</p> <ul style="list-style-type: none"> • Remove trash and sediment periodically. • Clean surrounding pond area • Try to limit trash and sediment inflow into pond through implementation of other BMPs. 	

<p>BMP 3</p>	<p>STORMWATER PONDS</p>	
<p><i>Inspection and Training</i></p> <ul style="list-style-type: none"> • Provide the appropriate level of employee training in the following areas: spill response and prevention, sediment and erosion control education, stormwater pollution prevention education, right-to-know awareness training, and hazardous materials management. • Perform and document inspections, as required, and correct deficiencies. • Inspect ponds after all significant storm events. 		

<p>BMP 4</p>	<p align="center">EMERGENCY RESPONSE PLANS</p>
<p>PURPOSE: Prevent or reduce the discharge of pollutants to storm water resulting from petroleum products or other materials.</p> <p>Operational Considerations</p> <ul style="list-style-type: none"> • Post a summary of the plan at appropriate site locations, identify the spill cleanup coordinators, locate cleanup equipment, and locate phone numbers of regulatory agencies to be contacted in the event of a spill. • Maintain an inventory of appropriate cleanup materials on-site and strategically deploy cleanup materials based on the type and quantities of chemicals present. • Make absorbent material readily available in fueling areas. • Maintain an Emergency Response Plan Onsite. • Fill out the appropriate forms and responses. • Take appropriate corrective actions. • See your SWPPP for a timeline of events and procedures. <p>Contingency Response</p> <ul style="list-style-type: none"> • Notify the following in the event of a spill: <p>Office Of Environmental Affairs (301) 405-3990 Local Fire Department 911 MDE (866) 633-4686</p> <p>Containment and cleanup of spills shall begin immediately.</p> <p>Inspection and Training</p> <ul style="list-style-type: none"> • Provide formal training in plan execution to key personnel. All employees should have a basic knowledge of spill control procedures. <p>LIMITATIONS:</p> <ul style="list-style-type: none"> • Spills occurring after work hours in confined areas may go undetected until impacting off-site areas. 	<p>TARGETED ACTIVITIES</p> <ul style="list-style-type: none"> • Vehicle/ Equipment Fueling • Vehicle/ Equipment Washing <ul style="list-style-type: none"> • Cargo Handling • Fuel/Chemical Storage <p>TARGETED POLLUTANTS</p> <ul style="list-style-type: none"> • Fuel <ul style="list-style-type: none"> • Oil and Grease • Solvents/Cleaning Solutions <ul style="list-style-type: none"> • Battery Acid <p>KEY APPROACHES</p> <ul style="list-style-type: none"> • Implement SPCC (if required) • SPCC implementation training • Immediate containment and cleanup of spills • Availability of spill response equipment and materials • Required agency notification.

<p>BMP 5</p>	<p>OUTDOOR SWEEPING</p>
<p><i>Operational Considerations</i></p> <ul style="list-style-type: none"> • Practice dry clean up techniques instead of using water wash down. If equipment must be washed down, conduct the wash down within the lined landfill cells. • Regularly sweep paved surfaces to prevent sediment transfer from the facility. Use “dry” cleaning techniques, such as sweeping, whenever possible. • Dispose of sweeping in an appropriate manner. <p><i>Contingency Response</i></p> <ul style="list-style-type: none"> • Maintain adequate supplies of spill response equipment and materials in accessible locations near areas where spills may be likely to occur. <p><i>Inspection and Training</i></p> <ul style="list-style-type: none"> • Provide the appropriate level of employee training in the following areas: spill response and prevention, storm water pollution prevention education, right-to-know awareness training, and hazardous materials management. • Conduct routine inspections of the facility and sweep as warranted. 	<p>TARGETED ACTIVITIES</p> <ul style="list-style-type: none"> • Sweeping <p>TARGETED POLLUTANTS</p> <ul style="list-style-type: none"> • Petroleum Products • Sediment • Metals • Trash <p>KEY APPROACHES</p> <ul style="list-style-type: none"> • Conduct equipment wash down in the landfill cells. • Use "dry" sweeping techniques. • Dispose of sweepings and clean out materials in the landfill.

<p>BMP 6</p>	<p>OUTDOOR STORAGE of MATERIALS AND WASTES</p>
<p>PURPOSE: Prevent or reduce the discharge of pollutants to stormwater associated with outdoor storage of materials or waste.</p> <p><i>Operational Considerations</i> <i>Good Housekeeping</i></p> <ul style="list-style-type: none"> • Avoid dispensing from drums positioned horizontally in cradles. Dispensing materials from upright drums equipped with hand pumps is preferred. Always use secondary containment if dispensing from horizontally positioned drums. • Store drums and containers on spill containment pallets or other structures to keep the container out of contact with stormwater. • Use drum lids and drum-top absorbent pads. • Discharge collected stormwater from secondary containment areas according to guidelines developed by the federal government and applicable state and local regulations. Verify that liquid is free from contaminants prior to discharge – when in doubt, collect samples. • Store all materials in their original containers or containers approved for that use. • Store materials ONLY in the designated area. • Store empty containers indoors if possible. • Properly label all containers. • Maintain SDS Sheets on site. • Maintain a spill response plan near the material or waste storage area. • Promptly cleanup spills regardless of whether it is liquid or solid. <p><i>Physical Site Usage</i></p> <ul style="list-style-type: none"> • Reduce the quantities of material and waste stored outside. • Make use of covered storage areas. • Use secondary containment structures for ASTs and utilize rain guards where possible. <p><i>Structural Controls</i></p> <ul style="list-style-type: none"> • Use Secondary Containment on ASTs, drums and containers where possible. • Store materials indoors where possible. • Use tarps to cover piles of materials. 	<p>TARGETED ACTIVITIES</p> <ul style="list-style-type: none"> • Vehicle/ Equipment Fueling & Maintenance • Fuel/Chemical Storage • Equipment Storage <p>TARGETED POLLUTANTS</p> <ul style="list-style-type: none"> • Petroleum Products • Liquid Wastes • Hazardous Materials • Sediment • Trash <p>KEY APPROACHES</p> <ul style="list-style-type: none"> • Store materials in a covered or fully enclosed area • Store materials only in designated areas • Provide secondary containment. • Implement an SPCC, if required • Perform and document inspections. • Stabilize or cover stockpiles of materials

<p>BMP 6</p>	<p>OUTDOOR STORAGE of MATERIALS AND WASTES</p>
<ul style="list-style-type: none"> • Use berms, silt fence, or straw bales to encircle temporary stockpiles. • Stabilize long-term stockpiles of materials, including soil. <p><i>Maintenance</i></p> <ul style="list-style-type: none"> • Maintain tanks, drums, and other vessels used for liquid storage to prevent leaks. • Inspect and maintain silt fencing and other BMPs and controls. <p><i>Contingency Response</i></p> <ul style="list-style-type: none"> • Develop and implement a Spill Prevention Control and Countermeasure (SPCC) Plan, if required under guidelines set forth in 40 CFR, Section 112.3(a), (b). • Maintain adequate supplies of spill response equipment and materials in accessible locations near areas where spills may be likely to occur. • Follow corrective actions as outlines in your SWPPP. • Post signs at all chemical storage locations in clearly visible locations noting the materials stored, emergency contacts, and spill cleanup procedures. <p><i>Inspection and Training</i></p> <ul style="list-style-type: none"> • Provide the appropriate level of employee training in the following areas: spill response and prevention, storm water pollution prevention education, right-to-know awareness training, and hazardous materials management. • Perform and document inspections. Correct deficiencies in a timely manner. 	

<p>BMP 7</p>	<p align="center">EMERGENCY SPILL CLEANUP PLANS</p>	
<p>PURPOSE:</p> <p>Prevent or reduce the discharge of pollutants to storm water resulting from petroleum products or other chemicals.</p> <p>GENERAL APPROACH:</p> <p>Owners and operators of facilities that store, process, or refine oil or oil products may be required by federal law (40 CFR 112) to develop and implement a Spill Prevention Control and Countermeasure (SPCC) Plan. Additionally, facilities may store other non-oil materials at the facility that are not subject to the provisions of the SPCC Plan but can result in environmental impacts as a result of spills. Emergency spill cleanup plans should include the following information:</p> <ul style="list-style-type: none"> • A description of the facility including the owner's name and address, the nature of the facility activity, and the general types and quantities of chemicals stored at the facility. • Locations of stormwater inlets, ponds and outfalls as well as the locations of sensitive receptors such as surface water bodies. • A site plan showing the location of chemical storage areas, fire hydrant locations, and the location and description of any devices used to contain spills, such as positive shut-off control valves. • Notification procedures to be implemented in the event of a spill, such as key company personnel and local, state, and federal agencies. • Instructions regarding cleanup procedures. • Designated personnel with overall spill response cleanup responsibility. • Reference to the proper Corrective Activities documentation located in your SWPPP. <p>APPROACH TO EXISTING FACILITY ACTIVITIES: <i>Operational Considerations</i></p> <ul style="list-style-type: none"> • Post a summary of the plan at appropriate site locations, identify the spill cleanup coordinators, locate cleanup 	<p>TARGETED ACTIVITIES</p> <ul style="list-style-type: none"> • Vehicle/ Equipment Fueling • Vehicle/ Equipment Maintenance • Cargo Handling • Fuel/Chemical Storage • Leachate Storage & Transfer <p>TARGETED POLLUTANTS</p> <ul style="list-style-type: none"> • Fuel • Oil and Grease • Solvents/Cleaning Solutions • Battery Acid <p>KEY APPROACHES</p> <ul style="list-style-type: none"> • Implement SPCC (if required) • SPCC implementation training • Immediate containment and cleanup of spills • Availability of spill response equipment and materials • Required agency notification. 	

<p>BMP 7</p>	<p align="center">EMERGENCY SPILL CLEANUP PLANS</p>
<p>equipment, and locate phone numbers of regulatory agencies to be contacted in the event of a spill.</p> <ul style="list-style-type: none"> • Maintain an inventory of appropriate cleanup materials on-site and strategically deploy cleanup materials based on the type and quantities of chemicals present. • Make absorbent material readily available in fueling areas. • Train facility staff on spill cleanup procedures. Perform drills simulating spills in order to test and evaluate existing procedures. <p><i>Contingency Response</i></p> <ul style="list-style-type: none"> • Notify the following in the event of a spill: <p>National Response Center 800-424-8802</p> <p>Local Fire Department 911</p> <p>MDE 866-633-4686</p> <p>Office Of Environmental Affairs (301) 405-3990</p> <ul style="list-style-type: none"> • Containment and cleanup of spills shall begin immediately unless the spill poses a risk to employee safety and health. <p><i>Inspection and Training</i></p> <ul style="list-style-type: none"> • Provide formal training in plan execution to key personnel. All employees should have a basic knowledge of spill control procedures. <p>REQUIREMENTS:</p> <ul style="list-style-type: none"> • Capital and O&M costs should be small to moderate depending on the types and quantities of chemicals stored on-site. • Maintenance costs include periodic training and equipment replacement. <p>LIMITATIONS:</p> <p>Spills occurring after work hours in confined areas may go undetected until impacting off-site areas.</p>	

<p>BMP 8</p>	<p>STORAGE/DISPOSAL OF WASTE AND MATERIALS</p>	
<p>PURPOSE: Prevent or reduce the discharge of pollutants to storm water from outdoor storage areas for waste or material (e.g., fuel, chemicals, bagged solids, contaminated soil, bulk storage, etc.)</p> <p><i>Operational Considerations</i> <i>Good Housekeeping</i></p> <ul style="list-style-type: none"> • Avoid dispensing from drums positioned horizontally in cradles. Dispensing materials from upright drums equipped with hand pumps is preferred. Always use secondary containment and self-closing spigots if dispensing from horizontally positioned drums. • Store drums and containers on spill containment pallets or other structures to keep the container out of contact with storm water. • Use drum lids and drum-top absorbent pads to prevent rainfall from washing materials and drippage from the top of containers to the storm drain system. • Discharge collected storm water from secondary containment areas according to guidelines developed by the federal government and applicable state and local regulations. • Store all materials in their original containers or containers approved for that use. Ensure that all containers are appropriately sealed. Store empty containers in fully enclosed areas, under cover, or move them off-site. • Properly label all containers with information, including their contents, size and hazards. • Maintain copies of SDS on file for any materials stored and/or handled by the applicator. • Maintain a spill response plan near the material or waste storage area. • Provide contractors and haulers with copies of pertinent BMPs. Require contractor/hauler adherence to BMP specifications. <p><i>Physical Site Usage</i></p> <ul style="list-style-type: none"> • Protect significant materials from rainfall, run-on, runoff and wind dispersal to the maximum extent practicable. Viable options are: <ul style="list-style-type: none"> - Store material in a fully enclosed area. 	<p>TARGETED ACTIVITIES</p> <ul style="list-style-type: none"> • Vehicle/ Equipment Fueling • Vehicle/ Equipment Maintenance • Fuel/Chemical Storage • Equipment Storage <p>TARGETED POLLUTANTS</p> <ul style="list-style-type: none"> • Fuel • Solvents • Cleaning Solutions • Liquid Wastes <p>KEY APPROACHES</p> <ul style="list-style-type: none"> • Store materials in a covered or fully enclosed area • Provide secondary containment. • Implement an SPCC, if required • Perform and document inspections 	

<p>BMP 8</p>	<p>STORAGE/DISPOSAL OF WASTE AND MATERIALS</p>	
	<ul style="list-style-type: none"> - Cover an outdoor storage area with a roof or awning. - Minimize the runoff of sediments by the use of filter bags in all drains. Clean out bags on a regular and as needed basis. • Reduce the quantities of material and waste stored outside to the minimum volume required based on variables such as release potential, usage, and shelf life. • Provide appropriate spill containments, hand pumps, and other devices to minimize releases during material transfer. • Position tank trucks or delivery vehicles so that possible spills or leaks can be contained. <p><i>Structural Controls</i></p> <ul style="list-style-type: none"> • Provide secondarily contain where feasible. • Install and maintain forebays. • Cover loading/unloading areas/docks and material use areas to reduce exposure of materials to rain. <p><i>Maintenance</i></p> <ul style="list-style-type: none"> • Maintain tanks, drums, and other vessels used for liquid storage to prevent leaks. <p><i>Contingency Response</i></p> <ul style="list-style-type: none"> • Develop and implement a Spill Prevention Control and Countermeasure (SPCC) Plan, if required under guidelines set forth in 40 CFR, Section 112.3(a), (b). • Maintain adequate supplies of spill response equipment and materials in accessible locations near areas where spills may be likely to occur. • Post signs at all chemical storage locations in clearly visible locations noting the materials stored, emergency contacts, and spill cleanup procedures including corrective actions. <p><i>Inspection and Training</i></p> <ul style="list-style-type: none"> • Provide the appropriate level of employee training in the following areas: spill response and prevention, storm water pollution prevention education, right-to-know awareness training, and hazardous materials management. • Perform and document inspections. 	

<p>BMP 9</p>	<p>VEHICLE AND EQUIPMENT FUELING</p>	
<p>PURPOSE: Prevent fuel spills and leaks and reduce their impacts to storm water.</p> <p>Operational Considerations Implement the following to the maximum extent practicable:</p> <p>Good Housekeeping</p> <ul style="list-style-type: none"> • Fuel all on-road vehicles off-site at a State fueling facility. • Fuel all on-site equipment in designated areas. • Fuel nozzles should be stored in appropriate nozzle holders or in secondary containment and the hose should be coiled or off the ground. • Manage the disposal of water that collects in secondary containment structures in an appropriate manner. Verify that the liquid is contaminant free prior to discharging. • Fuel small equipment (chainsaws, trimmers, etc.) on absorbent pads rather than the bare ground. <p>Physical Site Usage</p> <ul style="list-style-type: none"> • Avoid mobile fueling of equipment outside of designated areas. <p>Structural Controls</p> <ul style="list-style-type: none"> • Divert stormwater runoff away from fueling area to avoid stormwater contact with contaminated surfaces. • Employ secondary containment or drip pans when transferring fuel from a mobile tank to equipment outside of the lined landfill cell. <p>Equipment</p> <ul style="list-style-type: none"> • Provide appropriate monitoring for tanks containing fuel, such as: <ul style="list-style-type: none"> - Level indicators and gauges. - Overfill protection - Routinely inspection for tanks and tank containment areas. • Automatic shut-off mechanisms should be in place and operational on fuel dispensers. • Maintain adequate supplies of spill response equipment and materials in accessible locations near areas where spills may be likely to occur. 	<p>TARGETED ACTIVITIES</p> <ul style="list-style-type: none"> • Vehicle/ Equipment Fueling <p>TARGETED POLLUTANTS</p> <ul style="list-style-type: none"> • Petroleum Products <p>KEY APPROACHES</p> <ul style="list-style-type: none"> • Use absorbent materials and/or vacuum equipment for spills. • Install proper equipment for fuel dispensing and tank monitoring to prevent spills, leaks and overflows 	

<p>BMP 9</p>	<p>VEHICLE AND EQUIPMENT FUELING</p>	
<p><i>Contingency Response</i></p> <ul style="list-style-type: none"> • Develop and implement a Spill Prevention Control and Countermeasure (SPCC) Plan if required under guidelines set forth in 40 CFR, Sections 112.3(a), (b). • Clean up spills using dry methods (absorptive materials). Prevent spilled fuel from entering storm drains. • Perform appropriate Corrective Actions as needed for your SWPPP. • Properly dispose of any fuel spills and leaks. Never discharge materials to a catch basin or storm drain <p><i>Inspection and Training</i></p> <p>Inspect fueling areas and storage tanks per the SPCC. Record all maintenance activities and inspections relating to fueling equipment and containers.</p> <ul style="list-style-type: none"> • Provide the appropriate level of spill response training to personnel to address all types of potential spills. 		

<p>BMP 10</p>	<p>VEHICLE AND EQUIPMENT MAINTENANCE</p>	
<p>PURPOSE:</p> <ul style="list-style-type: none"> • Prevent or reduce the discharge of pollutants to stormwater from vehicles and equipment maintenance and repair. <p><i>Operational Considerations</i> Implement the following to the maximum extent practicable:</p> <p><i>Good Housekeeping</i></p> <ul style="list-style-type: none"> • Conduct all maintenance under cover or within the lined landfill cells to prevent contact with stormwater. • Use drip pans to collect fluid. Never discharge vehicle or equipment fluids to the ground surface, even within the lined landfill cell area. • Use absorbent materials when necessary. • Clean up absorbent materials from area after use and dispose of them in an appropriate manner. • Drain oil filters (and oil containers) before recycling or disposal. • Do not wash down work areas. As an alternative, use brooms, or other dry clean up techniques. • Drain and properly dispose of all fluids. • Drain parts and equipment of all fluids. Store on secondary containment under cover. • Recycle or properly dispose of the following: grease, oil, antifreeze, brake fluid, cleaning solutions, hydraulic fluid, batteries, transmission fluid, and filters. • Maintain an organized inventory of materials used in maintenance areas. • When possible, utilize non-hazardous alternatives for maintenance activities (e.g., use biodegradable surfactants in lieu of hazardous solvents and degreasers) <p><i>Physical Site Usage</i></p> <ul style="list-style-type: none"> • Where feasible, conduct maintenance activities under cover or in the lined landfill cells. • Store mechanical parts and equipment that may yield contaminants (e.g., oil or grease) under cover. • Store vehicles and equipment awaiting maintenance in designated areas. 	<p>TARGETED ACTIVITIES</p> <ul style="list-style-type: none"> • Vehicle/Equipment Maintenance <p>TARGETED POLLUTANTS</p> <ul style="list-style-type: none"> • Petroleum Products • Anti-freeze & coolants • Solvents & degreasers <ul style="list-style-type: none"> • Metals <p>KEY APPROACHES</p> <ul style="list-style-type: none"> • Conduct maintenance indoors, or in covered area. • Collect and properly dispose of all wastes and fluids 	

<p>BMP 10</p>	<p>VEHICLE AND EQUIPMENT MAINTENANCE</p>	
<p><i>Maintenance</i></p> <ul style="list-style-type: none"> • Complete pre-startup inspections to help ensure proper maintenance of equipment. • Inspect, clean and maintain sump and oil/water separator, if necessary. <p><i>Spill Response</i></p> <ul style="list-style-type: none"> • Maintain adequate supplies of spill response equipment and materials in accessible locations near areas where spills may be likely to occur. • Furnish all maintenance vehicles with adequate supplies of spill response materials and appropriate spill response procedures. <p><i>Training</i></p> <ul style="list-style-type: none"> • Provide the appropriate level of employee training in the following areas: spill response and prevention, stormwater pollution prevention, right-to-know awareness training, and hazardous materials management. • Conduct inspections of the facility in accordance with the Spill Prevention Control & Countermeasure Plan and Stormwater Pollution Prevention Plan. Document and correct deficiencies noted. 		

The background of the page features a large, faint watermark of the University of Maryland seal. The seal is circular and contains the text "UNIVERSITY OF" at the top and "MARYLAND" at the bottom. In the center is a shield with a red and white checkered pattern on the left and a yellow and black checkered pattern on the right. A red cross with a white center is superimposed on the shield. The shield is flanked by two white birds, one on each side.

APPENDIX D
UNIVERSITY OF MARYLAND'S
20-SW PERMIT



**GENERAL PERMIT FOR DISCHARGES FROM
STORMWATER ASSOCIATED WITH INDUSTRIAL ACTIVITIES**

DISCHARGE PERMIT NO. 20-SW NPDES PERMIT NO. MDR0000

Effective Date: February 1, 2023 Expiration Date: January 31, 2028

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- Appendix E – Definitions and Acronyms
- Appendix F – Nutrient Reduction Progress Report
- Appendix G – Reporting and Verification Requirements for Trading

You are only permitted to discharge under this permit after notifying and getting approval from the Department.

PART I. APPLICABILITY

By this permit the Maryland Department of the Environment (the Department) authorizes the discharge of stormwater associated with industrial activity to waters of this state. This authorization is only for operators located in the state of Maryland, who have submitted a notice of intent (NOI) and received written approval from the Department to discharge in accordance with the eligibility requirements and other conditions in this permit and consistent with your NOI, as on file with the Department. This authorization is pursuant to the provisions of Title 9 of the Environment Article, Annotated Code of Maryland, and the provisions of the Federal Clean Water Act (CWA), 33 U.S.C. §1251 *et seq.* and implementing regulations 40 CFR Parts 122, 123, 124, and 125. “You” and “Your” are used in this permit to refer to the permittee or the permit applicant, as the context indicates, and that party’s facility or responsibilities.

A. Geographic Coverage

This permit applies to facilities operating within the state of Maryland and discharging to waters of this state.

B. Facilities Covered

To be eligible to apply for authorization to discharge under this permit you must either (1) have been authorized to discharge under previous permit 12-SW or (2) have a stormwater discharge associated with industrial activity, as defined in Appendix E, from a primary industrial activity included in Appendix A or (3) be notified by the Department that you are eligible for coverage under Sector AD: Non-Classified Facilities, as defined in Appendix A.

C. Limitations on Coverage

The following stormwater discharges are not eligible for coverage under this permit. Additional limitations on coverage for each sector covered under this permit are listed in Appendix D. You must determine which sector(s) listed in Appendix A apply to your industrial activities to determine which additional limitations from Appendix D apply.

1. Stormwater discharges associated with construction activity, as defined in Appendix E and 40 CFR 122.26(b)(15);
 2. Stormwater discharges subject to effluent limitations guidelines (see Part I.G.2);
 3. Stormwater discharges that are mixed with non-stormwater, other than those non-stormwater discharges listed in Part I.E.3;
 4. Stormwater discharges for which a National Pollutant Discharge Elimination System (NPDES) permit has been terminated (other than at your request) or denied, or those for which the Department requires an individual permit to address stormwater discharges or an alternative general permit (Part I.G.2.b);
 5. New dischargers discharging to water quality “impaired waters,” as defined in Appendix E, are not eligible for coverage under this permit unless you:
 - a. prevent all exposure to stormwater of the pollutant(s) for which the waterbody is impaired, and retain documentation of procedures taken to prevent exposure onsite with your SWPPP; or
 - b. document that the pollutant(s) for which the waterbody is impaired is not present at your site, and retain documentation of this finding with your SWPPP; or
 - c. in advance of submitting your NOI, provide to the Department data to support a showing that the discharge is not expected to cause or contribute to an exceedance of a water quality standard, and retain such data onsite with your SWPPP. To do
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this, you must provide data and other technical information to the Department sufficient to demonstrate:

- i.) For discharges to impaired waters without an EPA approved or established TMDL, that the discharge of the pollutant for which the water is impaired will meet in-stream water quality criteria at the point of discharge to the waterbody; or
- ii.) For discharges to impaired waters with an EPA approved or established TMDL, that there are sufficient remaining wasteload allocations in an EPA approved or established TMDL to allow your discharge and that existing dischargers to the waterbody are subject to compliance schedules designed to bring the waterbody into attainment with water quality standards.

You are eligible to discharge to impaired waters if you receive an affirmative determination from the Department that your discharge will not contribute to the existing impairment, in which case you must maintain such determination onsite with your SWPPP.

D. Prohibited Stormwater Discharges

If you are covered (i.e., authorized to discharge) under this permit, a stormwater discharge to waters of this state that causes or contributes to a violation of a water quality standard is a permit violation and subject to corrective actions (see Part IV).

E. Eligible Discharges

Unless otherwise ineligible under Part I.C, and subject to the eligibility requirements and limitations described throughout this permit, the following discharges may be covered under this permit:

1. Stormwater discharges associated with industrial activity for any primary industrial activities and co-located industrial activities if that activity is listed in Appendix A, or discharges previously covered under permit 12-SW;
 2. Industrial stormwater discharges per the Department's discretion under Sector AD in Appendix A, which includes established Sector AD.a, Sector AD.b, Sector AD.d or Sector AD.e, or on a site specific basis as determined by the Department;
 3. Non-stormwater discharges from:
 - a. water used to fight active fires (*not from fire system cleaning or testing*),
 - b. pavement wash waters, provided that detergents or hazardous cleaning products are not used (e.g., bleach, hydrofluoric acid, muriatic acid, sodium hydroxide, nonylphenols), and the wash waters do not come into contact with oil and grease deposits, sources of pollutants associated with industrial activities (see Part III.C.5), or any other toxic or hazardous materials, unless residues are first cleaned up using dry clean-up methods (e.g., applying absorbent materials and sweeping, using hydrophobic mops/rags) and you have implemented appropriate control measures to minimize discharges of mobilized solids and other pollutants (e.g., filtration, detention, settlement);
 - c. landscape watering, only if all pesticides, herbicides, and fertilizer have been applied in accordance with the approved labeling;
 - d. routine external building wash down that does not use detergents or hazardous cleaning products and any dislodged paint chips are filtered;
 - e. uncontaminated condensate from air conditioners, coolers, and other compressors and from the outside storage of refrigerated gases or liquids;
 - f. irrigation drainage;
 - g. uncontaminated ground water or spring water;
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- h. foundation or footing drains where flows are not contaminated with process materials; and
 - i. incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of your facility, but not intentional discharges from the cooling tower (e.g., “piped” cooling tower blowdown or drains).
4. [RESERVED].
 5. Use of Chemical Additives for Sediment Control: Use of any chemical additives (defined in Appendix E) for sediment control requires prior notice, indicating your intent to use them on your NOI and listing the additives and any pertinent associated documentation in your Stormwater Pollution Prevention Plan (SWPPP). In addition, the use of Cationic Chemical Additives (defined in Appendix E) for sediment control is subject to the Department’s approval policy as outlined in Appendix D Sector L (Part L.5.4) of this permit. Any substances not approved by the Department are prohibited.

F. No Exposure Certification

If you are eligible for authorization to discharge pursuant to this permit and meet the requirements for a no exposure exclusion from permitting under 40 CFR 122.26(g), you may file a No Exposure Certification. Upon written notice from the Department that you have met the requirements, you are no longer required to comply with the terms and conditions of this permit.

- To qualify for this certification, you must first verify that there is no potential for the stormwater discharged from your facility to waters of this state to be exposed to pollutants in accordance with the criteria established by the Department on form MDE/WMA/PER.067 (found on MDE’s website at <http://www.mde.state.md.us/> or at the link <https://mdewwp.page.link/NEForm>).
- If your facility is 5 acres or greater in size, your operations are within the Base Flood Elevation (BFE), or your operations are within a census tract with an EJScore ≥ 0.76 , you shall also obtain written certification by either a Professional Engineer, a Certified Professional in Storm Water Quality (CPSWQ), a Registered Architect, a Landscape Architect or other professional as approved by the Department, that you meet the requirements of no exposure. EJScore and Base Flood Elevation (BFE) are defined in Appendix E.
- If your facility is not required to obtain written certification as in the previous condition (based on size, BFE or EJScore), you are required to provide photographic evidence to support your claim to include: satellite image of your property, your dumpsters, outside storage areas, loading docks, material handling areas, and parking areas.
- If you qualify, you will submit the completed and appropriately signed form to the Department, along with the required written certification according to the deadlines of this permit (Part II.B).
- The exemption is non-transferable and you must submit a No Exposure Certification to the Department at least once every five years.
- If your facility discharges to a Municipal Separate Storm Sewer System (MS4), you must notify the MS4 permittee/authority that your facility is exempted from obtaining an NPDES permit for stormwater associated with industrial activity. This exemption does not preclude the MS4 authority from imposing requirements for restoration of impervious surfaces at the facility.

G. Alternative Permit Coverage

The Department may require you to obtain, or you may also request, an individual permit or coverage under another general permit as described below, even though you may be eligible for coverage under this permit. If the Department requires you to apply for and obtain an alternative permit and you do not apply as required, the Department will terminate your coverage under this permit; however, The Department may grant additional time to

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submit the application or NOI if you request it. Any resulting termination is effective at the end of the day that the Department specified for the application or Notice of Intent (NOI) to be submitted, after which you must cease discharges that were covered by this permit. The Department may take appropriate enforcement action for any unpermitted discharge.

1. You must meet applicable water quality standards. You are ineligible for coverage under this permit if the Department determines prior to your authorization to discharge that your discharges will not meet an applicable water quality standard. In such case, the Department may notify you that an individual permit application is necessary, or, alternatively, the Department may authorize your coverage under this permit after you implement additional control measures so that your discharges will meet water quality standards.
2. The following situations require that you apply for an individual or general permit based on your activity.
 - a. You are ineligible for coverage under this permit for any stormwater discharges at your facility that are subject to effluent limitations guidelines (ELG) which provided in the following table or any new source performance standards under 40 CFR Subchapter N:

40 CFR Section	ELG Regulated Discharge
40 CFR 411, Subpart C – Cement Manufacturing	Runoff from material storage piles at cement manufacturing facilities
40 CFR 418, Subpart A – Fertilizer Manufacturing	Runoff from phosphate fertilizer manufacturing facilities that comes into contact with any raw materials, finished product, by-products or waste products (SIC 2874)
40 CFR 419 – Petroleum Refining	
40 CFR 423 – Steam Electric Power Generating	Runoff from coal storage piles at steam electric generating facilities
40 CFR 429, Subpart I – Timber Products Processing	Discharges resulting from spray down or intentional wetting of logs at wet deck storage areas
40 CFR 443, Subpart A – Paving and Roofing Material (tars & asphalt)	Runoff from asphalt emulsion facilities
40 CFR 445, Subparts A and B – Landfills	Runoff from hazardous waste and nonhazardous waste landfills
40 CFR 449 - Airfields	Runoff containing urea from airfield pavement deicing at existing and new primary airports with 1,000 or more annual non-propeller aircraft departures

For a complete list of current effluent guidelines by industry, see the indicated 40 CFR part on the Environmental Protection Agency’s (EPA) website for Industrial Regulations (<http://www.epa.gov/waterscience/guide/industry.html>). If your industry is included in this list then you should review the applicable 40 CFR part to determine if you are subject to effluent limitation guidelines for stormwater. This permit may cover parts of your facilities not covered by effluent limitation guidelines or new source performance standards.

- b. If you are eligible for coverage under an industry-specific general permit for the stormwater discharges, you must apply for coverage under that permit for the stormwater and process water related discharges. Currently, those specific permits are:

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- i.)* General Discharge Permit For Discharges from Mineral Quarries, Borrow Pits, and Concrete and Asphalt Plants: (General Permit No. 15-MM or replacement),
- ii.)* General Permit for Discharges from Surface Coal Mines and Related Facilities: (General Discharge Permit No. 06-CM or replacement),
- iii.)* General Permit for Discharges from Marinas including Boat Yards and Yacht Basins (Maryland General Permit No. 16-MA or replacement), and
- iv.)* General Discharge Permit for Animal Feeding Operations (General Permit No. 09-AF/MDG01 or replacement).

3. You may request to be excluded from coverage under this permit by applying for an individual state or NPDES discharge permit or submitting an NOI for coverage under another general permit. The Department may grant your request if the Department determines your reasons are adequate. If you are issued an individual NPDES permit or apply for coverage under an industry-specific general permit, the Department may terminate your coverage under this permit.

H. Continuation of an Expired General Permit and Permit Coverage

Upon the expiration of the 20-SW, the Department may administratively extend the 20-SW. To maintain 20-SW Coverage, You must submit a Continuation of Registration statement at least 60 days before the expiration of the 20-SW. Late Continuation of Registration statements will not be accepted.

I. Duty to Reapply

If you wish to continue an activity regulated by this permit after the expiration date of this permit, you must apply for and obtain authorization as required by the new permit once the Department issues it.

PART II. AUTHORIZATION UNDER THIS PERMIT

A. How to Obtain Authorization

If you are eligible for coverage under this permit, per PART I, to obtain authorization you must

- Select, design, install, and implement control measures in accordance with Part III.A and Part III.B to meet numeric and non-numeric effluent limits;
- Submit a complete and accurate Notice of Intent (NOI) or Permit Transfer Request with Permit Fee as indicated below; and
- Develop and submit to the Department, a Stormwater Pollution Prevention Plan (SWPPP) according to the requirements in Part III.C and, where applicable, Part III.A.2 of this permit.

Based on a review of your NOI or Transfer Request, the Department may delay your authorization for further review, notify you that additional effluent limitations are necessary, or deny coverage under this permit and require submission of an application for an individual NPDES permit. In these instances, the Department will notify you in writing of the delay, of the need for additional effluent limits, or of the request for submission of an individual NPDES permit application.

1. Notice of Intent (NOI) and Transfer Requests

a. Notice of Intent (NOI)

You must complete all information required on this permit's corresponding NOI form (MDE-WMA-PER004), or an equivalent electronic form provided by the Department. Detailed instructions are included on the NOI form. If you operate multiple facilities,

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you must submit an NOI for each noncontiguous site.

You are required to provide the following information on the appropriate NOI form.

- Facility Operator Information including your name, mailing address, email address, telephone number, IRS Employer Identification Number (EIN) and Worker's Comp Insurance company and policy.
- Facility Information including the facility location, including physical address and coordinates in degrees decimal; the primary and any subsequent co-located Standard Industrial Classification (SIC) codes relevant to this permit, verification if this is a new discharger or if there is any preexisting NPDES permit number for stormwater coverage, the total acres of property at that address and whether the facility is presently inactive and unstaffed.
- Outfall coordinates in degrees decimal, for each outfall discharging stormwater associated with Industrial Activity.
- Information on the receiving waters of the industrial stormwater. Identify the receiving water body(s) and 8 digit identifier for your discharges, including whether they qualify as high quality Tier II, and identification of any impairments. Specify the MS4 jurisdiction you operate in.
- Identify who has prepared the Stormwater Pollution Prevention Plan (SWPPP), including email and phone number, along with how you have provided the SWPPP to the Department.
- Identify if your facility is subject to the Chesapeake Bay Restoration requirements, quantifying 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).
- Identify which industry sector benchmarks apply to the operation, for each applicable outfall.
- Selection of either annual payments, or an upfront payment for 5 years and annual payments thereafter, or if you are exempt.
- Identify if your operation is within a census tract with an EJScore ≥ 0.76 . EJScore is defined in Appendix E.
- Identify if your operation is within the Base Flood Elevation (BFE). Base Flood Elevation is defined in Appendix E.
- If you intend to use cationic chemical additives, include the approved product you intend to use.
- Provide the signatory name, title and contact information and space for the actual signature. Provide the NOI preparer information, including phone number and email address.

b. Transfer of Authorization.

For transfer of ownership, you can complete the Permit Transfer Request Form for General NPDES Permits referred to as MDE/WMA/PER.079 found on the Department's website or at <https://mdewwp.page.link/GPXferForm>[about:blank](#). Detailed instructions are included with the form. If you operate multiple facilities, you must submit a Transfer Request for each noncontiguous site. The authorization under this permit is not transferable to any person except in accordance with this section. Authorization to discharge under this permit may be transferred to another person if:

- The current permittee notifies the Department in writing of the proposed transfer.
 - A written agreement, indicating the specific date of the proposed transfer of permit coverage and acknowledging the responsibilities of the current and new permittee for compliance with the terms and conditions of this permit, is submitted to the Department.
 - The new permittee either confirms in writing that the type of discharge, number
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of outfalls, and other information given on the original NOI remain correct or updates this information.

- The new permittee confirms in writing that either they will follow the existing SWPPP or that they have developed a new SWPPP.
- Neither the current permittee nor the new permittee receives notification from the Department, within 30 days of receipt of items above, of intent to terminate coverage under this permit.

2. Permit Fee

- a. You must submit the initial permit fee to the Department with the NOI form for the fee in effect at the time that the payment is due as specified in COMAR 26.08.04.09-1(C)(1)(a).
- b. Make the initial fee payable to the Maryland Department of the Environment and send it together with the completed NOI to:
Maryland Department of the Environment
P.O. Box 2057
Baltimore, MD 21203-2057
- c. If you pay the NOI fee by a check that does not clear for any reason, you will have 30 calendar days from the date the payment fails to make proper payment, including any interest and other charges. If payment is not received by the 31st calendar day following the failed payment, your coverage under this permit must be considered void from the outset. When payment is made successfully and authorization issued, you should save the cancelled check or other proof of payment, a copy of the completed NOI, and the letter confirming your authorization from the Department. These documents must be provided to the Department upon request.
- d. A new owner of a facility as a result of a transfer of ownership is responsible for any fees unpaid by the former owner.

3. SWPPP

Proper formats for submitting your SWPPP are provided below.

- a. You should not include any confidential information in your submitted SWPPP, which will be a public document available for review by the public.
- b. You must submit an electronic copy of the SWPPP to the Department and have a hard copy available onsite. Your electronic copy (PDF, JPEG or Word) of the SWPPP must be provided to the Department by one of these methods.
 - i.) Including a file on electronic media (CD, DVD, USB drive, or other approved media) along with your mailed copy of the NOI.
 - ii.) Emailing the file to swppp.permit@maryland.gov when you send your NOI to the Department. The email cannot exceed 25 MB and so you may need to use more than one email to deliver the entire file. The email subject line should include "20SW", your previous registration number (if you did have previous coverage under 12SW) and your facility name.
 - iii.) Posting a copy of the SWPPP using your NetDMR account when you send your NOI to the Department.
 - iv.) Including a link (URL) to your SWPPP on your NOI, which provides access to your SWPPP on a publicly available company website.
 - v.) Other electronic means that you make accessible to the Department such as a link to DropBox, Google Drive, SkyDrive, etc.

B. Deadlines for Coverage

You will be in violation of state and federal requirements to obtain a permit and subject to enforcement action by the Department if you fail to submit a i) No Exposure Certification, or ii) an NOI, SWPPP and fee payment or iii) transfer request in a timely manner as provided in

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the following table. Late NOIs will be accepted, but authorization to discharge will not be retroactive.

Category	NOI Submittal Deadline
Existing Dischargers – in operation as of Effective Date of this permit and previously authorized for coverage under 12-SW, that are not subject to Chesapeake Bay Restoration Requirements (Part III.A).	Within 6 months after the effective date of this permit. Authorization to discharge under 12-SW continues in the interim.
Existing Dischargers – in operation as of Effective Date of this permit and previously authorized for coverage under 12-SW that are subject to Chesapeake Bay Restoration Requirements (Part III.A).	Within 6 months after the effective date of this permit. Authorization to discharge under 12-SW continues in the interim.
New Dischargers or New Sources	A minimum of 60 days prior to commencing discharge.
New Owner/Operator of Existing Discharger - transfer of ownership and/or operation of a facility whose discharge is authorized under this permit	A minimum of 30 days prior to date that the transfer will take place to the new owner/operator.
Other Eligible Dischargers – in operation prior to permit effective date, but not covered under the 12-SW or another NPDES permit.	Immediately, to minimize the time discharges from the facility will continue to be unauthorized.

C. Required Signatures

1. Certification

Any person signing documents in accordance with part II.C.2 and II.C.3 above must include the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

2. All applications, including NOIs, transfer requests, and No Exposure Certifications must be signed by a Signatory as follows:

- a. For a corporation:** By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:
 - i.)** a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation; or
 - ii.)** the manager of one or more properties belonging to the owner, provided the manager is authorized to make management decisions which govern the operation of the regulated facility having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary

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systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

- b. *For a partnership or sole proprietorship:* By a general partner or the proprietor, respectively; or
 - c. *For a municipality, State, Federal, or other public agency:* By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:
 - i.) the chief executive officer of the agency; or
 - ii.) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of the EPA).
3. Your SWPPP, including changes to your SWPPP to document any corrective actions taken as required by Part IV, the Comprehensive Site Compliance Evaluation, and all reports submitted to the Department, must be signed by a person described in Part II.C.2 above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
- a. the authorization is made in writing by a Signatory;
 - b. the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or a position of equivalent responsibility or an individual or position having overall responsibility for environmental matters for the company (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and
 - c. the signed and dated written authorization is included in the SWPPP and made available to the Department upon request.
4. If an authorization for a representative is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of PART II.C.3 must be submitted to the Department prior to submitting or with any reports, information or applications that must be signed by a duly authorized representative.

D. Failure to Notify

If you (1) engage in an activity covered under this permit, (2) fail to notify the Department of your intent (Part II.A) to be covered under this permit within the deadlines established in this permit (Part II.B), and (3) discharge to waters of this state without an NPDES discharge permit, then you are in violation of the Federal Clean Water Act and of the Environment Article, Annotated Code of Maryland, and may be subject to penalties.

E. Additional Notification

If stormwater from your facility discharges into a Municipal Separate Storm Sewer System (MS4) you must notify the MS4 owner/operator that you are authorized to discharge under this permit. If the MS4 owner/operator notifies you of additional requirements that you must meet to discharge into that system then you must comply with those requirements to remain authorized to discharge under this permit.

F. Changes in Permit Coverage

Certain planned changes in stormwater discharge or termination of permit coverage, both described below in this section, require notification to the Department's Water Permits

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Program at this address:

Maryland Department of the Environment
Wastewater Permits Program
1800 Washington Blvd, Ste 455
Baltimore, MD 21230

1. Planned Changes

When possible, consider the contours/elevations at a particular site and aim to site new structures on the higher elevations at a site and put parking or other structures that can be flooded at the lower elevations, in anticipation of climate change effects. You must give written notice to Department's Water Permits Program as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

- a. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
- b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42(a)(1); or
- c. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan; or
- d. Anticipated Noncompliance Notification - You shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

2. Termination of Permit Coverage

a. Submitting a Notice of Termination

To terminate permit coverage, you must submit a complete and accurate Notice of Termination (NOT) <https://mdewwp.page.link/GPNOT> to the Wastewater Permits Program, or an equivalent electronic form provided by the Department. Your authorization to discharge under this permit terminates at midnight of the day that a complete Notice of Termination is processed and acknowledged by the Department. If you submit a Notice of Termination without meeting one or more of the conditions identified in Part II.F.2.b, then your Notice of Termination is not valid. You are responsible for meeting the terms of this permit until your authorization is terminated.

b. When to Submit a Notice of Termination

You must submit a Notice of Termination within 30 days after one or more of the following conditions have been met:

- i.)* All operations at your facility have permanently ceased and there will be no further exposure of stormwater to any industrial activity, process, material or transport at the facility, and you have already implemented necessary sediment and erosion controls as required by Part III.B.1.b.v; or
 - ii.)* You move your operation to a new location (After submitting an NOT you must then apply for coverage at the new location per Part II.); or
 - iii.)* A new owner or operator has taken over responsibility for the facility; or
 - iv.)* You have obtained coverage under an individual or alternative general permit for all discharges required to be covered by an NPDES permit, unless the Department has required that you obtain such coverage under Part I.E.4, in
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which case coverage under this permit will terminate automatically.

- c. The Department may terminate your coverage under this general permit if the Department finds good cause to do so.

G. Requirement to Post a Sign of your Permit Coverage.

You must post a sign or other notice of your permit coverage at a safe, publicly accessible location in close proximity to your facility and at potentially impacted public access areas. You must use a font large enough to be readily viewed from a public right-of-way and conduct periodic maintenance of the sign to ensure that it is legible, viable, and factually correct. At minimum, the sign must include:

1. The State and NPDES permit number (i.e., permit tracking number assigned to your NOI);
2. The Department's wastewater permits portal URL (<https://mdewwp.page.link/WWPPortal>); and
3. A contact name and phone number for obtaining additional facility information.

PART III. STORMWATER MANAGEMENT REQUIREMENTS

A. Chesapeake Bay Restoration Requirements

You must comply with the requirements in this section if you meet ALL of these criteria:

- your facility is located within the Chesapeake Bay Watershed;
- your facility is 5 acres or greater in size;
- any portion of your facility is located within a Phase I or Phase II municipal separate storm sewer system (MS4) jurisdiction¹; and
- your facility is not owned by or leased from an entity that is permitted as an MS4.

All facilities not owned by or leased from an entity that is permitted as an MS4, including those (Refer to Appendix G).

1. Control Measures for Nutrient Reduction

- a. You must select, design, install and implement restoration of 20% of the untreated impervious surface area at your facility or equivalent control measures for the reduction of nutrients.
 - i.) Restoration of impervious surfaces and allowed equivalent control measures are defined in paragraph "c" below.
 - ii.) "Untreated" means not meeting the definition of treatment in Appendix E, "Treatment of Impervious Surfaces." The amount of required restoration is determined from the impervious areas within your permitted industrial area as defined in paragraph "b" below. However the control measures may be implemented outside this industrial area, including but not limited to restoration of parking lots within your entire facility, or projects offsite in coordination with your local stormwater authority as described in paragraphs "c" or "d" below.
 - iii.) The control measures must be fully implemented within the time frame described in paragraph "e" below and must be consistent with other MDE policies as described in paragraphs "f" and "g" below.
- b. The total area of untreated impervious surfaces that existed at your facility on January 1, 2006, as determined to the best of your ability, shall be your baseline for determining the applicable amount of control measures. For the purposes of this

¹ Including operators in the 13-IM-5500 (MDR055500) Phase 2 jurisdictions.

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permit requirement, impervious surfaces are those surfaces that do not allow stormwater to infiltrate into the ground and may include any driveway, road or parking lot that is paved (concrete, asphalt) or used for vehicular storage or traffic, any building or storage facility rooftop, any water resistant material covers, any sidewalks/paths, any decks, any paved storage areas, any tanks or containment structures or any surfaces that are paved or covered for other reasons. These impervious surfaces also must collect or convey stormwater discharges associated with industrial activity (as defined in Appendix E "Stormwater Discharges Associated with Industrial Activity"), for your primary industrial or co-located industrial activities at your facility.

- c. Control measures must be designed and implemented using any combination of the following three methods. Any treatment of impervious surfaces added since January 1, 2006 may be counted towards meeting the 20% requirement (including restoration completed under the previous permit 12SW).
- i.) Practices found in the Design Manual (as defined in Appendix E, "Design Manual"), or other Proprietary Practices (as defined in Appendix E, "Proprietary Practices") approved by the Department. Restoration of impervious surfaces is defined as the treatment of untreated impervious surfaces with structural or non-structural stormwater management practices using structural best management practices (BMPs) found in the Design Manual, or through other Proprietary Practices approved by the Department, based upon designs that treat the volume from one inch of rainfall. Successful implementation of these structural BMPs in the industrial environment also requires some flexibility to accommodate site specific conditions. Restoration opportunities should be pursued where they make sense and where engineering adjustments allow for the successful functioning of any BMP used. The sources of pollutants that may impede the practices may require specific consideration such as pretreatment.
 - ii.) Practices found in the Accounting Guidance (as defined in Appendix E, "Accounting Guidance"). This nutrient accounting guidance provides several approved equivalent controls used by municipalities ranging from street sweeping to septic system upgrades, which can be considered by industrial facilities. In addition, this guidance addresses situations where site constraints prevent the capture of the full one inch or Water Quality Volume (WQv) treatment, and in these situations the impervious area considered as treated shall be pro-rated based on the total volume treated. The total impervious surface area draining to a BMP may be considered treated when the full WQv is provided for one inch of rainfall; otherwise, proportional treatment will be granted based on the percentage of the WQv captured. For example, if only a half inch of rainfall is treated, then only one half of the impervious surface area in the drainage area shall be considered treated.
 - iii.) Other equivalent control measures. Measures that achieve reduction of 5.4 lbs total nitrogen (TN) per year shall be considered equivalent to restoration of one acre of impervious surface area. The equivalent measures may include any of these options.
 - New controls required by this permit for erosion and sediment control, or for reduced use of fertilizer. Refer to EPA Chesapeake Bay Program Office Phase 5.3 Community Watershed Model, dated December 2010, for guidance on evaluating reductions (later Model performance data may also be used in this evaluation). This is referred to by document number "EPA 903S10002 - CBP/TRS-303-10" and can be found at the website "<http://ches.communitymodeling.org/models/CBPhase5/documentation.php>".
 - New erosion and sediment control reduction efficiencies are found in this document under "6.7.3 Erosion and Sediment Control" and reduced use of
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fertilizer load reductions are found under "6.7.10 Urban Nutrient Management".

- New controls to achieve the benchmarks for nitrogen required by this permit, if benchmarks are applicable for your facility. The control design and resulting TN reductions must be fully documented and approved by the Department.
 - Reducing an existing TN load allocation under an individual NPDES permit, issued to the permittee.
- d. You must implement these control measures (Part III.A.1.c) at your facility(s) unless infeasible (as defined in Appendix E, "Infeasible"). If it is infeasible to implement any or all of these practices at your facility(s), you may satisfy the restoration requirement by working through your local jurisdiction to implement project(s) offsite or through trading to acquire credits, but only as authorized under, and in accordance with the Maryland Water Quality Trading Program regulations (COMAR 26.08.11). If you intend to trade to meet these requirements, you must
- i.) notify the Department and address all applicable regulatory requirements, including all reporting and notification requirements under Appendix G of this permit;
 - ii.) translate the restoration requirements from impervious acres to Total Nitrogen (TN), Total Phosphorus (TP) and Sediment (TSS), using the calculation method prescribed by COMAR 26.08.11; and
 - iii.) complete the acquisition of verified credits no later than 3 months (end of March) following the end of the calendar year in which the credits are applicable.
- e. Existing facilities with prior coverage under the 12-SW subject to the Chesapeake Bay restoration requirements were required to implement control measures to meet the 20% restoration within the five (5) year term of the previous permit, beginning with the effective date of that permit or up to four (4) years from the date that the facility filed the NOI. This permit does not relieve such facilities from meeting those prior permit terms. Facilities with prior coverage under the 12-SW that were not previously subject to the Chesapeake Bay restoration requirements or facilities that are newly covered under 20-SW for the first time which are now subject to the Chesapeake Bay restoration requirements, must implement control measures within four (4) years from the date an NOI is filed.
- f. The reduction of nutrients associated with compliance with the 20% restoration requirement shall not generate any marketable credits. Reductions beyond the requirements in this permit may be eligible as marketable credits in accordance with Maryland Water Quality Trading Program regulations (COMAR 26.08.11).
- g. This requirement must be implemented in a manner that is consistent with any other permits, schedules or requirements by the Department for the control or mitigation of pollutants at the site.

2. Nutrient Control Measure Planning and SWPPP Documentation

For those facilities that were entirely developed or entirely redeveloped after 2002, such that all impervious surfaces have been treated with stormwater BMPs in the Design Manual, you must complete only step "a" and step "b" below and document the results in your SWPPP. For all other facilities, you must develop a plan by completing all the following steps and document in your SWPPP (required in Part III.C.4 of this permit) the results of each step.

- a. Identify all impervious surfaces that are subject to this permit, as defined in Part III.A.1.a, and calculate the total impervious surface area for your facility.
 - b. Identify the impervious surface area treated with existing stormwater best management practices (BMPs) that provide the full one inch or WQv treatment (as defined in Appendix E, "Treatment of Impervious Surfaces").
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- c. Identify the impervious surface area partially treated by existing stormwater best management practices (BMPs) that don't provide the full one inch or WQv treatment. Convert the partially treated area total to its equivalent fully treated area total by applying a proportional factor based on the percentage of the WQv captured. This result is the "adjusted partially treated area." For example, if only a half inch of rainfall is treated, then only one half of the impervious surface area in the drainage area shall be considered treated.
 - d. Subtract the treated area result in "b" above and the adjusted partially treated area result in "c" above from the total impervious surface area result in "a" above. The resulting value represents the untreated impervious surface area.
 - e. Multiply the untreated impervious surface area (result in "d" above) by 20% to calculate the impervious surface area subject to the 20% control measure requirement. Convert this area to acres by dividing your square feet of impervious area by 43,560.
 - f. Determine all of your available options as follows:
 - i.) restoration control measures using the Design Manual and/or Proprietary Practices as referenced in Part III.A.1.c.i;
 - ii.) control measure alternatives through the Accounting Guidance as referenced in Part III.A.1.c.ii; and
 - iii.) equivalent control measures as referenced in Part III.A.1.c.iii.
 - g. Evaluate and then select practices from the options (identified in "f" above) that you will implement to comply with the control measure requirement of this permit (result in "e" above).
 - h. If after evaluating your potential options for nutrient reductions, you determine it is infeasible to meet the nutrient reduction requirements at your facility, provide your rationale and describe your alternate plan and schedule consistent with Part III.A.1.d for coordinating with the local jurisdiction to implement equivalent off-site projects.
 - i. Document your selection of BMPs and equivalent measures, including calculations that show your approach will achieve the nutrient reduction requirement.
 - j. Provide a schedule and basis for all options you selected that cannot be implemented within 30 days of registration under this permit.
 - k. Specify appropriate routine maintenance schedules for all new and existing BMPs. Include in your plan a procedure for inspection and documentation of those inspections for all structural, nonstructural and other equivalent control measures.
 - l. Modify the resulting plan as needed to keep implementation on pace to meet the permit deadline in Part III.A.1.e.
3. Nutrient Control Measure Verification
- a. When the required selection of BMPs and equivalent measures have been implemented, you shall obtain written certification by either a Professional Engineer (PE), a Certified Professional in Storm Water Quality (CPSWQ), a Registered Architect, or a Landscape Architect. The certification shall be kept with your SWPPP. This certification is to provide verification that:
 - the type and capacity of the control(s) specified in the SWPPP meet the current design standards specified in the Design Manual, approved Proprietary Practices specification or Accounting Guidance satisfying the permit restoration requirements;
 - all equivalent measures specified in the SWPPP have been implemented to achieve the planned nutrient reduction levels;
 - all structural BMPs in the SWPPP are properly maintained in accordance with approved design plans;
 - all BMPs are supported by procedures in the SWPPP for required inspections and testing;
 - all BMPs are fully implemented; and
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- the professional signing the verification has visited and examined the facility.
 - b. You must provide an updated SWPPP and complete the Nutrient Reduction Progress Report Form, provided in Appendix F, and send both documents to the Department within four (4) years from the date you file an NOI.
4. Ongoing Requirements:
- a. For those facilities that have certified their implementation of the Chesapeake Bay Restoration requirements of this permit (see Part III.A.3), and for those facilities who have reached their required deadline for certification, you must continue to maintain structural practices, and/or continue to perform any non-structural requirements (such as street sweeping or trading), yearly as required by this permit, as long as this permit remains effective (or administratively extended). You must document these continued maintenance, ongoing non-structural practices or trading requirements in your SWPPP (Part III.C.5.v).
 - b. Operators seeking to achieve nutrient reduction via trading must continue to provide additional information verification of compliance annually. (Refer to Appendix G).

B. Control Measures and Effluent Limits

In the technology-based limits included in Part III.B.1 and in Appendix D, the term “minimize” means reduce and/or eliminate to the extent achievable using control measures (including best management practices) that are technologically available and economically practicable and achievable in light of best industry practice.

1. Control Measures

Considering the control measure selection and design considerations, you must select, design, install, and implement control measures (including best management practices) to meet the non-numeric effluent limits, as described below. The selection, design, installation, and implementation of these control measures must be in accordance with good engineering practices and manufacturer’s specifications. Note that you may deviate from such manufacturer’s specifications where you provide justification for such deviation and include documentation of your rationale in the part of your SWPPP that describes your control measures. If you find that your control measures are not achieving their intended effect of minimizing pollutant discharges, you must modify these control measures as expeditiously as practicable. Regulated stormwater discharges from your facility include stormwater run-on that commingles with stormwater discharges associated with industrial activity at your facility.

a. *Control Measure Selection and Design Considerations*

You must consider the following when selecting and designing control measures:

- i.)* preventing stormwater from coming into contact with polluting materials is generally more effective, and less costly, than trying to remove pollutants from stormwater;
 - ii.)* using control measures in combination is more effective than using control measures in isolation for minimizing pollutants in your stormwater discharge;
 - iii.)* assessing the type and quantity of pollutants, including their potential to impact receiving water quality, is critical to designing effective control measures that will achieve the limits in this permit;
 - iv.)* minimizing impervious areas at your facility and infiltrating runoff onsite (including bioretention cells, green roofs, pervious pavement, or improving soils on-site by adding organic matter, among other approaches) can reduce runoff and improve groundwater recharge and stream base flows in local streams, although care must be taken to avoid ground water contamination;
 - v.)* attenuating flow using open vegetated swales and natural depressions can reduce in-stream impacts of erosive flows;
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- vi.)** conserving and/or restoring riparian buffers will help protect streams from stormwater runoff and improve water quality;
 - vii.)** using treatment interceptors (e.g., swirl separators and sand filters) may be appropriate in some instances to minimize the discharge of pollutants; and
 - viii.)** adapting operations to address climate change impacts by implementing structural improvements, enhanced pollution prevention measures, and other mitigation measures, to minimize impacts from stormwater discharges from major storm events that cause extreme flooding conditions, such as the following:
 - Reinforce materials storage structures to withstand flooding and additional exertion of force;
 - Prevent floating of semi-stationary structures by elevating to the Base Flood Elevation (BFE)² level or securing with non-corrosive device;
 - When a delivery of materials is expected, and a storm is anticipated within 48 hours, delay delivery until after the storm or store materials as appropriate (refer to emergency procedures);
 - Temporarily store materials and waste above the BFE level;
 - Temporarily reduce or eliminate outdoor storage;
 - Temporarily relocate any mobile vehicles and equipment to upland areas;
 - Develop scenario-based emergency procedures for major storms that are complementary to regular stormwater pollution prevention planning and identify emergency contacts for staff and contractors; and
 - Conduct staff training for implementing your emergency procedures at regular intervals.
- b. Non-Numeric Technology-Based Effluent Limits (BPT/BAT/BCT)**
- i.) Minimize Exposure.** You must minimize the exposure of manufacturing, processing, and material storage areas (including loading and unloading, storage, disposal, cleaning, maintenance, and fueling operations) to rain, snow, snowmelt, and runoff by either locating these industrial materials and activities inside or protecting them with storm resistant coverings (although significant enlargement of impervious surface area is not recommended). You must store solid chemical products, chemical solutions, paints, oils, solvents, acids, caustic solutions and waste materials under cover on an impervious surface. In minimizing exposure, you should pay particular attention to the following:
 - use grading, berming, or curbing to prevent runoff of contaminated flows and divert run-on away from these areas;
 - locate materials, equipment, and activities so that leaks are contained in existing containment and diversion systems (confine the storage of leaky or leak-prone vehicles and equipment awaiting maintenance to protected areas);
 - clean up spills and leaks promptly using dry methods (e.g., absorbents) to prevent the discharge of pollutants;
 - use drip pans and absorbents under or around leaky vehicles and equipment or store indoors where feasible;
 - use spill/overflow protection equipment;
 - drain fluids from equipment and vehicles prior to onsite storage or disposal;
 - perform all cleaning operations indoors, under cover, or in bermed areas that prevent runoff and run-on and also that capture any overspray; and
 - ensure that all washwater drains to a proper collection system (i.e., not the stormwater drainage system).

² Base Flood Elevation (BFE) is the computed elevation to which floodwater is anticipated to rise during the base flood. BFEs are shown on the Federal Emergency Management Agency's Flood Maps and on the flood profiles, which can be access through <https://msc.fema.gov/portal/search>. Refer also to Appendix E.

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The discharge of vehicle and equipment washwater, including tank cleaning operations, is not authorized by this permit. These wastewaters must be covered under the vehicle washing general permit (<https://mdewwp.page.link/VWGP>), a separate NPDES permit, discharged to a sanitary sewer in accordance with applicable industrial pretreatment requirements, or disposed of otherwise in accordance with applicable law.

Note: Industrial materials do not need to be enclosed or covered if stormwater runoff from affected areas will not be discharged to receiving waters or if discharges are authorized under another NPDES permit.

- ii.) Good Housekeeping.* You must keep clean all exposed areas that are potential sources of pollutants, using such measures as sweeping at regular intervals, keeping materials orderly and labeled, and storing materials in appropriate containers. A good practice for ensuring housekeeping activities are performed at regular intervals would be keeping a schedule for routine grounds maintenance and cleanup. Keep all dumpster lids closed when not in use. For dumpsters and roll off boxes that do not have lids and could leak, ensure that discharges have a control (e.g., secondary containment, treatment). Consistent with Part I.E.3 above, this permit does not authorize dry weather discharges from dumpsters or roll off boxes;*
- iii.) Maintenance.* You must regularly inspect, test, maintain, and repair all industrial equipment and systems to avoid situations that may result in leaks, spills, and other releases of pollutants in stormwater discharged to receiving waters. You must maintain all stormwater control measures used to restore impervious surfaces. You must also maintain all control measures that are used to achieve the effluent limits required by this permit in effective operating condition. This includes cleaning catch basins when the depth of debris reaches two-thirds (2/3) of the sump depth and keeping the debris surface at least six inches below the lowest outlet pipe. Particular care should be taken to inspect compaction dumpsters to prevent debris around or under the dumpster as well as prevent hydraulic fluid leakage. Nonstructural control measures must also be diligently maintained (e.g., spill response supplies available, personnel appropriately trained). *Maintenance Deadlines.* If you find that your control measures need to be replaced or repaired, you must conduct the necessary maintenance immediately in order to minimize pollutant discharges. If you find that your control measures need to be repaired or replaced, you must immediately take all reasonable steps to prevent or minimize the discharge of pollutants until the final repair or replacement is implemented, including cleaning up any contaminated surfaces so that the material will not be discharged during subsequent storm events. Final repairs/replacement of stormwater controls should be completed as soon as feasible but must be no later than the timeframe established in Part IV.A.2 for corrective actions, i.e., within 14 days or, if that is infeasible, within 45 days. If the completion of stormwater control repairs/replacement will exceed the 45 day timeframe, you may take the minimum additional time necessary to complete the maintenance, provided that you notify the Department Compliance Program of your intention to exceed 45 days, and document in your SWPPP your rationale for your modified maintenance timeframe. If a control measure was never installed, was installed incorrectly or not being properly operated or maintained, you must conduct corrective action as specified in Part IV. Note: In this context, the term "immediately" means the day you identify that a control measure needs to be maintained, repaired, or replaced, you must take all reasonable steps to
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minimize or prevent the discharge of pollutants until you can implement a permanent solution. However, if you identify a problem too late in the work day to initiate action, you must perform the action the following work day morning. "All reasonable steps" means you must respond to the conditions triggering the action, such as, cleaning up any exposed materials that may be discharged in a storm event (e.g., through sweeping, vacuuming) or making arrangements (i.e., scheduling) for a new Stormwater Control Measure (SCM) to be installed.

iv.) Spill Prevention and Response Procedures. You must minimize the potential for leaks, spills and other releases that may be exposed to stormwater and develop plans for effective response to such spills if or when they occur. These procedures are complementary to and do not replace any requirements of RCRA (42 U.S.C. §6901), the Department's Land and Materials Administration Oil Control Program, NFPA 30 Flammable and Combustible Liquids Code or the Spill Prevention, Control and Countermeasure (SPCC) Plan (as a requirement of 40 CFR § 112). At a minimum, you must implement:

- Procedures for plainly labeling containers (e.g., "Used Oil," "Spent Solvents," "Fertilizers and Pesticides," etc.) that could be susceptible to spillage or leakage to encourage proper handling and facilitate rapid response if spills or leaks occur;
- Quarterly inspection procedures for containers that are susceptible to spillage or leakage (e.g., used oil) to ensure the containment structures have no leaks/cracks, and that the outlets are properly sealed. Check that plugs are properly affixed, that valves are in working condition, and that neither are leaking;
- Procedure for the discharge of any stormwater from a containment structure, requiring that a sample is taken to ensure that no visible or odorous pollutants are discharged. If a sample contains a visible sheen, floating solids or a noxious smell, then you must discharge the remaining wastewater to a sanitary sewer system or haul it to a recycler or TSDF (Treatment Storage & Disposal Facilities) or disposal facility;
- Preventative measures such as barriers between material storage and traffic areas, secondary containment provisions, and procedures for material storage and handling;
- Procedures for expeditiously stopping, containing, and cleaning up leaks, spills, and other releases. Employees who may cause, detect, or respond to a spill or leak must be trained in these procedures and have necessary spill response equipment available. If possible, one of these individuals should be a member of your stormwater pollution prevention team as described in Part III.C.1; and
- Procedures for notification of appropriate facility personnel, emergency response agencies, and regulatory agencies. Where a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302, occurs during a 24-hour period, you must notify the Department's Emergency Spill Response number at (866) 633-4686 and EPA's National Response Center (NRC) at (800) 424-8802 or, in the Washington, DC, metropolitan area, call (202) 267-2675 in accordance with the requirements of 40 CFR Part 110, 40 CFR Part 117, and 40 CFR Part 302 as soon as you have knowledge of the discharge. Local requirements may necessitate reporting spills or discharges to local emergency response, public health, or drinking water supply agencies. Contact information must be in locations that are readily accessible and available.

v.) Erosion and Sediment Controls. You must stabilize exposed areas and contain

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runoff using structural and/or non-structural control measures to minimize onsite erosion and sedimentation, and the resulting discharge of pollutants. Among other actions you must take to meet this limit, you must place flow velocity dissipation devices at discharge locations and within outfall channels where necessary to reduce erosion and/or settle out pollutants. In selecting, designing, installing, and implementing appropriate control measures, you are encouraged to consult with the Department's Soil Erosion & Sediment Control Handbook, EPA's internet-based resources relating to BMPs for erosion and sedimentation, including the sector-specific Industrial Stormwater Fact Sheet Series, (<https://mdewwp.page.link/ISWGuidance>), and National Management Measures to Control Nonpoint Source Pollution from Urban Areas (<https://mdewwp.page.link/NPSFS>).

- vi.) *Management of Runoff.*** You must divert, infiltrate, reuse, contain, or otherwise reduce stormwater runoff, to minimize pollutants in your discharges. In selecting, designing, installing, and implementing appropriate control measures, you are encouraged to consult with the Department's Design Manual, EPA's internet-based resources relating to runoff management, including the sector-specific Industrial Stormwater Fact Sheet Series, (<https://mdewwp.page.link/ISWGuidance>), and National Menu of Stormwater BMPs (<https://mdewwp.page.link/SWBMPs>).
- vii.) *Salt Storage Piles or Piles Containing Salt.*** You must enclose or cover storage piles of salt, or piles containing salt, used for deicing or other commercial or industrial purposes, including maintenance of paved surfaces. Refer to Sector Specific requirements for Sector AD.d for additional requirements for Salt Terminals. You must implement appropriate measures (e.g., good housekeeping, diversions, containment) to minimize exposure resulting from adding to or removing materials from the pile. Piles do not need to be enclosed or covered if stormwater runoff from the piles is not discharged or if discharges from the piles are authorized under another NPDES or State discharge permit.
- viii.) *Sector Specific Non-Numeric Effluent Limits.*** Appendix A of this permit identifies your specific Industry Sector. You must achieve any additional non-numeric limits stipulated in the relevant sector-specific section(s) of Appendix D: Sector-Specific Requirements for Industrial Activity.
- ix.) *Employee Training.*** You must train all employees who work in areas where industrial materials or activities are exposed to stormwater, or who are responsible for implementing activities necessary to meet the conditions of this permit (e.g., inspectors, maintenance personnel), including all members of your stormwater pollution prevention team described in Part III.C.1, below. Training must cover the specific control measures used to achieve the effluent limits in this part, and monitoring, inspection, planning, reporting, and documentation requirements in other parts of this permit. As part of the employee training program you must address, at a minimum, the following activities (as applicable): an overview of what is in the SWPPP; used oil management, spent solvent and paint management, disposal of spent abrasives (e.g., blasting materials, etc.), spill prevention and control, fueling procedures, general good housekeeping practices (e.g., dumpster/debris removal), used battery management, waste recycling (e.g., metals, plastics), used container controls (e.g., re-banding barrels, plugging drums), the location of all the controls required by this permit, and how they are to be maintained, etc. The Department recommends training be conducted at least annually (or more often if employee turnover is high).
- x.) *Non-Stormwater Discharges.*** You must eliminate non-stormwater discharges not authorized by a NPDES or State discharge permit. See Part I.E.3 for a list of non-stormwater discharges authorized by this permit.
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- xi.) Waste, Garbage and Floatable Debris.* You must ensure that waste, garbage, and floatable debris are not discharged to receiving waters by keeping exposed areas free of such materials or by intercepting them before they are discharged. The Department recommends practices including placing garbage or recycling containers at traffic areas, and identifying a schedule for personnel to walk site for trash and litter daily/weekly/monthly, etc.
- xii.) Dust Generation and Vehicle Tracking of Industrial Materials.* You must minimize generation of dust and offsite tracking of raw, final, or waste materials.

2. Water Quality-Based Effluent Limitations

a. *Water Quality Standards*

Your discharge must be controlled as necessary to meet applicable water quality standards. The Department expects that compliance with the other conditions in this permit will control discharges as necessary to meet applicable water quality standards. There shall be no discharge that causes visible oil sheen, and no discharge of floating solids or persistent foam in other than trace amounts. Persistent foam is foam that does not dissipate within one half-hour of point of discharge. If at any time you become aware, or the Department determines, that your discharge causes or contributes to an exceedance of applicable water quality standards, then you must (1) take corrective action, (2) document the corrective actions, and (3) report the corrective actions to the Department's Water and Science Administration Compliance Program as required by Part IV. Additionally, if information in your NOI or required reports or if information from other sources indicates that your discharge is not controlled as necessary to meet applicable water quality standards, the Department may impose additional control measures (to meet narrative water quality-based effluent limit above in Part III.B) on a site-specific basis or require you to obtain coverage under an individual permit. You must implement all measures necessary to be consistent with an available wasteload allocation in an EPA established or approved TMDL, including the restoration requirements (Part III.A).

b. *Discharges to Water Quality Impaired Waters*

You are considered to discharge to an impaired water if the first Waters of This State to which you discharge is identified by the State, or EPA as not meeting an applicable water quality standard, and:

- Requires development of a TMDL (pursuant to section 303(d) of the CWA);
- Is addressed by an EPA-approved or established TMDL; or
- Is not in either of the above categories but the waterbody is covered by a pollution control program that meets the requirements of 40 CFR130.7(b)(1).

Note: For discharges that enter a separate storm sewer system prior to discharge, the first Waters of This State to which you discharge is the waterbody that receives the water from the storm sewer system.

- i.) Existing Discharge to an Impaired Water with an EPA-Approved or Established TMDL.* If you discharge to an impaired water with an EPA-approved or established TMDL, the Department will inform you if any additional monitoring, limits or controls are necessary for your discharge to be consistent with the assumptions and requirements of any available wasteload allocation in an EPA approved or established TMDL, or if coverage under an individual permit is necessary in accordance with Part I.G.
- ii.) Existing Discharge to an Impaired Water without an EPA-Approved or Established TMDL.* If you discharge to an impaired water without an EPA-approved or established TMDL, the Department will inform you as to what actions are required to comply with Part III.B.2.a, and the monitoring requirements of Part V.B.3. Note that the impaired waters monitoring requirements of Part V.B.3 also apply where the Department determines that
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your discharge is not controlled as necessary to meet applicable water quality standards in an impaired downstream water segment, even if your discharge is to a receiving water that is not identified as impaired according to Part III.B.2.b.

iii.) New Discharger or New Source to an Impaired Water. If your authorization to discharge under this permit relied on Part I.C.5 for a new discharger or a new source to an impaired water, you must implement and maintain any measures that enabled you to become eligible under Part I.C.5, as determined by the Department and modify such measures as necessary pursuant to any corrective actions. The Department will also inform you as to what actions are required to comply with Part III.B.2.a and the monitoring requirements of Parts V.B.3.

c. Tier II Antidegradation Requirements for New or Increased Dischargers

If you are a new discharger or are required to notify the Department of a modified discharge (Part II.F.1), and you discharge directly to waters designated by the State as Tier II for antidegradation purposes under 40 CFR 131.12(a), you must perform an antidegradation review (COMAR 26.08.02.04-1), including the social and economic justification (SEJ) and alternatives analysis provisions, and establish stormwater controls to protect the water resource. The Department may notify you that additional analyses, control measures, or other permit conditions are necessary to comply with the applicable antidegradation requirements, or notify you that an individual permit application is necessary in accordance with Part I.G.

d. Criteria Selection

Any additional numerical water quality-based limits for any specific discharger under Part III.B.2 of the permit shall be based solely on Maryland's Numeric Water Criteria for Designated Uses in COMAR 26.08.02.03-3 and Maryland's Criteria for Toxic Substances in Surface Waters in COMAR 26.08.02.03-2, applied at end of pipe, or the applicable wasteload allocation in a final approved TMDL. For any additional control requested by the Department you must include a plan to implement BMPs to address the pollutant of concern in your SWPPP.

C. Stormwater Pollution Prevention Plan (SWPPP) Requirements

The SWPPP is intended to document the selection, design, and installation of control measures. The SWPPP does not contain effluent limitations; the limitations are contained in Part III.A, and Part III.B of the permit, and, for some Industry Sectors, Appendix D of the permit.

Upon registration under this Permit, if you are also subject to other individual NPDES permits or have coverage under an industry-specific general permit for the discharge of stormwater associated with industrial activity, then the requirements of this permit supersede the SWPPP requirements of the other permit(s). All other requirements of the other permit(s) remain in full effect.

Your SWPPP must contain all of the following elements, as described below. You must also meet all of this section's additional SWPPP requirements.

- Stormwater pollution prevention team (see Part III.C.1);
 - Site description (see Part III.C.2);
 - Summary of potential pollutant sources (see Part III.C.3);
 - Description of control measures (see Part III.C.4);
 - Schedules and procedures (see Part III.C.5); and
 - Signature requirements (see Part III.C.6).
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The SWPPP is a living document. Facilities must keep their SWPPP up-to-date throughout their permit coverage, such as making revisions and improvements to their stormwater management program based on new information and experiences with major storm events. As distinct from the SWPPP, the additional documentation requirements (see Part.III.C.8) are so that you document the implementation (including inspection, maintenance, monitoring, and corrective action) of the permit requirements.

1. Stormwater Pollution Prevention Team

You must identify the staff members (by name or title) that comprise the facility's stormwater pollution prevention team as well as their individual responsibilities. Your stormwater pollution prevention team is responsible for assisting the facility manager in developing and revising the facility's SWPPP as well as maintaining control measures and taking corrective actions where required. Each member of the stormwater pollution prevention team must have ready access to either an electronic or paper copy of applicable portions of this permit and your SWPPP.

2. Site Description

Your SWPPP must include the following:

- a. *Activities at the Facility.* Provide a description of the nature of the industrial activities at your facility.
- b. *General location map.* Provide a general location map (e.g., U.S. Geological Survey (USGS) quadrangle map) with enough detail to identify the location of your facility. Ideally this map will extend one-quarter of a mile beyond the property boundaries of the facility and identify any water body where discharge is conveyed. At least one public roadway must be identified on the map.
- c. *Site map.* Provide a map showing:
 - i.) the size of the property in acres;
 - ii.) the location and extent of significant structures and impervious surfaces
 - iii.) the location and extent for planned restoration of impervious surfaces, or other nutrient reduction control measures;
 - iv.) directions of stormwater flow (use arrows);
 - v.) locations of all existing structural control measures or BMPs;
 - vi.) locations of all receiving waters in the immediate vicinity of your facility, indicating if any of the waters are impaired and, if so, whether the waters have TMDLs established for them;
 - vii.) locations of all stormwater conveyances including ditches, pipes, and swales;
 - viii.) locations of potential pollutant sources identified under Part III.C.3;
 - ix.) locations where significant spills or leaks identified under Part III.C.3 have occurred;
 - x.) locations of all stormwater monitoring points;
 - xi.) locations of stormwater inlets and outfalls, with a unique identification code for each outfall (e.g., Outfall No. 1, No. 2, etc), indicating if you are treating one or more outfalls as substantially identical, and an approximate outline of the areas draining to each outfall;
 - xii.) municipal separate storm sewer systems, where your stormwater discharges to them;
 - xiii.) locations and descriptions of all non-stormwater discharges identified under Part I.E.3;
 - xiv.) locations of the following activities where such activities are exposed to precipitation:
 - fueling stations;
 - vehicle and equipment maintenance and/or cleaning areas;
 - loading/unloading areas;

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- locations used for the treatment, storage, or disposal of wastes;
 - liquid storage tanks;
 - processing and storage areas;
 - immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility;
 - transfer areas for substances in bulk; and
 - machinery;
 - manufacturing buildings and
- xv.) locations and sources of run-on to your site from adjacent property that contains significant quantities of pollutants.

3. Summary of Potential Pollutant Sources

You must document areas at your facility where industrial materials or activities are exposed to stormwater and from which allowable non-stormwater discharges are released. Industrial materials or activities include, but are not limited to: material handling equipment or activities; industrial machinery; raw materials; industrial production and processes; and intermediate products, by-products, final products, and waste products. Material handling activities include, but are not limited to: the storage, loading and unloading, transportation, disposal, or conveyance of any raw material, intermediate product, final product or waste product. For each area identified, the description must include:

- a. *Activities in the area.* A list of the industrial activities exposed to stormwater (e.g., material storage; equipment fueling, maintenance, and cleaning; cutting steel beams).
- b. *Pollutants.* A list of the pollutant(s) or pollutant constituents (e.g., crankcase oil, zinc, sulfuric acid, and cleaning solvents) associated with each identified activity. The pollutant list must include all significant materials that have been handled, treated, stored, or disposed, and that have been exposed to stormwater in the 3 years prior to the date you prepare or amend your SWPPP. In addition to your own evaluation, the following resources or guidelines must be taken into account when determining the potential pollutants.
 - i.) The Department has included on the industrial stormwater website, the industry specific fact sheets produced by EPA, that do include potential pollutants based on your industrial activity.
 - ii.) Certain industries are potential sources of Polychlorinated Biphenyls (PCBs), and should be aware of these for any required monitoring in this permit. These industries are included in Table III.C.3.b.ii below.

Table III.C.3.b.ii - Activities with higher likelihood as sources of Polychlorinated Biphenyls (PCB)

Sector or Subsector or (specific SICs)	Sector Description
(SIC 7600)	Miscellaneous Repair Service
(SIC 9700)	National Security and International Affairs
AA	FABRICATED METAL PRODUCTS
AB (SIC 3711-3799)	Transportation Equipment
AC (SIC 3612)	Transformers
B	PAPER AND ALLIED PRODUCTS
C (SIC 2812-2899)	Chemicals & Allied Products
F	PRIMARY METALS
M	AUTOMOBILE SALVAGE YARDS
N1	Scrap Recycling and Waste Recycling Facilities except Source-Separated Recycling.
P (SIC 4212-4215, 4231)	Motor Freight Transportation
P (SIC 4011)	Railroads, Line Haul Ops

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Q	Water Transportation
R1	Ship and Boat Building or Repairing Yards
U	Food and Kindred Products
V (SIC 2211-2299)	Textile Mill Products
X	Printing Publishing & Allied Industries
Y1	Tires and Inner Tubes, Rubber and Plastics Footwear, Gaskets, Packing and Sealing Devices, and Rubber and Plastic Hoses and Belting, Fabricated Rubber Products, Not Elsewhere Classified

- iii.)* You must identify potential sources of certain per- and polyfluoroalkyl substances (PFAS) at your operation which could be exposed to stormwater and list and address these sources in your SWPP. The PFAS compounds of interest are those addressed in EPA methods 533 and 537.1. Sources would include areas where fire retardants were discharged or stored, or where PFAS containing material used in your production process is stored or disposed of or may be accidentally spilled. For more information review <https://www.epa.gov/pfas/basic-information-pfas>. You should also be aware that the Department may require ongoing monitoring under this permit if a PFAS-related impairment is identified in your receiving stream.

- c. Spills and Leaks.** You must document where potential spills and leaks could occur that could contribute pollutants to stormwater discharges, and the corresponding outfall(s) that would be affected by such spills and leaks. You must document all significant spills and leaks of oil or toxic or hazardous pollutants that actually occurred at exposed areas, or that drained to a stormwater conveyance, in the 3 years prior to the date you prepare or amend your SWPPP. The plan may refer to applicable portions of other existing plans, such as Spill Prevention, Control, and Countermeasure (SPCC) plans required under 40 CFR Part 112. Discharges of precipitation from containment areas containing used oil must also be in accordance with applicable sections of 40 CFR Part 112.

Note: Significant spills and leaks include, but are not limited to, releases of oil or hazardous substances in excess of quantities that are reportable under CWA Section 311 (see 40 CFR 110.6 and 40 CFR 117.21) or Section 102 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 USC §9602. This permit does not relieve you of the reporting requirements of 40 CFR Part 110, 40 CFR Part 117, and 40 CFR Part 302 relating to spills or other releases of oils or hazardous substances.

- d. Non-Stormwater Discharges.** You must document that you have evaluated for the presence of non-stormwater discharges and that all unauthorized discharges have been eliminated. Documentation of your evaluation must include:

 - i.)* The date of any evaluation;
 - ii.)* A description of the evaluation criteria used;
 - iii.)* A list of the outfalls or onsite drainage points that were directly observed during the evaluation;
 - iv.)* The different types of non-stormwater discharge(s) and source locations; and
 - v.)* The action(s) taken, such as a list of control measures used to eliminate unauthorized discharge(s), if any were identified. For example, a floor drain was sealed, a sink drain was re-routed to sanitary, wash water is collected and hauled away, exterior vehicle washwater is discharged to groundwater under the vehicle washing general permit, or an NPDES permit application was submitted

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for an unauthorized cooling water discharge.

- e. *Salt Storage*. You must document the location of any storage piles containing salt used for deicing or other commercial or industrial purposes.
- f. *Sampling Data History*. You must summarize what you have observed (visual monitoring) or sampled for benchmarks (DMR data) as potential problems from stormwater during the previous permit term.

4. Description of Control Measures to Meet Technology- and Water Quality-Based Effluent Limits

You must document the location and type of control measures you have installed and implemented at your site to achieve the non-numeric effluent limits in Part III.B.1.b and, where applicable, in Appendix D Sector-Specific Requirements for Industrial Activity, and the water quality-based effluent limits in Part III.B.2, and describe how you are addressing the control measure selection and design considerations, if applicable, in Part III.A.1.a. This documentation must describe how the control measures at your site address both the pollutant sources identified in Part III.C.3 and any stormwater run-on that commingles with any discharges covered under this permit.

5. Schedules and Procedures

a. Pertaining to Control Measures Used to Comply with the Effluent Limits in Part III.B.

The following must be documented in your SWPPP:

- i.) *Good Housekeeping (See Part III.B.1.b.ii or Appendix D)* – A schedule for regular pickup and disposal of waste materials, along with routine inspections for leaks and conditions of drums, tanks and containers;
- ii.) *Maintenance (See Part III.B.1.b.iii or Appendix D)* – Preventative maintenance procedures, including regular inspections, testing, maintenance, and repair of all industrial equipment and systems, and control measures, to avoid situations that may result in leaks, spills, and other releases, and any back-up practices in place should a runoff event occur while a control measure is off-line;
- iii.) *Spill Prevention and Response Procedures (See Part III.B.1.b.iv or Appendix D)* – Procedures for preventing and responding to spills and leaks. You may reference the existence of other plans for Spill Prevention Control and Countermeasure (SPCC) developed for the facility under Section 311 of the CWA or BMP programs otherwise required by a NPDES permit for the facility, provided that you keep a copy of that other plan onsite and make it available for review consistent with Part III.C.8; and
- iv.) *Employee Training (See Part III.B.1.b.ix or Appendix D)* – The SWPPP must identify how often training will take place. All training must be held at least once per calendar year (or more often if employee turnover is high).
- v.) *Restoration Requirements* – You must identify the ongoing maintenance of restoration practices, non-structural practices, or ongoing trading required by this permit.

b. Pertaining to Inspection and Monitoring

- i.) You must document in your SWPPP your procedures for performing, as appropriate, the three types of inspections specified by this permit, including:
 - Routine facility inspections (see Part V.A.1);
 - Quarterly visual assessment of stormwater discharges (see Part V.A.3); and
 - Comprehensive site inspections (see Part V.A.2).
 - ii.) For each type of inspection performed, your SWPPP must identify:
 - Person(s) or positions of person(s) responsible for inspection; and
 - Specific items to be covered by the inspection, including schedules for specific outfalls.
 - iii.) If benchmark monitoring is required for your industry or industries, per Appendix D your SWPPP must document:
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- Locations where samples are collected, including any determination that two or more outfalls are substantially identical;
 - Parameters for sampling and the frequency of sampling for each parameter;
 - Schedules for monitoring at your facility;
 - Any numeric control values (benchmarks, TMDL-related requirements, or other requirements) applicable to discharges from each outfall; and
 - Procedures (e.g., responsible staff, logistics, laboratory to be used, etc.) for gathering storm event data, as specified in Part V.C.
- iv.)* You must document the following in your SWPPP if you plan to use the substantially identical outfall exception for your quarterly visual assessment requirements in Part V.A.3 or your benchmark monitoring requirements in Part V.B:
- Location of each of the substantially identical outfalls;
 - Description of the general industrial activities conducted in the drainage area of each outfall;
 - Description of the control measures implemented in the drainage area of each outfall;
 - Description of the exposed materials located in the drainage area of each outfall that are likely to be significant contributors of pollutants to stormwater discharges;
 - An estimate of the runoff coefficient of the drainage areas (low = under 40%; medium = 40 to 65%; high = above 65%); and
 - Why the outfalls are expected to discharge substantially identical effluents.
- v.)* If you are invoking the exception for inactive and unstaffed sites relating to routine facility inspections and quarterly visual assessments, you must include in your SWPPP the information to support this claim as required by Parts V.A.4. If you are invoking the exception for inactive and unstaffed sites for benchmark monitoring, you must include in your SWPPP the information to support this claim as required by Part V.B.5.

6. Signature Requirements

You must sign and date your SWPPP in accordance with Part II.C, including the date of signature.

7. Required SWPPP Modifications

You must modify your SWPPP whenever necessary to address any of the triggering conditions for corrective action in Part IV and to ensure that they do not reoccur, or to reflect changes implemented when a review following the triggering conditions in Part IV.B indicates that changes to your control measures are necessary to meet the effluent limits in this permit. Changes to your SWPPP document must be made in accordance with the corrective action deadlines in Parts IV.A and IV.B, and must be signed and dated in accordance with Part II.C.

8. Documentation Requirements

You must retain a copy of the current SWPPP required by this permit at your facility. This SWPPP may be paper or stored as an electronic file accessible by the site, however it must be immediately available to employees at the facility and to the Department. The Department encourages you to post your SWPPP online and provide the website address on your NOI. You are required to keep the following inspection, monitoring, and certification records with your SWPPP that together keep your records complete and up-to-date, and demonstrate your full compliance with the conditions of this permit:

- a. A copy of the NOI submitted to the Department along with any correspondence exchanged between you and the Department specific to coverage under this permit;
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- b. A copy of this permit (an electronic copy easily available to SWPPP personnel is also acceptable);
- c. A copy of the relevant portion of any other facility document referred to in your SWPPP, such as a Spill Prevention, Control and Countermeasure (SPCC) Plan;
- d. Descriptions and dates of any incidences of significant spills, leaks, or other releases that resulted in discharges of pollutants to Waters of This State, through stormwater or otherwise; the circumstances leading to the release and actions taken in response to the release; and measures taken to prevent the recurrence of such releases (see Part III.B.1.b.iv);
- e. Records of employee training, including date training received (see Part III.B.1.b.ix);
- f. Documentation of maintenance and repairs of control measures, including the date(s) of regular maintenance, date(s) of discovery of areas in need of repair/replacement, and for repairs, date(s) that the control measure(s) returned to full function, and the justification for any extended maintenance/repair schedules (see Part III.B.1.b.iii);
- g. All inspection reports, including the Routine Facility Inspection documentation (see Part V.A.1), the Quarterly Visual Monitoring Form in Appendix B, and the Comprehensive Site Inspection reports (see Part V.A.2);
- h. Description of any deviations from the schedule for visual assessments and/or monitoring, and the reason for the deviations (e.g., adverse weather or it was impracticable to collect samples within the first 30 minutes of a measurable storm event) (see Parts V.C.5);
- i. Description of any corrective action (Part IV.A and Part IV.B) taken at your site, including triggering event and dates when problems were discovered, and modifications occurred as required under Part IV.C;
- j. Documentation of any benchmark exceedances and how they were responded to, including either (1) corrective action taken, (2) a finding that the exceedance was due to natural background pollutant levels, or (3) a finding that no further pollutant reductions were technologically available and economically practicable and achievable in light of best industry practice consistent with Part IV ;
- k. Documentation to support any determination that pollutants of concern are not expected to be present above natural background levels if you discharge directly to impaired waters, and that such pollutants were not detected in your discharge or were solely attributable to natural background sources.
- l. Schedule of compliance for nutrient control measure planning per Part III.A.2.

If during the term of this permit, your site becomes inactive, you must contact the Department immediately and provide, in writing, the date of inactivity, the facility contact phone number and the location of the SWPPP and additional documentation. These must be made available during normal working hours. Note inactivity does not refer to seasonal closures.

D. Additional Requirements for Facilities Subject To SARA Title III, Section 313 Requirements

If you are subject to SARA Title III, Section 313 (42 U.S.C.11023) reporting requirements, in your SWPPP you must, in addition to the requirements of this Part, provide additional narrative on the preventive measures used to eliminate the exposure of these chemicals to stormwater run-on or run-off. To identify if your facility is subject to this requirement, visit the Maryland Department of the Environment's Community Right-to-Know website (<http://www.mde.state.md.us>). A list of the Section 313 chemicals can be found at the EPA's LIST OF LISTS Consolidated List of Chemicals Subject to the Emergency Planning and Community Right-To-Know Act (EPCRA) and Section 112(r) of the Clean Air Act

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(<http://www.epa.gov/>). Additionally, SARA Title III, Section 313 water priority chemicals are often identified on Material Data Safety Sheets (MSDS).

PART IV. CORRECTIVE ACTIONS AND ADDITIONAL IMPLEMENTATION MEASURES (AIM)

A. Corrective Action

1. Conditions Requiring SWPPP Review and Revision to Ensure Effluent Limits are Met

When any of the following conditions occur, or are detected during an inspection, monitoring or other means, or the Department or the operator of the MS4 through which you discharge informs you that any of the following conditions have occurred, you must review and revise, as appropriate, your SWPPP (e.g., sources of pollution; spill and leak procedures; non-stormwater discharges; the selection, design, installation, and implementation of your control measures) so that this permit's effluent limits are met and pollutant discharges are minimized:

- a. an unauthorized release or discharge (e.g., spill, leak, or discharge of non-stormwater not authorized by this or another NPDES permit) occurs at your facility;
- b. a discharge violates a numeric effluent limit;
- c. your control measures are not stringent enough for the discharge to meet applicable water quality standards or the non-numeric effluent limits in this permit;
- d. a required control measure was never installed, was installed incorrectly, or not in accordance with Parts III.A, III. B and/or in Appendix D, or is not being properly operated and maintained; or
- e. whenever a visual assessment (Part V.A.3) shows evidence of stormwater pollution (e.g., color, odor, floating solids, settled solids, suspended solids, foam).

2. Corrective Action Deadlines

- a. **Immediate Actions.** You must immediately take all reasonable steps to minimize or prevent the discharge of pollutants until you can implement a permanent solution, including cleaning up any contaminated surfaces so that the material will not discharge in subsequent storm events. In Part IV, the term "immediately" means that the day you find a condition requiring corrective action, you must take all reasonable steps to minimize or prevent the discharge of pollutants until you can implement a permanent solution. However, if you identify a problem too late in the work day to initiate corrective action, you must perform the corrective action the following work day morning. The term "all reasonable steps" means you must respond to the conditions triggering the corrective action, such as cleaning up any exposed materials that may be discharged in a storm event (e.g., through sweeping, vacuuming) or making arrangements (i.e., scheduling) for a new Stormwater Control to be installed.
 - b. **Subsequent Actions.** If additional actions are necessary beyond those implemented pursuant to Part IV.A.2.a, you must complete the corrective actions (e.g., install a new or modified control and make it operational, complete the repair) before the next storm event if possible or within no more than 14 calendar days from the time of discovery that the condition in IV.A.1 is not met. If it is infeasible to complete the
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corrective action within 14 calendar days, you must document why it is infeasible to complete the corrective action within the 14-day timeframe. You must also identify your schedule for initiating the work and complete the corrective action identified as soon as practicable after the 14-day timeframe but no longer than 45 days after discovery. If the completion of corrective action will exceed the 45-day timeframe, you may take the minimum additional time necessary to complete the corrective action, provided that you notify the Department Compliance program of your intention to exceed 45 days, your rationale for an extension, and a completion date, which you must also include in your corrective action documentation (see Part IV.C). Where your corrective actions result in changes to any of the controls or procedures documented in your SWPPP, you must modify your SWPPP accordingly within 14 calendar days of completing corrective action work. These time intervals are not grace periods, but are schedules considered reasonable for documenting your findings and for making repairs and improvements. They are included in this permit to ensure that the conditions prompting the need for these repairs and improvements are not allowed to persist indefinitely.

3. Effect of Corrective Action

If the event triggering the review is a permit violation (e.g., non-compliance with an effluent limit), correcting it does not remove the original violation. Additionally, failing to take corrective action in accordance with this section is an additional permit violation. The Department may consider the appropriateness and promptness of corrective action in determining enforcement responses to permit violations.

4. Substantially Identical Outfalls

If the event triggering corrective action is linked to an outfall that represents other substantially identical outfalls, your review must assess the need for corrective action for each outfall represented by the outfall that triggered the review. Any necessary changes to control measures that affect these other outfalls must also be made before the next storm event if possible, or as soon as practicable following that storm event. Any corrective actions must be conducted within the timeframes set forth in Part IV.A.2.

B. Additional Implementation Measures (AIM)

If any of the following events in Parts IV.B.1, IV.B.2, or IV.B.3 occur, you must follow the response procedures described in those parts, called “additional implementation measures” or “AIM.” There are multiple AIM levels: AIM Benchmark Action Level 1 through Benchmark Action Level 3. You are required to respond to different AIM levels which prescribe increasingly robust responses depending on the nature, duration, and magnitude of the benchmark exceedance. In the context of the following parts “year you are subject to benchmarks” means 4 quarters of monitoring. See Part IV.B.4 for AIM exceptions.

1. Benchmark Action Level 1 (AIM Level 1):

a. AIM Level 1 Triggering Events. If, during the first year you are subject to benchmarks (Year 1), any of the following events occur, you are in AIM Level 1. You must follow the AIM Level 1 responses (Part IV.B.1.b) and deadlines (Part IV.B.1.c).

i.) One Annual Average Over the Benchmark Threshold. If one annual average for a parameter is over the benchmark threshold during Year 1, you are in AIM Level 1. An annual average exceedance can occur from the average of four quarterly samples for a parameter, or from less than four samples with results such that an exceedance is mathematically certain (i.e., if the sum of quarterly

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sample results to date is already more than 4 times the benchmark threshold).

- ii.)* One Single Sampling Event Over 4 Times the Benchmark Threshold. If one single sampling event during Year 1 for a parameter is over 4 times the benchmark threshold, you are in AIM Level 1.

b. AIM Level 1 Responses. Except as provided in Part IV.B.4 (AIM Exceptions) if any of the triggering events in Part IV.B.1.a occur, you must:

- i.)* Review Stormwater Control Measures. Immediately review the selection, design, installation, and implementation of your control measures to determine if modifications are necessary to meet the benchmark threshold for the applicable parameter (Examples include: review sources of pollution, spill and leak procedures, and/or non-stormwater discharges; conducting a single comprehensive clean-up, making a change in subcontractor, implementing a new control measure, and/or increasing inspections.) and
- ii.)* Implement Additional Measures. After reviewing your control measures, you must implement additional implementation measures to ensure the effectiveness of your control measures to bring your exceedances below the parameter's benchmark threshold; or if you determine nothing further needs to be done with your control measures, you must document per Part III.C and include in your annual report why you expect your existing control measures to bring your exceedances below the parameter's benchmark threshold; and
- iii.)* Continue Quarterly Benchmark Monitoring. After compliance with (i) and (ii) in this Part, you must continue quarterly benchmark monitoring into the next year. You must also attach your updated Comprehensive Annual Report to your next DMR.

c. AIM Level 1 Deadlines: If any modifications related to control measures are necessary, you must implement those actions or modifications within 14 days of the occurrence of the triggering event under Part IV.B.1.a, unless doing so within 14 days is infeasible. If doing so within 14 days is infeasible, you must document per Part IV.C why it is infeasible and implement such modifications within 45 days.
Exception: You do not have to implement any modifications if, with the Department agreement, you determine and document in your SWPPP that the exceedance is solely attributable to natural background sources or run-on sources, consistent with Part IV.B.5 (AIM Exceptions).

2. Benchmark Action Level 2: (AIM Level 2)

a. AIM Level 2 Triggering Events. If, during the second year you are subject to benchmarks (Year 2), any of the following events occur, you are in AIM Level 2. You must follow the AIM Level 2 responses (Part IV.B.2.b) and deadlines (Part IV.B.2.c).

- i.)* The second Annual Average Over the Benchmark Threshold. If your second annual average for a parameter is over the benchmark threshold during Year 2, you are in AIM Level 2. An annual average exceedance can occur from the average of four quarterly samples for a parameter, or from less than four samples with results such that an exceedance is mathematically certain (i.e., the sum of quarterly sample results to date is already more than four times the benchmark threshold).
 - ii.)* One Single Sampling Event Over 4 Times the Benchmark Threshold. If one single sampling event during your second year of coverage for a parameter is over 4 times the benchmark threshold, you are in AIM Level 2.
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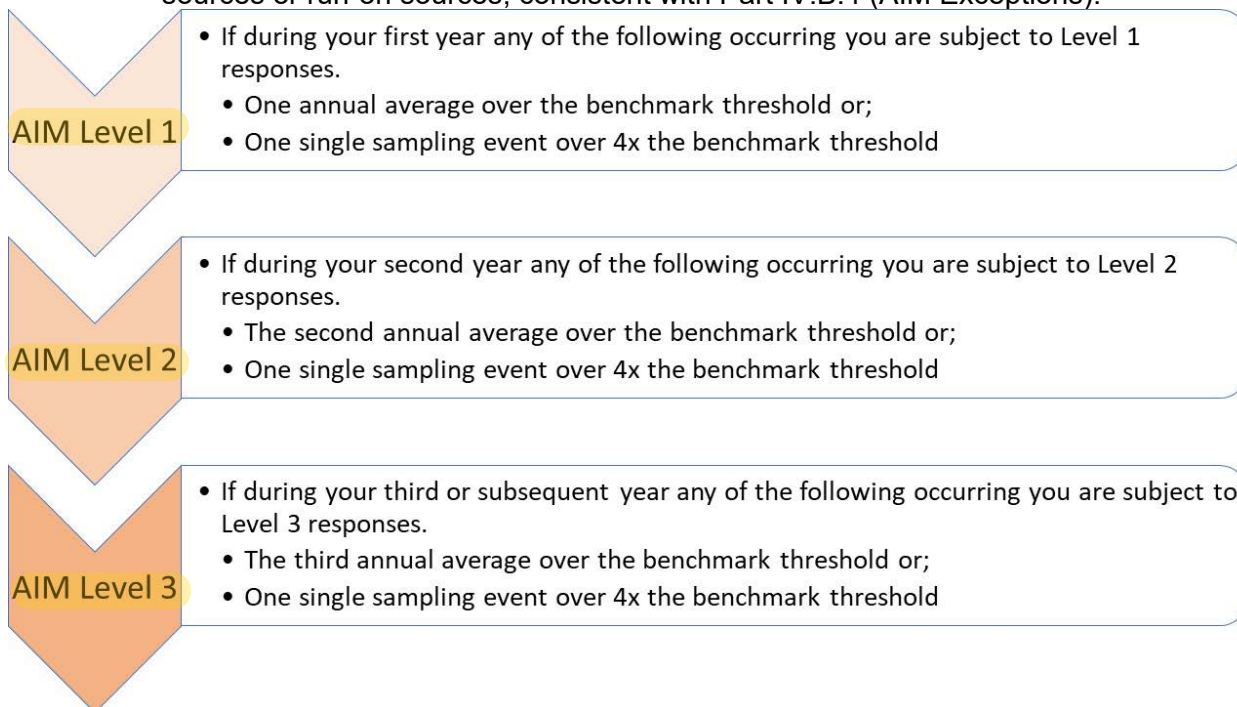
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- b. AIM Level 2 Responses.** Except as provided in Part IV.B.4 (AIM Exceptions), if any of the triggering events in IV.B.2.a occur, you must:
- i.)** Install Permanent Controls. Install structural source controls (e.g. permanent controls such as permanent cover, berms, and secondary containment), and/or treatment controls (e.g., sand filters, hydrodynamic separators, oil-water separators, retention ponds, the use of Chemical Additives (Part I.E.5), and infiltration structures), except as provided in Part IV.B.5 (AIM Exceptions). The treatment technologies or treatment train you install must be appropriate for the pollutants that triggered AIM Tier 2 and must be more rigorous than the pollution prevention-type measures employed under AIM Level 1 in Part IV.B.1. You must select controls with pollutant removal efficiencies that are sufficient to bring your exceedances below the benchmark threshold. You must have a professional engineer, stormwater professional or geologist assist with the installation of such controls for the discharge point in question and for substantially similar discharge points, unless you individually monitor those substantially similar discharge points and demonstrate that AIM Level 2 requirements are not triggered at those discharge points; and/or
 - ii.)** Alternative Option: As an alternative or adjunct to structural source controls and/or treatment controls, you may increase impervious surface restoration for your industrial stormwater about the baseline required by this permit, if such an approach is appropriate and feasible for your site-specific conditions. If this approach is feasible, the execution must be compliant with regulations for ground water protection and underground injection control (UIC). The analysis that shows infiltration/retention is appropriate for your site-specific conditions must be provided to the Department BEFORE you can choose this option and the Department must concur with your conclusions. Successful compliance with the provisions in this part may allow the Department to waive benchmark monitoring requirements (if this removes an outfall) and may generate marketable credits (refer to Part III.A); and
 - iii.)** Continue Quarterly Benchmark Monitoring. After compliance with (i) and/or (ii) (if the Department approves) in this Part, you must continue quarterly benchmark monitoring into the next year. You must also attach your updated Comprehensive Annual Report to your next DMR.
- c. AIM Level 2 Deadlines.** You must install the appropriate structural source and/or treatment control measures within 30 days of the occurrence of the triggering event under Part IV.B.2.a. If it is not feasible within 30 days, you may take up to 90 days to install such measures, documenting in your SWPPP why it is infeasible to install the measure within 30 days. The Department may also grant you an extension beyond 90 days, based on an appropriate demonstration by you, the operator. Exception: You do not have to install structural source controls or treatment controls if, with the Department agreement, you determine and document in your SWPPP that the exceedance is solely attributable to natural background sources or run-on sources, consistent with Part IV.B.4 (AIM Exceptions).
- 3. Benchmark Action Level 3+: (AIM Level 3)**
- a. AIM Level 3 Triggering Events.** If during the third or subsequent year you are subject to benchmarks (Year 3+) any of the following events occur, you are in AIM Level 3. You must follow the AIM Level 3 responses (Part IV.B.3.b) and deadlines (Part IV.B.3.c).
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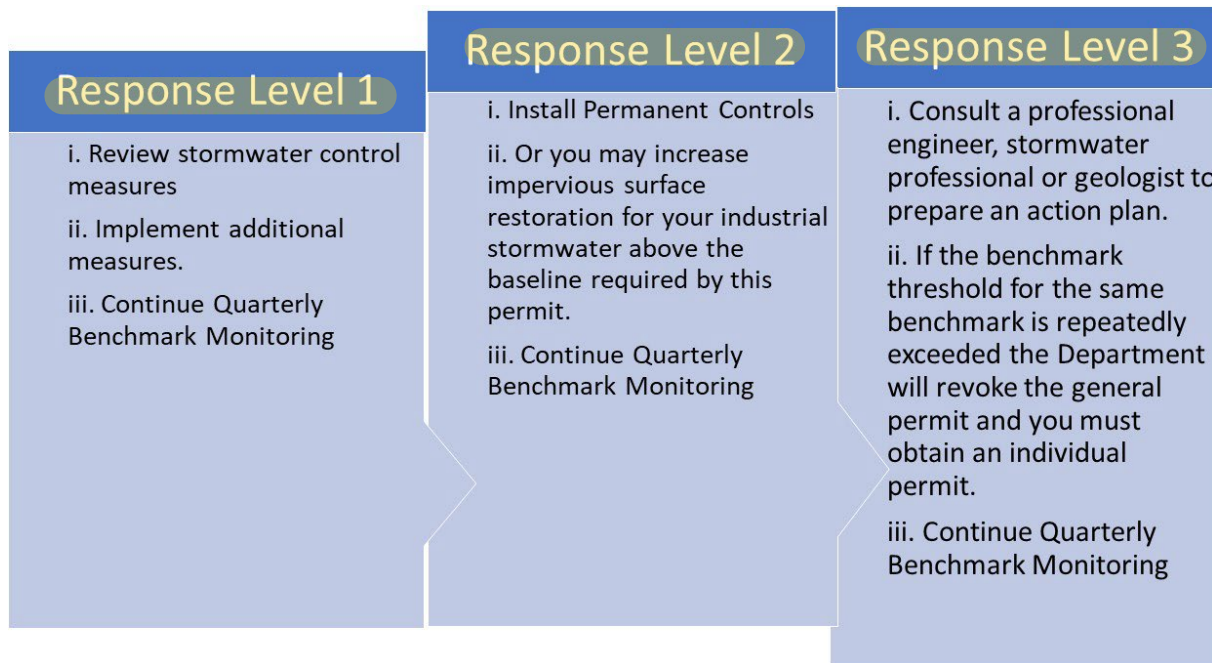
- ii.) If you continue to exceed the quarterly benchmark threshold for the same parameter and cannot demonstrate at least a 20% reduction from the previous year performance, even after installation of structural source controls or treatment controls as required in Part IV.B.3.b.i, the Department will revoke coverage under this permit through the development of an individual permit to address site specific water quality limits, or a final determination to deny permit coverage, unless you are under a consent order.
- iii.) Continue Quarterly Benchmark Monitoring. After compliance with (i), or (ii), in this Part, you must continue quarterly benchmark monitoring into the next year. You must also attach your updated Comprehensive Annual Report to your next DMR.

c. **AIM Level 3 Deadlines.** You must install the appropriate structural source and/or treatment control measures within 90 days of the occurrence of the triggering event under Part IV.B.3.a. If it is not feasible within 90 days, you may take up to an additional 30 days to install such measures, documenting in your SWPPP why it is infeasible to install the measure within 90 days. The Department may also grant you an extension beyond 120 days, based on an appropriate demonstration by you, the operator. Exception: You do not have to install structural source controls or treatment controls if, with the Department agreement, you determine and document in your SWPPP that the exceedance is solely attributable to natural background sources or run-on sources, consistent with Part IV.B.4 (AIM Exceptions).



The above image shows a simplified view of how a site would progress through the AIM levels.

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The above image shows the actions a site is required to take as they progress through the aim levels. Refer to IV.B for the detailed requirements.

4. AIM Exceptions.

At any point or Benchmark Action Level of AIM, the below exceptions from AIM requirements and additional benchmark monitoring below may apply. You must still review your stormwater control measures, SWPPP, and other on-site activities to determine if actions or modifications are necessary or appropriate.

- a. Natural Background Pollutant Levels:** You are not required to perform AIM or additional benchmark monitoring for any parameters for which you can demonstrate with Department agreement that the benchmark exceedance is attributable solely to the presence of that pollutant in the natural background (i.e. you would not have exceeded the benchmark if it were not for the contribution of that natural background pollutant). You are not required to perform corrective action or additional benchmark monitoring provided that all the following conditions are met, and you submit your analysis and documentation to the Department’s Permitting Program:
 - i.)** The four-quarter average concentration of your benchmark monitoring results (or fewer than four-quarters of data that trigger an exceedance) is less than or equal to the concentration of that pollutant in the natural background; and
 - ii.)** You document and maintain with the SWPPP as required in Part III.C, your supporting rationale for concluding that benchmark exceedances are in fact attributable solely to natural background pollutant levels. You must include in your supporting rationale any data previously collected by you or others (including literature studies) that describe the levels of natural background pollutants in your stormwater discharge; and
 - iii.)** You notify the Departments Permitting Program and get concurrence, and include the concurrence on your final quarterly benchmark monitoring report that the benchmark exceedances are attributable due to natural background pollutant levels. The Department will take into consideration any impairments for that pollutant, potential impacts to receiving waters, in addition to the methodologies and information provided (refer to Part III.B.2).

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Natural background pollutants are those substances that are naturally occurring in soils or groundwater. Natural background pollutants do not include legacy pollutants from earlier activity on your site, or pollutants in run-on from neighboring sources which are not naturally occurring, such as other industrial facilities or roadways.

- b. Run-On:** You are not required to perform AIM or additional benchmark monitoring for any parameters for which you can demonstrate and obtain the Department's agreement that run-on from a neighboring source (e.g., a source external to your facility) is the cause of the exceedance, provided that all the following conditions are met and you submit your analysis and documentation to the Department for concurrence:
- i.)* After reviewing and revising your SWPPP, as appropriate, you should notify the other facility or entity contributing run-on to your discharges and request that they abate their pollutant contribution.
 - ii.)* If the other facility or entity fails to take action to address their discharges or sources of pollutants, you should contact the Department's Compliance Program.
- c. Due to an abnormal event:** You must immediately document per Part IV.C that the AIM triggering event was abnormal, a description explaining what caused the abnormal event, and how any measures taken within 14 days of such event will prevent a reoccurrence of the exceedance. You must also collect a sample during the next measurable storm event to demonstrate that the result is less than the benchmark threshold, in which case you do not trigger any AIM requirements based on the abnormal event. You must report the result of this sample in NetDMR in lieu of the result from the sample that caused the AIM triggering event. You may avail yourself of the "abnormal" demonstration opportunity at any AIM Level, one time per parameter, and one time per discharge point, which shall include substantially identical discharge points (SIDP), provided you qualify for the exception.
- d. For Aluminum and Copper benchmark parameters only: Demonstrated to not result in an exceedance of your facility-specific value using the national recommended water quality criteria in-lieu of the applicable benchmark threshold:** To be eligible for the exception, you must demonstrate to the Department that your stormwater discharge(s) that exceeded the applicable benchmark threshold would not result in an exceedance of a derived facility-specific value. The demonstration to the Department, which will be made publicly available, must meet the minimum elements below in order to be considered for and approved by the Department. If you exceed the benchmark threshold for aluminum or copper, you must still comply with any applicable AIM requirements and additional benchmark monitoring until the demonstration is made to and approved by the Department. In this case, the Department suggests that samples collected for any continued benchmark monitoring also be analyzed for the required input parameters for each model for efficiency. If you are an existing operator and you anticipate an exceedance of the benchmark(s) based on previous monitoring data and expect to utilize this exception(s), the Department recommends you begin the required data collection in your first year of permit coverage.
- i.) Aluminum (only for discharges to freshwater):*
Conditions for this exception are:
- Use of EPA's 2018 National Recommended Aluminum Aquatic Life Criteria: <https://www.epa.gov/wqc/aquatic-life-criteria-aluminum>;
 - In-stream waterbody sampling for the three water quality input parameters for the recommended criteria model: pH, total hardness, and dissolved organic carbon (DOC); and
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- Completion of sampling events sufficient to capture spatial and temporal variability. Sampling events must adequately represent each applicable season at the facility's location, which would likely be over the course of at least one year. An equal number of ambient waterbody samples must be collected at a single upstream and downstream location from the operator's discharge point(s) to the receiving Waters of this State. Where there exists no ambient source water upstream of the operator's discharge point(s) to the receiving waters of this State, samples of the ambient downstream waterbody conditions are sufficient.

The demonstration provided for aluminum to the Department must include, at minimum:

- A description of the sampling, analysis, and quality assurance procedures that were followed for data collection, following the guidance in Section 3 of EPA's Industrial Stormwater Monitoring and Sampling Guide. https://mde.maryland.gov/programs/Permits/WaterManagementPermits/Documents/GDP%20Stormwater/EPA%20Industrial%20Stormwater%20Guidance/EPA_Monitoring_Guide.pdf ;
- The input parameters and export of results from the Aluminum Criteria Calculator, available at: <https://mdewwp.page.link/ISWGuidance>; and,
- A narrative summary of results.

ii.) Copper (only for discharges to freshwater):

Conditions for this exception are:

- Use of EPA's 2007 National Recommended Freshwater Copper Aquatic Life Criteria: <https://www.epa.gov/wqc/aquatic-life-criteria-copper>;
- In-stream waterbody sampling for the 10 water quality input parameters to the BLM for copper: pH; dissolved organic carbon (DOC); alkalinity; temperature; major cations (calcium, magnesium, sodium, and potassium); and major anions (sulfate, chloride);
- The water quality input parameters, with the exception of temperature, must fall within the range of conditions recommended for use in the Biotic Ligand Model (BLM), found in Table 1-1 of the Data Requirements document: <https://www.epa.gov/sites/production/files/2015-11/documents/copperdata-requirements-training.pdf>; and
- Completion of sampling events sufficient to capture spatial and temporal variability. Because some of the BLM input parameters are known to vary seasonally, the Department suggests a possible starting point of at least one sampling event per season. Sampling events must adequately represent each applicable season at the facility's location, which would likely be over the course of at least one year. An equal number of ambient waterbody samples must be collected at a single upstream and downstream location from the operator's discharge point(s) to the receiving Waters of this State. Where there exists no ambient source water upstream of the operator's discharge point(s) to the receiving Waters of this State, samples of the ambient downstream waterbody conditions are sufficient.

The demonstration provided for copper to the Department must include, at minimum:

- A description of the sampling, analysis, and quality assurance procedures that were followed for data collection, following the guidance in Section 3 of EPA's Industrial Stormwater Monitoring and Sampling Guide. <https://mde.maryland.gov/programs/Permits/WaterManagementPermits/Documents/GDP%20Stormwater/EPA%20Industrial%20Stormwater%20Guidance>
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ce/EPA_Monitoring_Guide.pdf;

- A discussion of how the data collected reflects the site-specific characteristics and how the operator considered special circumstances that may affect copper toxicity throughout the expected range of receiving water conditions;
- The input file and export of the results from the BLM software, which can be requested at: <https://www.epa.gov/wqs-tech/copper-biotic-ligandmodel>; and
- A narrative summary of results.

C. Corrective Action and AIM Documentation

1. Documentation within 24 Hours.

You must document the existence of any of the conditions listed in Parts IV.A.1, IV.B.1.a, IV.B.2.a, and/or IV.B.3.a within 24 hours of becoming aware of such condition. You are not required to submit this documentation to the Department, unless specifically required or requested to do so. However, you must summarize your findings in the annual report per Part V.A.2. Include the following information in your documentation:

- Description of the condition or event triggering the need for corrective action review and/or AIM response. For any spills or leaks, include the following information: a description of the incident including material, date/time, amount, location, and reason for spill, and any leaks, spills or other releases that resulted in discharges of pollutants to Waters of this state, through stormwater or otherwise;
- Date the condition/triggering event was identified;
- Description of immediate actions taken pursuant to Part IV.A.2.a to minimize or prevent the discharge of pollutants. For any spills or leaks, include response actions, the date/time clean-up completed, notifications made, and staff involved. Also include any measures taken to prevent the reoccurrence of such releases (see Part III.B.1.b.iv); and
- A statement, signed and certified in accordance with Part II.C.1.

2. Documentation within 14 Days.

You must also document the corrective actions and/or AIM responses you took or will take as a result of the conditions listed in IV.A.1, IV.B.1.a, IV.B.2.a, and/or IV.B.3.a within 14 days from the time of discovery of any of those conditions/triggering events. Provide the dates when you initiated and completed (or expect to complete) each corrective action and/or AIM response. If infeasible to complete the necessary corrective actions and/or AIM responses within the specified timeframe, per Parts IV.A.2, IV.B.1.c, IV.B.2.c, and/or IV.B.3.c, you must document your rationale and schedule for installing the controls and making them operational as soon as practicable after the specified timeframe. If you notified the Department regarding an allowed extension of the specified timeframe, you must document your rationale for an extension, and attach your documented rationale to your next discharge monitoring report through NetDMR. Include any additional information and/or rationale that is required and/or applicable to the specified corrective action and/or AIM response in Part IV. You are not required to otherwise submit this documentation to the Department, unless specifically required or requested to do so. In addition, you must summarize your corrective actions and/or AIM responses in the annual report required in Part V.A.2.

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PART V. INSPECTIONS, MONITORING, AND REPORTING

A. Site Inspections and Evaluations

You must conduct the following inspections or evaluations at your facility in accordance with the monitoring procedures outlined in Part V.C. You must keep a copy of the documentation from all inspections and evaluations onsite with your SWPPP per Part III.C.8.g.

1. Routine Facility Inspection

At least once per quarter, you must conduct a site assessment that will review the effectiveness of the SWPPP. At least once each calendar year, the routine facility inspection must be conducted during a period when a stormwater discharge is happening. The facility inspections must be documented with a checklist (refer to Part V.A.2.a.i - Part V.A.2.a.viii for a minimum list of what to include) or other summary signed in accordance with Part II.C.1 of this permit, by qualified personnel, with at least one member of your stormwater pollution prevention team participating. The checklist must include a certification that the site is in compliance with the SWPPP and this permit, or a record of the deficiencies and necessary follow up actions. Refer to Part IV.C Corrective Action and AIM Documentation and Part IV.A.2 Corrective Action Deadlines for appropriate time frames.

2. Comprehensive Site Compliance Evaluation

You must conduct a comprehensive site compliance evaluation once a year. The evaluation must be performed by qualified personnel who possess the knowledge and skills to assess conditions and activities that could impact stormwater quality at the facility and who can evaluate the effectiveness of all existing BMPs. The personnel conducting the evaluation may be either facility employees (such as pollution prevention team members) or contractors you hire. If a scheduled compliance evaluation overlaps with a routine facility inspection, the annual compliance evaluation may be used as one of the four routine facility inspections. The Comprehensive Site Compliance Evaluation must be documented and signed in accordance with Part II.C.1 of this permit.

- a.** Evaluations must include all areas where industrial materials or activities are exposed to stormwater, at a minimum:
 - i.)** Industrial materials, residue or trash that may have or could come into contact with stormwater;
 - ii.)** Leaks or spills from industrial equipment, drums, barrels, tanks or other containers that have occurred within the past three years;
 - iii.)** Offsite tracking of industrial or waste materials or sediment where vehicles enter or exit the site;
 - iv.)** Tracking or blowing of raw, final, or waste materials from areas of no exposure to exposed areas;
 - v.)** Evidence of, or the potential for, pollutants entering the drainage system;
 - vi.)** Evidence of pollutants discharging to surface waters at all facility outfalls;
 - vii.)** The condition of and around any outfall, including flow dissipation measures to prevent scouring;
 - viii.)** Inspection of BMPs/control measures;
 - ix.)** Training performed, inspections completed, maintenance performed, quarterly visual examinations, and effective operation of BMPs (including those required for Chesapeake Bay Restoration); and
 - x.)** Visual and analytical monitoring results from the past year.
 - b.** A report must be written summarizing the scope of the evaluation, name(s) of personnel performing the evaluation, the date of the evaluation, and all observations relating to the implementation of the SWPPP. Based on the results of the evaluation, the SWPPP must be modified as necessary. Include a summary of any incomplete
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actions remaining related to Corrective Actions triggered under Part IV, and include the AIM Documentation as required under Part IV.C. If your EJScore is ≥ 0.76 , and you are required to report Benchmarks, then you must submit your annual Comprehensive Site Compliance Evaluation using NetDMR. EJScore is defined in Appendix E and identified on your NOI, and will be indicated on your authorization letter.

3. Quarterly Visual Sampling/Inspections

You are required to begin visual inspections in the first full quarter after you have been notified that you are covered by this permit. For example, if you obtain permit coverage in June, then your first monitoring quarter is July 1 - September 30 of that year. Once each quarter, you must collect a stormwater sample from each outfall (except in adverse weather conditions, substantially identical outfalls, or inactive and unstaffed sites as noted below) and assess the sample visually. Samples may be taken during any precipitation event (except as noted in Areas Subject to Snow below) where there is a measurable discharge and must be sampled within the first 30 minutes of the storm event. In the case of snowmelt, samples must be taken during a period with a measurable discharge from your site. These samples are not required to be collected consistent with 40 CFR 136 procedures but must be collected in such a manner that the samples are representative of the stormwater discharge.

- a. The Quarterly Visual Monitoring Form found in Appendix B of this permit must be completed for each sample, evaluated during the comprehensive site evaluation, and be kept with the SWPPP so as to be available to an inspector as necessary.
- b. Adverse Weather Conditions are those that are dangerous or create inaccessibility for personnel, such as local flooding, high winds, or electrical storms, or situations that otherwise make sampling impractical, such as drought or extended frozen conditions. When adverse weather conditions prevent the collection of samples during the quarter, a substitute sample must be taken during the next qualifying storm event. Documentation of the rationale for no visual assessment for the quarter must be included in SWPPP records.
- c. *Areas Subject to Snow*: In areas subject to snow, at least one quarterly visual assessment must capture snowmelt discharge. The assessment should identify the date when the sample was taken.
- d. *Substantially identical outfalls*: If your facility has two or more outfalls that you believe discharge substantially identical effluents, as documented in Part III.C.5.b, you may conduct quarterly visual assessments of the discharge at just one of the outfalls and report that the results also apply to the substantially identical outfall(s) provided that you perform visual assessments on a rotating basis of each substantially identical outfall throughout the period of your coverage under this permit. If stormwater contamination is identified through visual assessment performed at a substantially identical outfall, you must assess and modify your control measures as appropriate for each outfall represented by the monitored outfall.

4. Inactive and Unstaffed Sites Exceptions to Routine Facility Inspections.

The requirement to conduct routine facility inspections and visual monitoring on a quarterly basis does not apply at a facility that is inactive and unstaffed, as long as there are no industrial materials or activities exposed to stormwater. Such a facility is only required to conduct an annual comprehensive site inspection in accordance with the requirements of Part V.A.2. To invoke this exception, you must maintain a statement in your SWPPP pursuant to Part III.C.5.b.v indicating that the site is inactive and unstaffed, and that there are no industrial materials or activities exposed to precipitation, in accordance with the substantive requirements in 40 CFR 122.26(g)(4)(iii). The statement must be signed and certified in accordance with Part II.C.2. If circumstances change and

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industrial materials or activities become exposed to stormwater or your facility becomes active and/or staffed, this exception no longer applies and you must immediately resume quarterly facility inspections. Consistent with Part V.B.3.b.ii, you must indicate in a "Change NOI" form that the facility has materials or activities exposed to stormwater or has become active and/or staffed. If you are not qualified for this exception at the time you are authorized under this permit, but during the permit term you become qualified because your facility is inactive and unstaffed, and there are no industrial materials or activities that are exposed to stormwater, then you must include the same signed and certified statement as above and retain it with your records pursuant to Part III.C.5.b.v.

B. Industry Specific Benchmarks and Impaired Waters Monitoring Requirements

This permit stipulates pollutant benchmark concentrations that may be applicable to your discharge (Part V.B.1). Samples and measurements taken for the purpose of monitoring must be representative of the volume and nature of the monitored activity. Impaired water monitoring requirements below (Part V.B.3) are based on the impairment status of the receiving waters (refer to Part III.B.3.b). Benchmark or impaired water monitoring, if required, must be conducted according to the monitoring below (Part V.C) or as specified for the impaired water by the Department (Part V.B.3).

1. Applicability of Benchmark Monitoring

You must monitor for any benchmark parameters specified for the industrial sector(s), both primary industrial activity and any co-located industrial activities, applicable to your discharge. Your industry-specific benchmark concentrations are listed in the sector-specific sections of Appendix D. The benchmark concentrations are not effluent limitations; a benchmark exceedance, therefore, is not a permit violation. Benchmark monitoring data are primarily for your use to determine the overall effectiveness of your control measures and to assist you in knowing when Additional Implementation Measures (AIM) may be necessary to comply with the effluent limitations in Part III.B. Failure to conduct any required measures would be a permit violation.

If your facility is in one of the industrial sectors subject to benchmark concentrations that are hardness-dependent, you are required to submit to the Department with your first benchmark discharge monitoring report (Part V.B.4) a hardness value, established consistent with the procedures in Appendix C, which is representative of your receiving water, if you plan to modify your benchmark based on receiving water hardness.

At your discretion, you may take more than four samples during separate discharge events to determine the average benchmark parameter value for facility discharges.

2. Benchmark Monitoring Schedule

You must conduct benchmark monitoring quarterly for four (4) full quarters, starting the first full monitoring period (found in Part V.C.7) that occurs, after registering under this permit. For example, if you obtain permit coverage in June, then your first monitoring period is July 1 – September 30. If the annual average for any parameter does not exceed the benchmark threshold, you have fulfilled your benchmark monitoring requirements for that parameter for the permit term and you can request to discontinue benchmark monitoring for that parameter by 1) entering all data for the parameters in NetDMR, 2) requesting the Department's Permit Program to verify your calculation and 3) receiving confirmation from the Department. For averaging purposes, use a value of zero for any individual sample parameter, analyzed using procedures consistent with Part V.C, which is determined to be less than the method detection limit. For sample values that fall between the method detection level and the quantitation limit (i.e., a confirmed detection but below the level that can be reliably quantified), use a value

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halfway between zero and the quantitation limit. You must comply with Part IV (Additional Implementation Measures) and continue quarterly benchmark monitoring for any parameter with data exceeding the benchmark threshold as specified in Part IV.

3. Impaired Waters Monitoring.

For the purposes of this permit, your facility is considered to discharge to an impaired water if the first Waters of This State to which you discharge is identified by the State or EPA pursuant to section 303(d) of the CWA as not meeting an applicable water quality standard (i.e., without an EPA-approved or - established TMDL, see Part V.B.3.a below), or has been removed from the 303(d) list either because the impairments are addressed by an EPA-approved or established TMDL or is covered by pollution control requirements that meet the requirements of 40 CFR 130.7(b)(1) (see Part V.B.3.b below). For discharges that enter a separate storm sewer system prior to discharge, the first Waters of this State to which you discharge is the waterbody that receives the stormwater discharge from the separate storm sewer system.

a. Facilities Required to Monitor Discharges to Impaired Waters without an EPA-approved or established TMDL:

Beginning in the first full quarter following your date of discharge authorization, you must monitor for pollutants of concern once per year at each discharge point (except substantially identical discharge points) discharging stormwater to impaired waters without an EPA-approved or established TMDL, as follows:

- i.)* Determine which pollutant of concern to monitor for:
 - Review the potential pollutants you have listed in your SWPPP (Part III.C.3) and any sector specific benchmark monitoring pollutants, and compare these to the list of pollutants for which the waterbody is impaired and for which a standard analytical method exists (see 40 CFR Part 136). The pollutant of concern will be where there is an overlap.
 - Except where otherwise directed by the Department, if the pollutant of concern for the impaired waterbody is suspended solids, turbidity, or sediment/sedimentation, you must monitor for Total Suspended Solids (TSS).
 - If a pollutant of concern is expressed in the form of an indicator or surrogate pollutant, you must monitor for that indicator or surrogate pollutant.
 - No monitoring is required when a waterbody's biological communities are impaired but no pollutant, including indicator or surrogate pollutants, is specified as causing the impairment, or when a waterbody's impairment is related to hydrologic modifications, impaired hydrology, or other non-pollutant.
 - Operators should consult the Department for any available guidance regarding required monitoring parameters under this part.
 - ii.)* If the monitored pollutant is not detected in your discharge, or is within the acceptable range for a given parameter for the waterbody to meet its designated use (e.g., pH or temperature), for three consecutive years, or it is detected but you have determined that its presence is caused solely by natural background sources (see iv below), you may discontinue monitoring for that pollutant.
 - iii.)* If the monitored pollutant is detected in your discharge, or is outside the acceptable range for a given parameter for the waterbody to meet its designated use (e.g., pH or temperature), for three consecutive years, or it is
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detected but you have determined that its presence is caused solely by natural background sources (see iv below), you must continue to monitor for the pollutant(s) annually until no longer detected, after which you may discontinue monitoring for that pollutant.

iv.) Natural Background Condition: To support a determination that the pollutant's presence is caused solely by natural background sources, you must document:

- An explanation of why you believe that the presence of the pollutant of concern in your discharge is not related to the activities or materials at your facility; and
- Data and/or studies that tie the presence of the pollutant of concern in your discharge to natural background sources in the watershed.

You must submit this determination to the Department's Permitting Program and receive verification that the request was granted, and maintain request and verification with your SWPPP, as required by Part III.C.8.

Natural background pollutants include those that occur naturally as a result of native soils, and vegetation, wildlife, or ground water. Natural background pollutants do not include legacy pollutants from earlier activity on your site, or pollutants in run-on from neighboring sources that are not naturally occurring. However, you may be eligible to discontinue annual monitoring for pollutants that occur solely from these sources and should consult the Department's Compliance Program for related guidance.

b. Facilities Required to Monitor Discharges to Impaired Waters With an EPA-approved or established TMDL.

For stormwater discharges to waters for which there is an EPA-approved or established TMDL, you are not required to monitor for the pollutant(s) for which the TMDL was written unless the Department informs you, upon examination of the applicable TMDL and its wasteload allocation, that you are subject to such a requirement consistent with the assumptions and requirements of the applicable TMDL and its wasteload allocation. The Department's notice will include specifications on monitoring parameters and frequency. If there are questions, you may consult the Department's Compliance Program for guidance regarding required monitoring under this Part.

c. Impaired Water Exception for Inactive and Unstaffed Sites

The requirement for impaired waters monitoring does not apply at a facility that is inactive and unstaffed, as long as there are no industrial materials or activities exposed to stormwater. To invoke this exception, you must do the following:

- i.)** Maintain a statement with your SWPPP stating that the site is inactive and unstaffed, and that there are no industrial materials or activities exposed to stormwater in accordance with the substantive requirements in 40 CFR 122.26(g) and sign and certify the statement in accordance with Part II.C.
 - ii.)** If circumstances change and industrial materials or activities become exposed to stormwater or your facility becomes active and/or staffed, this exception no longer applies and you must immediately begin complying with the applicable impaired waters monitoring requirements under Part V.B as if you were in your first year of permit coverage. You must submit an NOI indicating this change in operations, now that your facility has materials or activities exposed to
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stormwater or has become active and/or staffed.

iii.) If you are not qualified for this exception at the time you are authorized under this permit, but during the permit term you become qualified because your facility is inactive and unstaffed, and there are no industrial materials or activities that are exposed to stormwater, then you must submit an NOI indicating this change in operations. You may discontinue impaired waters monitoring once you have submitted the NOI, and prepared and signed the certification statement described above concerning your facility's qualification for this special exception.

4. Submitting Benchmark or Impaired Water Discharge Monitoring Reports (DMRs)

You must summarize and submit benchmark or Impaired Water monitoring information electronically using NetDMR once you are granted access to this tool, unless you demonstrate a reasonable basis that precludes the use of NetDMR. Specific requirements regarding submittal of data and reports in hard copy form and for submittal using NetDMR are described below:

- a. NetDMR is a U.S. EPA tool allowing regulated Clean Water Act permittees to submit monitoring reports electronically via a secure Internet application. You must apply for access to NetDMR at www.epa.gov/netdmr and register for a NetDMR Webinar, unless you are able to demonstrate a reasonable basis, such as technical or administrative infeasibility, that precludes the use of NetDMR for submitting DMRs ("opt-out request"). Before you can submit official DMRs using NetDMR you must attend a training Webinar and successfully set-up and submit test monitoring results electronically. You must complete all requirements to gain access to NetDMR within six (6) months of authorization under this permit, including applying for access within one (1) month of being registered.
- b. Opt-out requests must be submitted in writing to the Department for written approval at least sixty (60) days prior to the date you would be required under this permit to begin using NetDMR. This demonstration shall be valid for twelve (12) months from the date of the Department approval and shall thereupon expire. At such time, DMRs and reports shall be submitted electronically to the Department unless the permittee submits a renewed opt-out request and such request is approved by the Department. All opt-out requests and subsequent hardcopy DMRs should be sent to the following addresses with "Attn: DMRs":

Maryland Department of the Environment
WMA – Compliance Program
1800 Washington Blvd., Suite 425
Baltimore, MD 21230

- c. If you are required to perform monitoring and report for specific pollutants you must report the quarterly measurements no later than 28 days following the Monitoring Period (Part V. C.7), and according to the other Monitoring Procedures (Part V.C). Failure to sample and report is considered a permit violation.

1. Benchmark Exception for Inactive and Unstaffed Sites

The requirement for benchmark monitoring does not apply at a facility that is inactive and unstaffed, as long as there are no industrial materials or activities exposed to stormwater. To invoke this exception, you must do the following:

- Maintain a statement onsite with your SWPPP stating that the site is inactive and unstaffed, and that there are no industrial materials or activities exposed to stormwater in accordance with the substantive requirements in 40 CFR 122.26(g) and sign and certify the statement in accordance with Part II.C; and
 - If circumstances change and industrial materials or activities become exposed to stormwater or your facility becomes active and/or staffed, this exception no
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longer applies and you must immediately begin complying with the applicable benchmark monitoring requirements under Part V.B as if you were in your first year of permit coverage. You must indicate in your first benchmark monitoring report that your facility has materials or activities exposed to stormwater or has become active and/or staffed.

- If you are not qualified for this exception at the time you are authorized under this permit, but during the permit term you become qualified because your facility is inactive and unstaffed, and there are no industrial materials or activities that are exposed to stormwater, then you must provide written notification to the Department's Compliance Program of this change in your next benchmark monitoring report. You may discontinue benchmark monitoring once you have notified the Department, and prepared and signed the certification statement described above concerning your facility's qualification for this special exception.

2. Substantially identical outfalls

If your facility has two or more outfalls that you believe discharge substantially identical effluents, as documented in Part III.C.5.b, you may perform benchmark or impaired water monitoring of the discharge at just one of the outfalls and report that the results also apply to the substantially identical outfall(s) provided that you perform benchmark or impaired water monitoring on a rotating basis of each substantially identical outfall throughout the period you are required to under this permit. If stormwater contamination is identified through benchmark monitoring performed at a substantially identical outfall, you must assess and modify your control measures as appropriate for each outfall represented by the monitored outfall.

3. Additional Monitoring Required by the Department.

The Department may notify you of additional discharge monitoring requirements that the Department determines are necessary to meet the permit's effluent limitations. Any such notice will briefly state the reasons for the monitoring, locations, and parameters to be monitored, frequency and period of monitoring, sample types, and reporting requirements.

C. Monitoring Procedures

You must collect and analyze stormwater samples and document monitoring activities for visual and benchmark monitoring consistently with the procedures described in this section and the industry specific benchmark monitoring requirements.

1. Monitored Outfalls

You must conduct monitoring as required by this permit at each outfall authorized by this permit, except when an outfall is exempt from monitoring as a substantially identical outfall. If your facility has two or more outfalls that you believe discharge substantially identical effluents, based on the similarities of the general industrial activities and control measures, exposed materials that may significantly contribute pollutants to stormwater, and runoff coefficients of their drainage areas, you may monitor the effluent of just one of the outfalls and report that the results also apply to the substantially identical outfall(s). As required in Part III.C.5, your SWPPP must identify each outfall authorized by this permit and describe the rationale for any substantially identical outfall determinations.

2. Commingled Discharges

If discharges authorized by this permit commingle with discharges not authorized under this permit, any required sampling of the authorized discharges must be performed at a point before they mix with other waste streams, to the extent practicable. The following are some examples of mixed water source situations that should not be sampled.

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- a. A common ditch that carries stormwater from properties upstream. In this case, the stormwater from the permitted facility is mixed with other water. You should find a location or locations where your facility's stormwater alone can be sampled.
- b. A partially submerged storm sewer pipe where it discharges into the receiving water body. In this case, this final discharge point should not be used as a sampling point because the stormwater flow is mixed with the receiving water.
- c. A manhole that carries stormwater not only from the permitted facility but from other stormwater sources as well. If taking a grab sample from a manhole, you should make sure that the flow in that pipe is entirely from your facility.

3. Measurable Storm Events

All required monitoring must be performed on a storm event that results in an actual discharge from your site ("measurable storm event") that follows the preceding measurable storm event by at least 72 hours (3 days). The 72-hour (3-day) storm interval does not apply if you are able to document that less than a 72-hour (3-day) interval is representative for local storm events during the sampling period. In the case of snowmelt, the monitoring must be performed at a time when a measurable discharge occurs at your site.

For each monitoring event, except snowmelt monitoring, you must identify the date and duration (in hours) of the rainfall event, rainfall total (in inches) for that rainfall event, and time (in days) since the previous measurable storm event. For snowmelt monitoring, you must identify the date of the sampling event.

4. Sample Type

You must take a minimum of one grab sample from a discharge resulting from a measurable storm event as described above. Samples must be collected within the first 30 minutes of a measurable storm event. However, the Department does not advocate impractical or potentially unsafe sampling methods during periods of adverse weather conditions. Therefore, if it is not possible to collect the sample within the first 30 minutes of a measurable storm event, the sample must be collected as soon as practicable after the first 30 minutes and documentation must be kept with the SWPPP explaining why it was not possible to take samples within the first 30 minutes. In the case of snowmelt, samples must be taken during a period with a measurable discharge.

For benchmark monitoring, you may use a composite sampling method instead of taking grab samples as described above. This composite method may be either flow-weighted or time weighted. Flow-Weighted composite sample means a composite sample consisting of a mixture of aliquots collected at a constant time interval, where the volume of each aliquot is proportional to the flow rate of the discharge. Composite samples must be initiated during the first 30 minutes of the same storm event. If it is not possible to initiate composite sampling within the first 30 minutes of a measurable storm event, you must initiate composite sampling as soon as possible after the first 30 minutes and keep documentation with the SWPPP explaining why it was not possible to initiate composite sampling within the first 30 minutes. Composite sampling may not be used to measure parameters that have a short holding time for processing or that degrade or transform quickly such as pH, temperature, and oil and grease (O&G).

If you monitor any pollutant more frequently than required by the permit using test procedures approved under 40 CFR Part 136, or another method required for an industry-specific waste stream under 40 CFR subchapters N or O, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Department.

Provides discharge authorization only upon Maryland Department of the Environment notification of registration.

5. Adverse Weather Conditions

When adverse weather conditions, as described in Part V.A.3.b, prevent the collection of samples according to the relevant monitoring schedule, you must take a substitute sample during the next qualifying storm event. Adverse weather does not exempt you from having to file a benchmark monitoring report in accordance with your sampling schedule. You must keep a record with your SWPPP of any failure to monitor as specified, indicating the basis for not sampling during the usual reporting period.

6. Representative Sampling

You must take all required samples and measurements at times to be representative of the quantity and quality of the discharges during the specified monitoring periods. At a minimum, samples must be taken once every quarter unless otherwise specified.

The sampling and analytical methods used must conform to procedures for the analysis of pollutants as identified in [40 CFR 136](#) - "Guidelines Establishing Test Procedures for the Analysis of Pollutants" except for visual monitoring which is not subject to 40 CFR 136, or unless otherwise specified. You must select test procedures with quantitation limits at or below benchmark values for all benchmark parameters for which you are required to sample and for impaired waters based on guidance from the Department.

7. Monitoring Periods

Visual (Part V.A.3) and benchmark (Part V.B.2) monitoring are required on a quarterly basis, following these 3-month intervals:

- a. January 1 – March 31;
- b. April 1 – June 30;
- c. July 1 – September 30; and
- d. October 1 – December 31.

8. Data Recording Requirements

If you are required to perform monitoring, you must record the following information for each sample:

- a. The exact place, date, and time of sampling or measurement;
- b. The person(s) who performed the sampling or measurement;
- c. The dates and times the analyses were performed;
- d. The person(s) who performed the analyses;
- e. The analytical techniques or methods used; and
- f. The results of all required analyses.

D. Additional Reporting Requirements

In addition to the reporting requirements stipulated in Part IV, you must submit the following reports to the Department. If you discharge through an MS4, you must also submit these reports to the MS4 operator.

1. Noncompliance which may Endanger Health or the Environment

You must report any noncompliance which may endanger health or the environment to WSA Compliance within 24 hours. The following shall be included as information which must be reported under this paragraph.

- Any unanticipated bypass which exceeds any effluent limitation in the permit.
 - Any upset which exceeds any effluent limitation in the permit.
 - Violation of a maximum daily discharge limitation for any of the pollutants.
- a. 24-hour reporting – Any information must be provided orally within 24 hours from the time you become aware of the circumstances; and
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Provides discharge authorization only upon Maryland Department of the Environment notification of registration.

- b. 5-day follow-up reporting to the 24 hour reporting – A written submission must also be provided within five days of the time you become aware of the circumstances.

2. Hazardous Substances or Oil in Stormwater Discharge(s) Reporting

- a. This permit does not authorize the discharge of hazardous substances or oil resulting from an onsite spill.
- b. You must prevent the discharge of hazardous substances or oil in the stormwater discharge(s) from your facility in accordance with your SWPPP. This permit does not relieve you of the reporting requirements of 40 CFR part 117 and 40 CFR part 302. If a spill or discharge of hazardous substances or oil occurs you must do the following:
 - i.) Notify the Department by calling its Emergency Response Division at (866) 633-4686 and notify the National Response Center (NRC) at (800) 424-8802 or, in the Washington, DC metropolitan area, at (202) 426-2675 in accordance with the requirements of COMAR 26.10.01.03, 40 CFR 117 and 40 CFR 302 respectively as soon as he or she has knowledge of the discharge;
 - ii.) Submit to the Department a written description within 10 working days of knowledge of the incident including: the type and estimate of the amount of material released, the date it occurred, the circumstances leading to it, and steps to be taken in accordance with Part V.C.1.c, below, and any other information as required by COMAR 26.10.01.03; and
 - iii.) Modify the SWPPP within 14 calendar days of knowledge of the incident to (1) provide a description of the release, the circumstances leading to it, and the date it occurred and (2) identify measures to prevent the reoccurrence of respond to such releases and modify the plan where appropriate.

E. Records Retention

Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR part 503), you shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Department at any time.

PART VI. STANDARD PERMIT CONDITIONS

A. Duty to Comply

You must comply at all times with the terms and conditions of this permit, the provisions of the Environment Article, Title 7, Subtitle 2 and Title 9, Subtitles 2 and 3 of the Annotated Code of Maryland, and the Clean Water Act, 33 U.S.C. § 1251 et seq. Any noncompliance with any of the requirements of this permit constitutes a violation of the Clean Water Act, and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit coverage. As detailed in Part IV (Corrective Actions) of this permit, failure to take any required corrective actions constitute an independent, additional violation of this permit and the Clean Water Act. As such, any actions and time periods specified for remedying noncompliance do not absolve parties of the initial underlying noncompliance. However, where corrective action is triggered by an event that does not itself constitute permit noncompliance, there is no permit violation provided you take the required corrective action within the relevant deadlines established in Part IV.

Provides discharge authorization only upon Maryland Department of the Environment notification of registration.

B. Property Rights.

The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

C. Water Construction and Obstruction

This permit does not authorize you to construct or place physical structures, facilities, or debris or undertake related activities in any Waters of this State. Operations within the floodplain may require additional permit coverage and may justify flood insurance in those flood prone areas, especially due to climate change effects on increased frequency of flooding.

D. Right of Entry

You must permit the Secretary of the Department, the Regional Administrator for the EPA, or their authorized representatives, upon the presentation of credentials, to:

1. enter upon your premises where a discharges' source is located or where any records are required to be kept under the terms and conditions of this permit;
2. access and copy, at reasonable times, any records required to be kept under the terms and conditions of this permit;
3. inspect, at reasonable times, any monitoring equipment or monitoring method required in this permit;
4. inspect, at reasonable times, any collection, treatment, pollution management, or discharge facilities required under this permit;
5. sample, at reasonable times, any discharge of pollutants; and
6. take photographs (which may require direction for reasons of national security).

E. Duty to Provide Information.

You must provide within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit to the Department. You must also provide copies of records required to be kept by this permit to the Department, upon request.

F. Availability of Reports

Except for data determined to be confidential under the Maryland Public Information Act and/or Section 308 of the Clean Water Act, 33 U.S.C. § 1318, all submitted data, plans or reports prepared pursuant to this permit, including self-inspection information, must be available for public inspection at the offices of the Department and the Regional Administrator of the Environmental Protection Agency.

G. Submitting Additional or Corrected Information

When you become aware that you failed to submit any relevant facts or submitted incorrect information in the NOI or in any other approved plans or report to the Department, you must submit the facts or information to the Department within 30 days.

H. Removed Substances

Wastes such as solids, sludges, or other pollutants removed from or resulting from treatment or control of wastewaters or facility operations, must be disposed of in a manner to prevent any wastes or runoff from wastes from contacting Waters of this State. You must comply with standards for sewage sludge use or disposal established under section 405(d) of the Federal Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal.

Provides discharge authorization only upon Maryland Department of the Environment notification of registration.

I. Toxic Pollutants

You must comply with effluent standards or prohibitions for toxic pollutants established under section 307(a) of the Federal Clean Water Act, or under Section 9-314 and Sections 9-322 to 9-328 of the Environment Article, Annotated Code of Maryland. You must be in compliance within the time provided in the regulations that establish these standards or prohibitions, even if this permit has not yet been modified to incorporate the requirement.

J. Oil and Hazardous Substances Prohibited

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve you from any responsibility, liability, or penalties to which the permittee may be subject under Section 311 of the Clean Water Act (33 U.S.C. § 1321), or under the Annotated Code of Maryland. Permittees may be subject to additional requirements and regulations dictated by the Department's Oil Control Program and Emergency Planning and Community Right-to-Know Act (EPCRA) (40 CFR 116). Any requirements listed in this permit which control grease, oil or fuel are to address potential pollutants not governed directly by Oil Pollution Prevention (40 CFR 112), as the handling and storage of fuel and other petroleum products has a potential to cause negative impacts to waters of this state.

K. Proper Operation and Maintenance.

You shall at all times properly operate and maintain all systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance requires the installation and operation of backup, auxiliary, or similar systems or controls, by a permittee when necessary to achieve compliance with the conditions of the permit.

L. Bypass

Any bypass of treatment facilities necessary to maintain compliance with the terms and conditions of this permit is prohibited unless:

1. the bypass is unavoidable to prevent a loss of life, personal injury or substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources;
2. there are no feasible alternatives;
3. notification is received by the Department within 24 hours (if orally notified, then followed by a written submission within five calendar days of the permittee's becoming aware of the bypass). Where the need for a bypass is known (or should have been known) in advance, this notification shall be submitted to the Department for approval at least ten calendar days before the date of bypass or at the earliest possible date if the period of advance knowledge is less than ten calendar days; and
4. the bypass is allowed under conditions determined by the Department to be necessary to minimize adverse effects.

M. Upset

Conditions Necessary for Demonstration of an Upset. An upset shall constitute an affirmative defense to an action brought for noncompliance with technology-based effluent limitations only if the permittee demonstrates, through properly signed, contemporaneous operating logs, or other relevant evidence, that:

1. an upset occurred and that the permittee can identify the specific cause(s) of the upset;
 2. the permitted facility was at the time being operated in a prudent and workman-like manner and in compliance with proper operation and maintenance procedures;
 3. the permittee submitted a 24-hour notification of upset in accordance with the reporting requirements of Corrective Actions above;
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4. the permittee submitted, within five (5) calendar days of becoming aware of the upset, documentation to support and justify the upset; and
5. the permittee complied with any remedial measures required to minimize adverse impact.

N. Need to Halt or Reduce Activity Not a Defense.

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this general permit.

O. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any adverse impact to Waters of this State or to human health resulting from noncompliance with any effluent limitations specified in this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

P. Permit Actions.

Authorization under this permit may be modified, revoked and reissued, or terminated for cause. At any time at the discretion of the Department or the U.S. Environmental Protection Agency, or if there is evidence indicating that stormwater discharges authorized by this permit cause, have the reasonable potential to cause or contribute to an excursion above any applicable water quality standard, the Department may require the owner or operator of such discharge to obtain an individual permit or alternative general permit coverage. A request by the permittee for a modification, revocation or reissuance, termination, or a notification of planned changes or anticipated noncompliance does not suspend the permittee's obligation to comply with all permit conditions.

Q. Reopener Clause for Permits

The Department may revoke this permit or modify this permit to include different limitations and requirements, in accordance with the procedures contained in COMAR 26.08.04.10 and 40 C.F.R. §§ 122.62, 122.63, 122.64 and 124.5, to comply with any applicable TMDL, or any effluent standard or limitation issued or approved under Sections 301, 304, and 307 of the Clean Water Act [33 USCS §§ 1311, 1314, 1317] if the effluent standard or limitation issued or approved:

1. contains different conditions or is otherwise more stringent than any effluent limitation in this permit; or
2. controls any pollutant not limited in this permit.

This permit, as modified or reissued under this section, must also contain any other requirements of the Act then applicable.

R. Severability.

The provisions of this permit are severable. If any provisions of this permit must be held invalid for any reason, the remaining provisions must remain in full force and effect. If the application of any provision of this permit to any circumstances is held invalid, its application to other circumstances must not be affected.

S. Civil and Criminal Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under section 309 of the CWA, with Title 9 of the Environment Article, Annotated Code of Maryland, any applicable State or Federal law, or regulation under authority preserved by section 510 of the CWA.

Provides discharge authorization only upon Maryland Department of the Environment notification of registration.

T. Action on Violations

The issuance or reissuance of this permit does not constitute a decision by the State not to proceed in an administrative, civil, or criminal action for any violations of State law or regulations occurring before the issuance or re-issuance of this permit, nor a waiver of the State's right to do so.

U. Civil Penalties for Violations of Permit Conditions.

In addition to civil penalties for violations of State water pollution control laws set forth in Section 9-342 of the Environment Article, Annotated Code of Maryland, the Clean Water Act and EPA regulations at 40 C.F.R. Part 19 provide that any person who violates Section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under Section 402 of the Act or in a permit issued under Section 404 of the Act, is subject to a civil penalty not to exceed \$37,500 per day for each violation. Statutory penalties of the CWA are subject to the Civil Monetary Penalty Inflation Adjustment Rule (40 CFR 19.4). Nothing in this permit precludes the institution of any legal action or relieves You from any responsibilities, or penalties for which You are or may be subject to under the CWA, Title 9 Environmental Article or any applicable federal or State law.

V. Criminal Penalties for Violations of Permit Conditions.

In addition to the criminal penalties for violations of State water pollution control laws set forth in Section 9-343 of the Environment Article, Annotated Code of Maryland, the Clean Water Act provides that:

1. Any person who negligently violates Section 301, 302, 306, 307, 308, 311(b)(3), 318, or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under Section 402 of the Act, or in a permit issued under Section 404 of the Act, is subject to a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than one year, or both; In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to a fine of not more than \$50,000 per day of violation or by imprisonment of not more than two years, or both;
 2. Any person who knowingly violates Section 301, 302, 306, 307, 308, 311(b)(3), 318, or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under Section 402 of the Act, or in a permit issued under Section 404 of the Act, is subject to a fine of not less than \$5,000 nor more than \$50,000 per day of violation, or by imprisonment for not more than three years, or both; in the case of a second or subsequent conviction for a knowing violation, a person shall be subject to a fine of not more than \$100,000 per day of violation, or imprisonment of not more than 6 years, or both;
 3. Any person who knowingly violates Sections 301, 302, 306, 307, 308, 311(b)(3), 318, or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under Section 402 of the Act, or in a permit issued under Section 404 of the Act, and who knows at that time that he is placing another person in imminent danger of death or serious bodily injury, is subject to a fine of not more than \$250,000 or imprisonment for not more than 15 years, or both; in the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both; an organization, as defined in Section 309(c)(3)(B)(iii) of the Act, shall, upon conviction of violating the imminent danger provision be subject to a fine of not more than \$1,000,000 for a first violation and up to \$2,000,000 for second or subsequent convictions;
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Provides discharge authorization only upon Maryland Department of the Environment notification of registration.

W. Administrative Penalties for Violations of Permit Conditions.

In addition to administrative penalties for violations of State water pollution control laws set forth in Section 9-342 of the Environment Article, Annotated Code of Maryland, the Clean Water Act provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to an administrative penalty, as follows:

1. Class I Penalty. Not to exceed the maximum amounts authorized by Section 309(g)(2)(A) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. § 2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. § 3701 note) (currently \$16,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$37,500).
2. Class II Penalty. Not to exceed the maximum amounts authorized by Section 309(g)(2)(B) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. § 2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. § 3701 note) (currently \$16,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$187,500).

X. Penalties for Falsification and Tampering

Per the Environment Article, §9-343, Annotated Code of Maryland, any person who knowingly makes any false material statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance, or who knowingly falsifies, tampers with or renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both. Per the federal Clean Water Act, any person who knowingly falsifies, tampers with, or renders inaccurate any monitoring device or method required to be maintained under the Act, or who knowingly makes any false statement, representation, or certification in any records or other documents submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than two years, or by both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or both.

PART VII. AUTHORITY TO ISSUE GENERAL NPDES PERMITS

On September 5, 1974, the Administrator of the EPA approved the proposal submitted by the State of Maryland for the operation of a permit program for discharges into navigable waters under Section 402 of the Federal Clean Water Act, 33 U.S.C. Section 1342.

On September 30, 1990, the Administrator of the EPA approved the proposal submitted by the State of Maryland for the operation of a general permit program.

Under the approvals described above, the general discharge permit is both a State of Maryland general discharge permit and a NPDES general permit.

D. Lee Currey
D. Lee Currey (Nov 8, 2022 08:50 EST)

Nov 8, 2022

D. Lee Currey, Director
Water and Science Administration

Appendix A: Industry Specific Sectors

These Industry Sector descriptions are categorized by Standard Industrial Classification (SIC), and in a few cases by "Activity Code". More detailed descriptions of the SIC codes can be found at Department of Labor's - Occupation, Safety and Health Administration (OSHA) website (<http://www.osha.gov/pls/imis/sicsearch.html>). References to "sectors" in this permit (e.g., sector-specific monitoring requirements) refer to these groupings.

SIC Code or Activity Code	Activity Represented
SECTOR A: TIMBER PRODUCTS	
2421	(Subsector A1) General Sawmills and Planing Mills
2491	(Subsector A2) Wood Preserving
2411	(Subsector A3) Log Storage and Handling
2426	Hardwood Dimension and Flooring Mills
2429, 2499	(Subsector A4) Special Product Sawmills, Not Elsewhere Classified and Wood Products, Not Elsewhere Classified
2431-2439 (except 2434, see Sector W)	Millwork, Veneer, Plywood, and Structural Wood
2441	Nailed and Lock Corner Wood Boxes and Shook
2448	Wood Pallets and Skids
2449	Wood Containers, Not Elsewhere Classified
2451, 2452	Wood Buildings and Mobile Homes
2493	Reconstituted Wood Products
SECTOR B: PAPER AND ALLIED PRODUCTS	
2631	Paperboard Mills
2611	Pulp Mills
2621	Paper Mills
2652-2657	Paperboard Containers and Boxes
2671-2679	Converted Paper and Paperboard Products, Except Containers and Boxes
SECTOR C: CHEMICALS AND ALLIED PRODUCTS	
2873-2879	(Subsector C1) Agricultural Chemicals (includes composting)
2812-2819	(Subsector C2) Industrial Inorganic Chemicals
2841-2844	(Subsector C3) Soaps, Detergents, and Cleaning Preparations; Perfumes, Cosmetics, and Other Toilet Preparations
2821-2824	Plastics Materials and Synthetic Resins, Synthetic Rubber, Cellulosic and Other Manmade Fibers Except Glass
2833-2836	Medicinal Chemicals and Botanical Products; Pharmaceutical Preparations; in vitro and in vivo Diagnostic Substances; and Biological Products, Except Diagnostic Substances
2851	Paints, Varnishes, Lacquers, Enamels, and Allied Products
2861-2869	Industrial Organic Chemicals
2891-2899	Miscellaneous Chemical Products
3952 (limited to list of inks and paints)	Inks and Paints, Including China Painting Enamels, India Ink, Drawing Ink, Platinum Paints for Burnt Wood or Leather Work, Paints for China Painting, Artist's Paints and Artist's Watercolors
2911	Petroleum Refining
SECTOR D: ASPHALT PAVING AND ROOFING MATERIALS AND LUBRICANTS	
2951, 2952	(Subsector D1) Asphalt Paving and Roofing Materials (except Bituminous concrete)
2992, 2999	Miscellaneous Products of Petroleum and Coal

SIC Code or Activity Code	Activity Represented
SECTOR E: GLASS, CLAY, CEMENT, CONCRETE, AND GYPSUM PRODUCTS	
3251-3259, 3261-3269	(Subsector E1) Structural Clay Products and Pottery and Related Products
3271-3275	(Subsector E2) Lime & Gypsum Products
3211	Flat Glass
3221, 3229	Glass and Glassware, Pressed or Blown
3231	Glass Products Made of Purchased Glass
3241	Hydraulic Cement
3281	Cut Stone and Stone Products
3291-3299	Abrasive, Asbestos, and Miscellaneous Nonmetallic Mineral Products
SECTOR F: PRIMARY METALS	
3312-3317	(Subsector F1) Steel Works, Blast Furnaces, and Rolling and Finishing Mills
3321-3325	(Subsector F2) Iron and Steel Foundries
3351-3357	(Subsector F3) Rolling, Drawing, and Extruding of Nonferrous Metals
3363-3369	(Subsector F4) Nonferrous Foundries (Castings)
3331-3339	Primary Smelting and Refining of Nonferrous Metals
3341	Secondary Smelting and Refining of Nonferrous Metals
3398, 3399	Miscellaneous Primary Metal Products
SECTOR G: METAL MINING (ORE MINING AND DRESSING)	
	(Reserved)
SECTOR H: COAL MINES AND COAL MINING-RELATED FACILITIES	
	(Reserved)
SECTOR I: OIL AND GAS EXTRACTION AND REFINING	
1311, 1321, 1381-1389	(Subsector I1) Crude Petroleum and Natural Gas, Natural Gas Liquids, Oil and Gas Field Services
SECTOR J: MINERAL MINING AND DRESSING	
	(Reserved)
SECTOR K: HAZARDOUS WASTE TREATMENT, STORAGE, OR DISPOSAL FACILITIES	
HZ	(Subsector K1) Hazardous Waste Treatment, Storage, or Disposal Facilities, including those that are operating under interim status or a permit under subtitle C of RCRA
SECTOR L: LANDFILLS AND LAND APPLICATION SITES	
LF, 4953	(Subsector L1) All Landfills with a refuse disposal permit or Land Application Sites with a marginal land permit
	(Subsector L2) All Landfills with a refuse disposal permit or Land Application Sites with a marginal land permit, except Municipal Solid Waste Landfill (MSWLF) Areas Closed in Accordance with 40 CFR 258.60
SECTOR M: AUTOMOBILE SALVAGE YARDS	
5015	Automobile Salvage Yards

SIC Code or Activity Code	Activity Represented
SECTOR N: SCRAP RECYCLING FACILITIES	
5093	(Subsector N1) Scrap Recycling and Waste Recycling Facilities except Source-Separated Recycling.
	(Subsector N2) Source-separated Recycling Facility. "Source-Separated Recycling" are facilities that only receive recyclable materials separated at the source from solid waste, primarily from non-industrial and residential sources (i.e., common consumer products including paper, newspaper, glass, cardboard, plastic containers, aluminum and tin cans); including recycling facilities commonly referred to as material recovery facilities (MRF). Additional separation of the collected recyclables can occur at the facility and still considered source-separated recycling, if the stream of material was separated at the source of any trash, commonly called single stream recycling in the state.
	(Subsector N3) Non-metallic Recycling Facility. Scrap made up entirely of paper, rags, or other non-metallic materials.
SECTOR O: STEAM ELECTRIC GENERATING FACILITIES	
SE	Steam Electric Generating Facilities, including coal handling sites
SECTOR P: LAND TRANSPORTATION AND WAREHOUSING	
4011, 4013	Railroad Transportation *
4111-4173	Local and Highway Passenger Transportation *
4212-4231 (except 4221-4226)	Motor Freight Transportation and Warehousing *
4311	United States Postal Service *
5171	Petroleum Bulk Stations and Terminals *
	* Only those facilities which have vehicle maintenance onsite (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication) or equipment cleaning operations are included for the facilities specified above in this Sector.
4221-4226	Storage facilities must include stormwater discharges from all areas (except access roads and rail lines) where material handling, equipment, or activities, raw materials, intermediate products, final products, waste materials, by-products, or industrial machinery are exposed to stormwater. Material handling activities include the storage, loading and unloading, transportation, or conveyance of any raw material, intermediate produce, finished product, by-product, or waste product. Exception: Warehouses of either preassembly parts or finished products that are not located at an industrial facility (i.e. located off-site) are not required to have coverage.
SECTOR Q: WATER TRANSPORTATION	
4412-4499 (except 4493)	(Subsector Q1) Water Transportation Facilities
	Only those facilities listed which have vehicle maintenance shops or equipment cleaning operations are included in this sector. The facility associated with industrial activity are those portions involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication) or equipment cleaning operations.
SECTOR R: SHIP AND BOAT BUILDING AND REPAIRING YARDS	
3731, 3732	(Subsector R1) Ship and Boat Building or Repairing Yards

SIC Code or Activity Code	Activity Represented
SECTOR S: AIR TRANSPORTATION FACILITIES	
4512-4581	(Subsector S1) Air Transportation Facilities
	Only those facilities listed which have vehicle maintenance shops, equipment cleaning operations, or airport deicing operations are included in this sector. The facility associated with industrial activity are those portions involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations or airport deicing operations.
SECTOR T: TREATMENT WORKS	
TW, 4952	Treatment Works treating domestic sewage or any other sewage sludge or wastewater treatment device or system, used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge that are located within the confines of the facility, with a design flow of 1.0 mgd or more, or required to have an approved pretreatment program under 40 CFR Part 403. Not included are farm lands, domestic gardens or lands used for sludge management where sludge is beneficially reused and which are not physically located in the confines of the facility, or areas that are in compliance with section 405 of the CWA .
SECTOR U: FOOD AND KINDRED PRODUCTS	
2041-2048	(Subsector U1) Grain Mill Products
2074-2079	(Subsector U2) Fats and Oils Products
2011-2015	Meat Products
2021-2026	Dairy Products
2032-2038	Canned, Frozen, and Preserved Fruits, Vegetables, and Food Specialties
2051-2053	Bakery Products
2061-2068	Sugar and Confectionery Products
2082-2087	Beverages
2091-2099	Miscellaneous Food Preparations and Kindred Products
2111-2141	Tobacco Products
SECTOR V: TEXTILE MILLS, APPAREL, AND OTHER FABRIC PRODUCT MANUFACTURING; LEATHER AND LEATHER PRODUCTS	
2211-2299	Textile Mill Products
2311-2399	Apparel and Other Finished Products Made from Fabrics and Similar Materials
3131-3199	Leather and Leather Products
SECTOR W: FURNITURE AND FIXTURES	
2434	Wood Kitchen Cabinets
2511-2599	Furniture and Fixtures
SECTOR X: PRINTING AND PUBLISHING	
2711-2796	Printing, Publishing, and Allied Industries
SECTOR Y: RUBBER, MISCELLANEOUS PLASTIC PRODUCTS, AND MISCELLANEOUS MANUFACTURING INDUSTRIES	
3011, 3021, 3052, 3053, 3061, 3069	(Subsector Y1) Tires and Inner Tubes, Rubber and Plastics Footwear, Gaskets, Packing and Sealing Devices, and Rubber and Plastic Hoses and Belting, Fabricated Rubber Products, Not Elsewhere Classified
3081-3089	Miscellaneous Plastics Products
3931	Musical Instruments
3942-3949	Dolls, Toys, Games, and Sporting and Athletic Goods

SIC Code or Activity Code	Activity Represented
3951-3955 (except 3952 – see Sector C)	Pens, Pencils, and Other Artists' Materials
3961, 3965	Costume Jewelry, Costume Novelties, Buttons, and Miscellaneous Notions, Except Precious Metal
3991-3999	Miscellaneous Manufacturing Industries
SECTOR Z: LEATHER TANNING AND FINISHING	
3111	Leather Tanning and Finishing
SECTOR AA: FABRICATED METAL PRODUCTS	
3411-3499, 3911-3915	Fabricated Metal Products, Fabricated Metal Coating and Engraving, and Allied Services, Jewelry, Silverware, and Plated Ware
SECTOR AB: TRANSPORTATION EQUIPMENT, INDUSTRIAL OR COMMERCIAL MACHINERY	
3511-3599 (except 3571-3579 see Sector AC)	Industrial and Commercial Machinery
3711-3799 (except 3731, 3732 see Sector R)	Transportation Equipment
SECTOR AC: ELECTRONIC, ELECTRICAL, PHOTOGRAPHIC, AND OPTICAL GOODS	
3571-3579	Computer and Office Equipment
3812-3873	Measuring, Analyzing, and Controlling Instruments; Photographic and Optical Goods, Watches, and Clocks
3612-3699	Electronic and Electrical Equipment and Components
SECTOR AD.a: DEPARTMENT OF PUBLIC WORKS AND HIGHWAY MAINTENANCE FACILITIES	
DPW, HM	Department of Public Works (DPW) and Highway Maintenance (HM) facilities that have operations including vehicle and equipment maintenance shops (vehicle and equipment rehabilitation, mechanical repairs, painting, fueling and lubrication), equipment cleaning operations and salt storage for road deicing activities. Department of public works and highway maintenance facilities where no vehicle repair is occurring are not required to apply for coverage. NOTE: Coverage under this permit is not required for a municipally owned and operated facility unless the facility is notified by the Department that coverage is needed, or the facility was covered under the 12-SW permit.
DPW, HM	(Subsector AD.a1) Department of Public Works (DPW) and Highway Maintenance (HM) facilities <u>that store or dewater street sweeping or stormdrain inlet cleaning debris.</u> NOTE: Coverage under this permit is not required for a municipally owned and operated facility unless the facility is notified by the Department that coverage is needed, or the facility was covered under the 12-SW permit.
SECTOR AD.b: SCHOOL BUS MAINTENANCE FACILITIES	
82xx	School Bus Maintenance facilities that have operations including vehicle and equipment maintenance shops (vehicle and equipment rehabilitation, mechanical repairs, painting, fueling and lubrication), and equipment cleaning operations. NOTE: Coverage under this permit is not required for a municipally owned and operated facility unless the facility is notified by the Department that coverage is needed, or the facility was covered under the 12-SW permit.

SECTOR AD.d: SALT TERMINALS	
5169	Salt Terminal operations. NOTE: Coverage under this permit is not required for a facility unless the facility is notified by the Department that coverage is needed, or the facility was covered under the 12-SW permit.
SECTOR AD.e: INACTIVE LANDFILLS	
LF	All Landfills <u>without</u> a refuse disposal permit that have been notified by the Department that coverage is needed, or the facility was covered under the 12-SW permit
SECTOR AD: NON-CLASSIFIED FACILITIES	
AD	Other stormwater discharges to waters of the state designated by the Department as needing a permit (see 40 CFR 122.26.(a)(9)(i)(C) & (D)) or any facility discharging stormwater associated with industrial activity not described by any Sectors A-AC. NOTE: Facilities may not elect to be covered under Sector AD. Only the Department may assign a facility to Sector AD.

Appendix B: 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: <i>Yellow Brown Red Gray</i> <i>Other:</i>		
2. Clarity	Is the stormwater <u>not</u> clear? Yes No		If not clear, which of the following best describes the clarity of the stormwater? <i>Suspended Solids Milky/Cloudy Opaque</i> <i>Other:</i>		
3. Oil Sheen	Can you see a rainbow effect or sheen on the water surface? Yes No		Which best describes the sheen? <i>Rainbow sheet Floating oil globules</i> <i>Other:</i>		
4. Odor	Does the sample have an odor? Yes No		If Yes, describe: <i>Chemical Musty Rotten Eggs</i> <i>Sewage Sour Milk Oil/Petroleum</i> <i>Other:</i>		
5. Floating Solids	Is there anything on the surface of the sample? Yes No		If Yes, describe: <i>Suds Oily Film Garbage</i> <i>Sewage Water Fowl Excrement</i> <i>Other:</i>		
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: <i>(note type, size and material after sample is not disturbed for 30 minutes)</i>		
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:

Note – Sample should be collected and analyzed in a colorless glass or plastic bottle.

Instructions for Completing the Visual Monitoring Form

Per PART V. INSPECTIONS, MONITORING, AND REPORTING, you must collect a stormwater sample from each outfall once each quarter for the entire permit term and conduct a visual assessment of each sample. You must follow the monitoring procedures outlined in Part V.C. These samples should be collected in such a manner that they are representative of the stormwater discharge from that outfall. Each assessment must be kept onsite with your SWPPP and available for inspection and review by the Department at anytime.

First, fill out all information on the top of the visual monitoring form. A qualifying storm event is any storm where there is a measurable discharge. Then, take a grab sample in a clear container. Evaluate the sample in a well-lit area for the following parameters:

1. **Color:** Record the best description of the sample color in the appropriate space on the form.
2. **Clarity:** This parameter refers to how cloudy the sample is. It is *usually* an indication of fewer pollutants in the water if the sample is clear or transparent. If the clarity has changed since the last sample, try to identify what might have caused this to happen.
 - **Clear** – Sample doesn't block any light; can be seen through regardless of color.
 - **Cloudy** – Sample blocks some light; objects not clear but can be identified looking through the sample.
 - **Very Cloudy** – Sample blocks most light; objects cannot be identified looking through the sample.
 - **Opaque** – Sample blocks all light; objects cannot be seen when looking through the sample.
3. **Oil Sheen:** Record whether or not an oil sheen is present. If a film of iridescent color is noted on the surface of the sample or a rainbow effect appears to be floating on the surface of the water, this usually indicates oil is present.
4. **Odor:** If sample has no odor other than natural rainwater or snowmelt, write "NO" on the visual monitoring form. Note the presence of any of the following odors if detected, such as gasoline, diesel, oil, solvents (WD-40, other petroleum products, etc.), garbage, fishy, sweet/sugary, any other unusual odors not normally present in clean runoff from the area sampled.
5. **Floating Solids:** A contaminated flow may contain solids or liquids floating on the surface. Identifying floatables can aid in finding the source of the contamination. Examples of floatables are spoiled food products, oils, plant parts, solvents, sawdust, foams and fuel. Give a general description of the type of floating solids present (wood chips, leaf debris, algae, etc) in the general comments section for each sample. Identify amount of floating solids as described below.
 - **High** – More than 20% of the surface of the sample is covered with floating solids.
 - **Moderate** – Less than 20% of the surface of the sample is covered with floating solids.
 - **Slight** – Only a few floating particles observed on the surface of the sample.
 - **None** – No floating solids present on the surface of the sample.
6. **Suspended solids:** Record whether or not suspended solids are present in the sample. Suspended solids are particles floating inside the column of water, not on top, and may contribute to changes in water color or clarity. Cracked or deteriorated concrete or peeling surface paint at an outfall usually indicates the presence of severely contaminated discharges. Contaminants causing this type of damage are usually very acidic or basic.

----- **WAIT 30 MINUTES** -----

Leave the sample undisturbed for 30 minutes to allow the water and anything in it to settle.

7. **Settled Solids:** After 30 minutes has passed, give a general description of the type of settled solids present (sand, decayed plant matter, rust particles, etc.) in the general comments section.
 8. **Foam:** After completing #7, shake the bottle gently. Record foam results on the form as they most closely match one of the descriptions listed below.
 - **None** – Most bubbles break down within ten (10) seconds of shaking; only a few large bubbles persist longer than ten (10) seconds.
 - **Moderate** – Many small bubbles are present but these bubbles persist for less than two (minutes) after shaking.
 - **High** – Many small bubbles are present and they persist longer than two (2) minutes after shaking.
 9. Detail any concerns, corrective actions taken and any other indicators of pollution present in the sample. This should include the identified source if there are visible indicators present in the sample. The person performing test must sign and date each form.
-

Appendix C:

Calculating for Fresh Water Benchmarks for Hardness Dependent Metals

Overview - For any sectors required to conduct benchmark samples for a hardness-dependent metal, per Appendix D, the following table includes 'hardness ranges' from which benchmark values are determined. To determine which hardness range to use, you must collect data on the hardness of your receiving water(s). Once the site-specific hardness data have been collected, the corresponding benchmark value for each metal is determined by comparing where the hardness data fall within 25 mg/L ranges, as shown in Table Appendix C-1. If the hardness is 100 mg/L, the metal benchmark values are still valid.

Table Appendix C-1. Hardness Ranges to Be Used to Determine Benchmark Values for Cadmium, Copper, Lead, Nickel, Silver, and Zinc.

All Units mg/L	Benchmark Values (mg/L, total)					
	Cadmium	Copper	Lead	Nickel	Silver	Zinc
0-25 mg/L	0.0005	0.0038	0.014	0.15	0.0007	0.04
25-50 mg/L	0.0008	0.0056	0.023	0.20	0.0007	0.05
50-75 mg/L	0.0013	0.0090	0.045	0.32	0.0017	0.08
75-100 mg/L	0.0018	0.0123	0.069	0.42	0.0030	0.11
100-125 mg/L	0.0023	0.0156	0.095	0.52	0.0046	0.13
125-150 mg/L	0.0029	0.0189	0.122	0.61	0.0065	0.16
150-175 mg/L	0.0034	0.0221	0.151	0.71	0.0087	0.18
175-200 mg/L	0.0039	0.0253	0.182	0.80	0.0112	0.20
200-225 mg/L	0.0045	0.0285	0.213	0.89	0.0138	0.23
225-250 mg/L	0.0050	0.0316	0.246	0.98	0.0168	0.25
250+ mg/L	0.0053	0.0332	0.262	1.02	0.0183	0.26

How to Determine Hardness for Hardness-Dependent Parameters.

You may select one of three methods to determine hardness, including; individual grab sampling, grab sampling by a group of operators which discharge to the same receiving water, or using third-party data. Regardless of the method used, you are responsible for documenting the procedures used for determining hardness values. Once the hardness value is established, you are required to include this information in your first benchmark report submitted to the Department so that the Department can make appropriate comparisons between your benchmark monitoring results and the corresponding benchmark. You must retain all report and monitoring data in accordance with Part III.C.8 of the permit. The three method options for determining hardness are detailed in the following sections.

1. *Permittee Samples for Receiving Stream Hardness*

This method involves collecting samples in the receiving water and submitting these to a laboratory for analysis. If you elect to sample your receiving water(s) and submit samples for analysis, hardness must be determined from the closest intermittent or perennial stream downstream of your point of discharge. The sample can be collected during either dry or wet weather. Collection of the sample during wet weather is more representative of conditions during storm water discharges; however, collection of in-stream samples during wet weather events may be impracticable or present safety issues.

Hardness must be sampled and analyzed using approved methods as described in 40 CFR Part 136 (Guidelines Establishing Test Procedures for the Analysis of Pollutants).

2. *Group Monitoring for Receiving Stream Hardness*

You can be part of a group of permittees discharging to the same receiving waters and collect samples that are representative of the hardness values for all members of the group. In this scenario, hardness of the receiving water must be determined using 40 CFR Part 136 procedures and the results shared by group members. To use the same results, hardness measurements must be taken on a stream reach within a reasonable distance of the discharge points of each of the group members.

3. *Collection of Third-Party Hardness Data*

You can submit receiving stream hardness data collected by a third party provided the results are collected consistent with the approved 40 CFR Part 136 methods. These data may come from a local water utility, previously conducted stream reports, TMDLs, peer reviewed literature, other government publications, or data previously collected by the permittee. Data should be less than 10 years old.

Water quality data for many of the nation's surface waters are available on-line or by contacting EPA or a state environmental agency. EPA's data system STORET, short for STOrage and RETrieval, is a repository for receiving

water quality, biological, and physical data and is used by state environmental agencies, EPA and other federal agencies, universities, private citizens, and many others. Similarly, state environmental agencies and the U.S. Geological Service (USGS) also have water quality data available that, in some instances, can be accessed online. "Legacy STORET" codes for hardness include: 259 hardness, carbonate; 260 hardness, noncarbonated; and 261 calcium + magnesium, while more recent, "Modern STORET" data codes include: 00900 hardness, 00901 carbonate hardness, and 00902 noncarbonate hardness; or the discrete measurements of calcium (00915) and magnesium (00925) can be used to calculate hardness. Hardness data historically has been reported as "carbonate," "noncarbonate," or "Ca + Mg." If these are unavailable, then individual results for calcium (Ca) and magnesium (Mg) may be used to calculate hardness using the following equation:

$$\text{mg/L CaCO}_3 = 2.497 (\text{Ca mg/L}) + 4.118 (\text{Mg mg/L})$$

When interpreting the data for carbonate and non-carbonate hardness, note that total hardness is equivalent to the sum of carbonate and noncarbonate hardness if both forms are reported. If only carbonate hardness is reported, it is more than likely that noncarbonate hardness is absent and the total hardness is equivalent to the available carbonate hardness.

Appendix D: Sector-Specific Requirements for Industrial Activity

You must comply with Appendix D sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

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Sector A – Timber Products.

A.1 Covered Stormwater Discharges.

The requirements in Sector A apply to stormwater discharges associated with industrial activity from Timber Products facilities as identified by the SIC Codes specified under Sector A in Appendix A of the permit.

A.2 Limitation on Coverage.

A.2.1 *Prohibition of Discharges.* (See also Part I.C Limitations on Coverage) Not covered by this permit: stormwater discharges from areas where there may be contact with the chemical formulations sprayed to provide surface protection. These discharges must be covered by a separate NPDES/State discharge permit.

A.2.2 Intentionally Left Blank

A.3 Additional Technology-Based Effluent Limits.

A.3.1 *Good Housekeeping.* (See also Part III.B.1.b.ii) In areas where storage, loading and unloading, and material handling occur, perform good housekeeping to limit the discharge of wood debris, minimize the leachate generated from decaying wood materials, and minimize the generation of dust.

A.4 Additional SWPPP Requirements.

A.4.1 *Drainage Area Site Map.* (See also Part III.C.2) Document in your SWPPP where any of the following may be exposed to precipitation or surface runoff: processing areas, treatment chemical storage areas, treated wood and residue storage areas, wet decking areas, dry decking areas, untreated wood and residue storage areas, and treatment equipment storage areas.

A.4.2 *Inventory of Exposed Materials.* (See also Part III.C.3) Where such information exists, if your facility has used chlorophenolic, creosote, or chromium-copper-arsenic formulations for wood surface protection or preserving, document in your SWPPP the following: areas where contaminated soils, treatment equipment, and stored materials still remain and the management practices employed to minimize the contact of these materials with stormwater runoff.

A.4.3 *Description of Stormwater Management Controls.* (See also Part III.C.4) Document measures implemented to address the following activities and sources: log, lumber, and wood product storage areas; residue storage areas; loading and unloading areas; material handling areas; chemical storage areas; and equipment and vehicle maintenance, storage, and repair areas. If your facility performs wood surface protection and preservation activities, address the specific control measures, including any BMPs, for these activities.

A.5 Additional Inspection Requirements.

See also Part V.A. If your facility performs wood surface protection and preservation activities, inspect processing areas, transport areas, and treated wood storage areas monthly to assess the usefulness of practices to minimize the deposit of treatment chemicals on unprotected soils and in areas that will come in contact with stormwater discharges.

A.6 Sector-Specific Benchmarks

Tables A-1 through A-4 identify benchmarks that may apply to your specific subsectors of Sector A. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table A-1 - Subsector A1 Benchmarks (General Sawmills and Planing Mills for SIC 2421)

PARAMETER	Benchmark	Units	Frequency	Sample Type
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Chemical Oxygen Demand (COD)	120.0	mg/L	1/quarter	Grab
Total Suspended Solids (TSS)	100.0	mg/L	1/quarter	Grab
Total Zinc (freshwater) ¹	0.12	mg/L	1/quarter	Grab
Total Zinc (saltwater) ¹	0.09	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.

Table A-2 - Subsector A2 Benchmarks (Wood Preserving for SIC 2491)

PARAMETER	Benchmark	Units	Frequency	Sample Type
Total Recoverable Arsenic (freshwater)	150	µg /L	1/quarter	Grab
Total Recoverable Arsenic (saltwater)	69	µg /L	1/quarter	Grab
Total Recoverable Copper (freshwater) ¹	14	µg /L	1/quarter	Grab
Total Recoverable Copper (saltwater)	4.8	µg /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.

Table A-3 - Subsector A3 Benchmarks (Log Storage and Handling for SIC 2411)

PARAMETER	Benchmark	Units	Frequency	Sample Type
Total Suspended Solids (TSS)	100.0	mg/L	1/quarter	Grab

Table A-4 - Subsector A4 Benchmarks (Special Products Sawmills, not elsewhere classified and Wood Products Facilities not elsewhere classified for SIC 2426 and 2499)

PARAMETER	Benchmark	Units	Frequency	Sample Type
Chemical Oxygen Demand (COD)	120.0	mg/L	1/quarter	Grab
Total Suspended Solids (TSS)	100.0	mg/L	1/quarter	Grab

A.7 Effluent Limitations Based on Effluent Limitations Guidelines.

Discharges resulting from spray down or intentional wetting of logs at wet deck storage areas are required to meet specific effluent limits (40 CFR Part 429, Subpart I) and are therefore not covered by this permit. You must obtain an individual discharge permit to discharge this type of effluent.

Sector B – Paper and Allied Products.

B.1 Covered Stormwater Discharges.

The requirements in Sector B apply to stormwater discharges associated with industrial activity from Paper and Allied Manufacturing Products facilities as identified by the SIC Codes specified under Sector B in Appendix A of the permit.

B.2 Sector-Specific Benchmarks

Table B-1 identifies benchmarks that may apply to your specific subsectors of Sector A. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table B-1 - Subsector B1 Benchmarks (Paperboard Mills for SIC Code 2631)

PARAMETER	Benchmark	Units	Frequency	Sample Type
Chemical Oxygen Demand (COD)	120.0	mg/L	1/quarter	Grab

Sector C – Chemical and Allied Products Manufacturing, and Refining.

C.1 Covered Stormwater Discharges.

The requirements in Sector C apply to stormwater discharges associated with industrial activity from Chemical and Allied Products Manufacturing, and Refining facilities, as identified by the SIC Codes specified under Sector C in Appendix A of the permit.

C.2 Limitations on Coverage.

C.2.1 Prohibition of Non-Stormwater Discharges. (See also Part I.C Limitations on Coverage) The following are not covered by this permit: non-stormwater discharges containing inks, paints, or substances (hazardous, nonhazardous, etc.) resulting from an onsite spill, including materials collected in drip pans; washwater from material handling and processing areas; and washwater from drum, tank, or container rinsing and cleaning.

C.2.2 Prohibition of Contaminated Stormwater Discharges. (See also Part I.C Limitations on Coverage) The following are not authorized by this permit from manufacturers or formulators of Aldrin/Dieldrin, DDT, Endrin, Toxaphene, Benzidine, or Polychlorinated Biphenyls (PCBs): All discharges from the manufacturing or incineration areas, loading and unloading areas, storage areas and other areas which are subject to direct contamination by these toxic pollutants as a result of the manufacturing process, including but not limited to: stormwater and other runoff; and water used for routine cleanup or cleanup of spills. These limitations do not apply to stormwater runoff or other discharges from areas subject to contamination solely by fallout from air emissions of these toxic pollutants; or to stormwater runoff that exceeds that from the ten-year 24-hour rainfall event. (See also effluent standards in 40 CFR Subchapter D Part 129)

C.3 Sector-Specific Benchmarks

Tables C-1 through C-4 identifies benchmarks that may apply to your specific subsectors of Sector C. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table C-1 - Subsector C1 Benchmarks (Agricultural Chemicals for SIC 2873-2879)

PARAMETER	Benchmark	Units	Frequency	Sample Type
Nitrate plus Nitrite Nitrogen	0.68	mg/L	1/quarter	Grab
Total Lead (freshwater) ¹	0.082	mg/L	1/quarter	Grab
Total Lead (saltwater)	0.21	mg/L	1/quarter	Grab
Total Zinc ¹	0.12	mg/L	1/quarter	Grab
Total Zinc (saltwater)	0.090	mg/L	1/quarter	Grab
Phosphorus	2.0	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.

Table C-2 - Subsector C2 (Industrial Inorganic Chemicals for SIC 2812-2819) Benchmarks

PARAMETER	Benchmark	Units	Frequency	Sample Type
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Nitrate plus Nitrite Nitrogen	0.68	mg/L	1/quarter	Grab
Total Recoverable Aluminum	1.1	mg/L	1/quarter	Grab

Table C-3 – Subsector C3 (Soaps, Detergents, Cosmetics and Perfumes for SIC 2841 – 2844) Benchmarks

PARAMETER	Benchmark	Units	Frequency	Sample Type
Nitrate plus Nitrite Nitrogen	0.68	mg/L	1/quarter	Grab
Total Zinc ¹	0.12	mg/L	1/quarter	Grab
Total Zinc (saltwater)	0.090	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.

Table C-4 – Subsector C4 (Plastics, Synthetics, and Resins for SIC 2821-2824) Benchmarks

PARAMETER	Benchmark	Units	Frequency	Sample Type
Total Zinc ¹	0.12	mg/L	1/quarter	Grab
Total Zinc (saltwater)	0.090	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.

C.4 Effluent Limitations Based on Effluent Limitations Guidelines (Limitation)

Runoff from phosphate fertilizer manufacturing facilities that comes into contact with any raw materials, finished product, by-products or waste products (SIC 2874) required to meet specific effluent limits (40 CFR Part 418, Subpart A) and are therefore not covered by this permit. You must obtain an individual discharge permit to discharge this type of effluent.

Sector D – Asphalt Paving and Roofing Materials and Lubricant Manufacturing.

D.1 Covered Stormwater Discharges.

The requirements in Sector D apply to stormwater discharges associated with industrial activity from Asphalt Paving and Roofing Materials and Lubricant Manufacturing facilities, as identified by the SIC Codes specified under Sector D in Appendix A of the permit.

D.2 Limitations on Coverage.

The following stormwater discharges associated with industrial activity are not authorized by this permit (See also Part I.C Limitations on Coverage)

D.2.1 Discharges from petroleum refining facilities, including those that manufacture asphalt or asphalt products, that are subject to nationally established effluent limitation guidelines found in 40 CFR Part 419 (Petroleum Refining); or

D.2.2 Discharges from oil recycling facilities; or

D.2.3 Discharges associated with fats and oils rendering.

D.2.4 Discharges from bituminous concrete manufacturing facilities. These discharges are covered by a separate general permit, Maryland General Permit No. 15-MM or replacement.

D.3 Sector-Specific Benchmarks and Visual Monitoring

Table D-1 identifies benchmarks that apply to the specific subsectors of Sector D. These benchmarks apply to both your primary industrial activity and any co-located industrial activities, which describe your site activities. Asphalt plants shutdown during winter months should note on the visual monitoring form for that quarter that no samples were taken due to the seasonal shutdown.

Table D-1 Subsector D1 Benchmarks (Asphalt Paving and Roofing Materials SIC 2951, 2952)

PARAMETER	Benchmark	Units	Frequency	Sample Type
Total Suspended Solids (TSS)	100.0	mg/L	1/quarter ¹	Grab

¹ For asphalt plants shutdown during the winter months, use report code “NODI-9” on your Discharge Monitoring Report (DMR) to indicate that quarter discharge benchmark will not be evaluated.

D.4 Effluent Limitations Based on Effluent Limitations Guidelines.

Discharges from asphalt emulsion facilities are required to meet specific effluent limits (40 CFR Part 443, Subpart A) and are therefore not covered by this permit. You must obtain an alternative general or an individual discharge permit to discharge this type of effluent.

Sector E – Glass, Clay, Cement, Concrete, and Gypsum Products.

E.1 Covered Stormwater Discharges.

The requirements in Sector E apply to stormwater discharges associated with industrial activity from Glass, Clay, Cement, Concrete, and Gypsum Products facilities, as identified by the SIC Codes specified under Sector E in Appendix A of the permit.

E.2 Additional Technology-Based Effluent Limits.

E.2.1 Good Housekeeping Measures. (See also Part III.B.1.b.ii) With good housekeeping, prevent or minimize the discharge of spilled cement, aggregate (including sand or gravel), kiln dust, fly ash, settled dust, or other significant material in stormwater from paved portions of the site that are exposed to stormwater. Consider sweeping regularly or using other equivalent measures to minimize the presence of these materials. Indicate in your SWPPP the frequency of sweeping or equivalent measures. Determine the frequency based on the amount of industrial activity occurring in the area and the frequency of precipitation, but it must be performed at least once a week if cement, aggregate, kiln dust, fly ash, or settled dust are being handled or processed. You must also prevent the exposure of fine granular solids (cement, fly ash, kiln dust, etc.) to stormwater, where practicable, by storing these materials in enclosed silos, hoppers, or buildings, or under other covering.

E.3 Additional SWPPP Requirements.

E.3.1 Drainage Area Site Map. (See also Part III.C.2) Document in the SWPPP the locations of the following, as applicable: bag house or other dust control device; recycle/sedimentation pond, clarifier, or other device used for the treatment of process wastewater; and the areas that drain to the treatment device.

E.3.2 Certification. (See also Part III.C.3.d : Non-Stormwater Discharges) For facilities producing ready-mix concrete, concrete block, brick, or similar products applying for coverage under this permit, include in the non-stormwater discharge certification a description of measures that ensure that process waste waters resulting from washing trucks, mixers, transport buckets, forms, or other equipment are discharged in accordance with NPDES/State discharge permit requirements or are recycled.

E.4 Sector-Specific Benchmarks.

Tables E-1 and E-2 identify benchmarks that apply to the specific subsectors of Sector E. These benchmarks apply to both your primary industrial activity and any co-located industrial activities, which describe your site activities. You may be subject to requirements for more than one sector/subsector.

Table E-1 Subsector E1 Benchmarks (Clay Product Manufacturers SIC 3251-3259, 3261-3269)

PARAMETER	Benchmark	Units	Frequency	Sample Type
Total Recoverable Aluminum	1.1	mg/L	1/quarter	Grab

Table E-2 Subsector E2 Benchmarks (Concrete and Gypsum Product Manufacturers SIC 3271-3275)

PARAMETER	Benchmark	Units	Frequency	Sample Type
Total Suspended Solids (TSS)	100.0	mg/L	1/quarter	Grab

E.5 Effluent Limitations Based on Effluent Limitations Guidelines.

Discharges from material storage piles at cement manufacturing facilities are required to meet specific effluent limits (40 CFR Part 411, Subpart C) and are therefore not covered by this permit. You must obtain an alternative general or an individual discharge permit to discharge this type of effluent.

Sector F – Primary Metals.

F.1 Covered Stormwater Discharges.

The requirements in Sector F apply to stormwater discharges associated with industrial activity from Primary Metals facilities, as identified by the SIC Codes specified under Sector F in Appendix A of the permit.

F.2 Additional Technology-Based Effluent Limits

F.2.1 Good Housekeeping Measures. (See also Part III.B.1.b.ii) As part of your good housekeeping program, include a cleaning and maintenance program for all impervious areas of the facility where particulate matter, dust, or debris may accumulate, especially areas where material loading and unloading, storage, handling, and processing occur; and, where practicable, the paving of areas where vehicle traffic or material storage occur but where vegetative or other stabilization methods are not practicable (institute a sweeping program in these areas too). For unstabilized areas where sweeping is not practicable, consider using stormwater management devices such as sediment traps, vegetative buffer strips, filter fabric fence, sediment filtering boom, gravel outlet protection, or other equivalent measures that effectively trap or remove sediment.

F.3 Additional SWPPP Requirements.

F.3.1 Drainage Area Site Map. (See also Part III.C.2) Identify in the SWPPP where any of the following activities may be exposed to precipitation or surface runoff: storage or disposal of wastes such as spent solvents and baths, sand, slag and dross; liquid storage tanks and drums; processing areas including pollution control equipment (e.g., baghouses); and storage areas of raw material such as coal, coke, scrap, sand, fluxes, refractories, or metal in any form. In addition, indicate where an accumulation of significant amounts of particulate matter could occur from such sources as furnace or oven emissions, losses from coal and coke handling operations, etc., and could result in a discharge of pollutants to waters of the United States.

F.3.2 Inventory of Exposed Material. (See also Part III.C.3) Include in the inventory of materials handled at the site that potentially may be exposed to precipitation or runoff, areas where deposition of particulate matter from process air emissions or losses during material-handling activities are possible

F.4 Additional Inspection Requirements. (See also Part V.A) As part of conducting your quarterly routine facility inspections, address all potential sources of pollutants, including (if applicable) air pollution control equipment (e.g., baghouses, electrostatic precipitators, scrubbers, and cyclones), for any signs of degradation (e.g., leaks, corrosion, or improper operation) that could limit their efficiency and lead to excessive emissions. Consider monitoring air flow at inlets and outlets (or use equivalent measures) to check for leaks (e.g., particulate deposition) or blockage in ducts. Also inspect all process and material handling equipment (e.g., conveyors, cranes, and vehicles) for leaks, drips, or the potential loss of material; and material storage areas (e.g., piles, bins, or hoppers for storing coke, coal, scrap, or slag, as well as chemicals stored in tanks and drums) for signs of material losses due to wind or stormwater runoff.

F.5 Sector-Specific Benchmarks.

Tables F-1 through F-4 identify benchmarks that apply to the specific subsectors of Sector E. These benchmarks apply to both your primary industrial activity and any co-located industrial activities, which describe your site activities.

Table F-1 - Subsector F1 Benchmarks (Steel Works, Blast Furnaces, and Rolling and Finishing Mills for SIC 3312-3317)

PARAMETER	Benchmark	Units	Frequency	Sample Type
Total Recoverable Aluminum	1.1	mg/L	1/quarter	Grab

Total Zinc (freshwater) ¹	0.12	mg/L	1/quarter	Grab
Total Zinc (saltwater) ¹	0.09	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.

Table F-2 - Subsector F2 Benchmarks (Iron and Steel Foundries for SIC 3321-3325)

PARAMETER	Benchmark	Units	Frequency	Sample Type
Total Recoverable Aluminum	1.1	mg/L	1/quarter	Grab
Total Suspended Solids (TSS)	100.0	mg/L	1/quarter	Grab
Total Recoverable Copper (freshwater) ¹	14	µg /L	1/quarter	Grab
Total Recoverable Copper (saltwater)	4.8	µg /L	1/quarter	Grab
Total Zinc (freshwater) ¹	0.12	mg/L	1/quarter	Grab
Total Zinc (saltwater)	0.09	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.

Table F-3 - Subsector F3 Benchmarks (Rolling, Drawing, and Extruding of Nonferrous Metals for SIC 3351-3357)

PARAMETER	Benchmark	Units	Frequency	Sample Type
Total Recoverable Copper (freshwater) ¹	14	µg /L	1/quarter	Grab
Total Recoverable Copper (saltwater)	4.8	µg /L	1/quarter	Grab
Total Zinc (freshwater) ¹	0.12	mg/L	1/quarter	Grab
Total Zinc (saltwater)	0.09	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.

Table F-4 - Subsector F4 Benchmarks (Nonferrous Foundries (SIC 3363-3369))

PARAMETER	Benchmark	Units	Frequency	Sample Type
Total Recoverable Copper (freshwater) ¹	14	µg /L	1/quarter	Grab
Total Recoverable Copper (saltwater)	4.8	µg /L	1/quarter	Grab

Total Zinc (freshwater) ¹	0.12	mg/L	1/quarter	Grab
Total Zinc (saltwater)	0.09	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.

Sector G – Not currently covered in this permit.

Sector H – Not currently covered in this permit.

Sector I – Oil and Gas Extraction.

I.1 Covered Stormwater Discharges.

The requirements in Sector I apply to stormwater discharges associated with industrial activity from Oil and Gas Extraction facilities as identified by the SIC Codes specified under Sector I in Appendix A of the permit.

Discharges of stormwater runoff from field activities or operations associated with oil and gas exploration, production, processing, or treatment operations or transmission facilities are exempt from NPDES/ State discharge permit coverage unless, in accordance with 40 CFR 122.26(c)(1)(iii), the facility:

- Has had a discharge of stormwater resulting in the discharge of a reportable quantity for which notification is or was required pursuant to 40 CFR 117.21 or 40 CFR 302.6 at anytime since November 16, 1987; or
- Has had a discharge of stormwater resulting in the discharge of a reportable quantity for which notification is or was required pursuant to 40 CFR 110.6 at any time since November 16, 1987; or
- Contributes to a violation of a water quality standard.

Any stormwater discharges that require permit coverage as a result of meeting one of the conditions of 122.26(c)(1)(iii) may be covered under this permit unless otherwise required to obtain coverage under an alternative NPDES/State discharge general permit or an individual NPDES/State discharge permit as specified in Part I.C Limitations on Coverage.

I.2 Limitations on Coverage.

I.2.1 Stormwater Discharges Subject to Effluent Limitation Guidelines. This permit does not authorize stormwater discharges from petroleum drilling operations that are subject to nationally established effluent limitation guidelines found at 40 CFR Part 435, respectively.

I.2.2 Non-Stormwater Discharges. (See also Part C.3.d: Non-Stormwater Discharges) Discharges of vehicle and equipment washwater, including tank cleaning operations, are not authorized by this permit. Alternatively, washwater discharges must be authorized under a separate NPDES/State discharge permit, or be discharged to a sanitary sewer in accordance with applicable industrial pretreatment requirements.

I.3 Additional Technology-Based Effluent Limits.

I.3.1 Vegetative Controls. Implement vegetative practices designed to preserve existing vegetation, where attainable, and revegetate open areas as soon as practicable after grade drilling. Consider the following (or equivalent measures): temporary or permanent seeding, mulching, sod stabilization, vegetative buffer strips, and tree protection practices. Begin implementing appropriate vegetative practices on all disturbed areas within 14 days following the last activity in that area.

I.4 Additional SWPPP Requirements.

I.4.1 Drainage Area Site Map. (See also Part III.C.2) Document in your SWPPP where any of the following may be exposed to precipitation or surface runoff: Reportable Quantity (RQ) releases; locations used for the treatment, storage, or disposal of wastes; processing areas and storage areas; chemical mixing areas; construction and drilling areas; all areas subject to the effluent guidelines requirements for “No Discharge” in accordance with 40 CFR 435.32; and the structural controls to achieve compliance with the “No Discharge” requirements.

I.4.2 Potential Pollutant Sources. (See also Part III.C.3) Also document in your SWPPP the following sources and activities that have potential pollutants associated with them: chemical, cement, mud, or gel mixing activities; drilling or mining activities; and equipment cleaning and rehabilitation activities. In addition, include information about the reportable quantity (RQ) release that triggered the permit application requirements: the nature of the release (e.g., spill of oil from a drum storage area), amount of oil or hazardous substance released, amount of substance recovered, date of the release, cause of the release (e.g., poor handling techniques and lack of containment in the area), areas affected by the release (i.e., land and water), procedure to clean up release, actions or procedures implemented to prevent or improve response to a release, and remaining potential contamination of stormwater from release (taking into account human health risks, the control of drinking water intakes, and the designated uses of the receiving water).

I.4.3 Erosion and Sedimentation Control. (See also Part III.B.1.b.v) Unless covered by the current Construction General Permit (CGP), the additional documentation requirements for sediment and erosion controls for well drillings and sand/shale mining areas include the following:

I.4.3.1 Site Description. Also include a description in your SWPPP of the nature of the exploration activity, estimates of the total area of site and area disturbed due to exploration activity, an estimate of runoff coefficient of the site, a site drainage map, including approximate slopes, and the names of all receiving waters.

I.4.3.2 Vegetative Controls. Document vegetative practices used consistent with Part I.3.1 in the SWPPP.

I.5 Additional Inspection Requirements.

All erosion and sedimentation control measures must be inspected every 7 days.

I.6 Sector-Specific Benchmarks.

Table I-1 identifies benchmarks that apply to the specific subsectors of Sector E. These benchmarks apply to both your primary industrial activity and any co-located industrial activities, which describe your site activities.

Table I-1 - Subsector I1 Benchmarks (Crude Petroleum and Natural Gas; Natural Gas Liquids; Oil and Gas Field Services (SIC 1311, 1321, 1381-1389))

PARAMETER	Benchmark	Units	Frequency	Sample Type
Ammonia	2.14	mg/L	1/quarter	Grab
Total Lead (freshwater) ¹	0.082	mg/L	1/quarter	Grab
Total Lead (saltwater)	0.21	mg/L	1/quarter	Grab
Total Recoverable Nickel (freshwater) ¹	520	µg /L	1/quarter	Grab
Total Recoverable Nickel (saltwater) ¹	74	µg /L	1/quarter	Grab
Nitrate plus Nitrite Nitrogen	0.68	mg/L	1/quarter	Grab
Total Zinc (freshwater) ¹	0.12	mg/L	1/quarter	Grab
Total Zinc (saltwater)	0.09	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.

Sector J – Not currently covered in this permit.

Sector K – Hazardous Waste Treatment, Storage, or Disposal Facilities.

K.1 Covered Stormwater Discharges.

The requirements in Sector K apply to stormwater discharges associated with industrial activity from Hazardous Waste Treatment, Storage, or Disposal facilities (TSDFs) as identified by the Activity Code specified under Sector K in Appendix A of the permit.

K.2 Industrial Activities Covered by Sector K.

This permit authorizes stormwater discharges associated with industrial activity from facilities that treat, store, or dispose of hazardous wastes, including those that are operating under interim status or a permit under subtitle C of RCRA and disposal facilities that have been properly closed and capped, although considered inactive.

K.3 Limitations on Coverage.

Prohibition of Non-Stormwater Discharges. (See also Part I.C Limitations on Coverage) The following are not authorized by this permit: leachate, gas collection condensate, drained free liquids, contaminated ground water, laboratory-derived wastewater, and contact washwater from washing truck and railcar exteriors and surface areas that have come in direct contact with solid waste at the landfill facility. Note: Any leachate for this sector is considered a wastewater and any stormwater discharge combined with this leachate/wastewater is not authorized under this permit.

K.4 Definitions.

K.4.1 Contaminated stormwater - stormwater that comes into direct contact with landfill wastes, the waste handling and treatment areas, or landfill wastewater as defined in Part K.4.5. Some specific areas of a landfill that may produce contaminated stormwater include (but are not limited to) the open face of an active landfill with exposed waste (no cover added); the areas around wastewater treatment operations; trucks, equipment, or machinery that has been in direct contact with the waste; and waste dumping areas.

K.4.2 Drained free liquids - aqueous wastes drained from waste containers (e.g., drums) prior to landfilling.

K.4.3 Landfill - an area of land or an excavation in which wastes are placed for permanent disposal, but that is not a land application or land treatment unit, surface impoundment, underground injection well, waste pile, salt dome formation, salt bed formation, underground mine, or cave as these terms are defined in 40 CFR 257.2, 258.2, and 260.10.

K.4.4 Landfill wastewater - as defined in 40 CFR Part 445 (Landfills Point Source Category), all wastewater associated with, or produced by, landfilling activities except for sanitary wastewater, non-contaminated stormwater, contaminated groundwater, and wastewater from recovery pumping wells. Landfill wastewater includes, but is not limited to, leachate, gas collection condensate, drained free liquids, laboratory derived wastewater, contaminated stormwater, and contact washwater from washing truck, equipment, and railcar exteriors and surface areas that have come in direct contact with solid waste at the landfill facility.

K.4.5 Non-contaminated stormwater - stormwater that does not come into direct contact with landfill wastes, the waste handling and treatment areas, or landfill wastewater as defined in Part K.4.4. Non-contaminated stormwater includes stormwater that flows off the cap, cover, intermediate cover, daily cover, and/or final cover of the landfill.

K.5 Sector-Specific Benchmarks.

Table K-1 identifies benchmarks that apply to the specific subsectors of Sector K. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table K-1 - Subsector K1 Benchmarks (ALL - Industrial Activity Code “HZ”. Benchmarks only applicable to discharges not subject to effluent limitations in 40 CFR Part 445 Subpart A (see below).)

PARAMETER	Benchmark	Units	Frequency	Sample Type
Ammonia	2.14	mg/L	1/quarter	Grab
Chemical Oxygen Demand (COD)	120.0	mg/L	1/quarter	Grab
Total Recoverable Arsenic (freshwater)	150	µg /L	1/quarter	Grab
Total Recoverable Arsenic (saltwater)	69	µg /L	1/quarter	Grab
Recoverable Cadmium (freshwater)	1.8	µg /L	1/quarter	Grab
Recoverable Cadmium (saltwater)	33	µg /L	1/quarter	Grab
Recoverable Cyanide (freshwater)	22	µg /L	1/quarter	Grab
Recoverable Cyanide (saltwater)	1	µg /L	1/quarter	Grab
Total Lead (freshwater) ¹	0.082	mg/L	1/quarter	Grab
Total Lead (saltwater)	0.21	mg/L	1/quarter	Grab
Total Recoverable Mercury (freshwater) ¹	1.4	µg /L	1/quarter	Grab
Total Recoverable Mercury (saltwater)	1.8	µg /L	1/quarter	Grab
Total Recoverable Selenium (freshwater) ¹	3.1	µg /L	1/quarter	Grab
Total Recoverable Selenium (saltwater)	290	µg /L	1/quarter	Grab
Total Silver (freshwater) ¹	4.6	µg /L	1/quarter	Grab
Total Silver (saltwater)	1.9	µg /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.

K.6 Effluent Limitations Based on Effluent Limitations Guidelines.

Discharges from hazardous waste landfills that are required to meet specific effluent limits (40 CFR Part 445, Subpart A) are not covered by this permit. As set forth at 40 CFR Part 445 Subpart A, numeric limitations apply to contaminated stormwater discharges from hazardous waste landfills subject to the provisions of RCRA Subtitle C at 40 CFR Parts 264 (Subpart N) and 265 (Subpart N) except for any of the following facilities:

- (a) landfills operated in conjunction with other industrial or commercial operations when the landfill receives only wastes generated by the industrial or commercial operation directly associated with the landfill;

- (b) landfills operated in conjunction with other industrial or commercial operations when the landfill receives wastes generated by the industrial or commercial operation directly associated with the landfill and also receives other wastes, provided that the other wastes received for disposal are generated by a facility that is subject to the same provisions in 40 CFR Subchapter N as the industrial or commercial operation or that the other wastes received are of similar nature to the wastes generated by the industrial or commercial operation;
- (c) landfills operated in conjunction with Centralized Waste Treatment (CWT) facilities subject to 40 CFR Part 437, so long as the CWT facility commingles the landfill wastewater with other non-landfill wastewater for discharge. A landfill directly associated with a CWT facility is subject to this part if the CWT facility discharges landfill wastewater separately from other CWT wastewater or commingles the wastewater from its landfill only with wastewater from other landfills; or
- (d) landfills operated in conjunction with other industrial or commercial operations when the landfill receives wastes from public service activities, so long as the company owning the landfill does not receive a fee or other remuneration for the disposal service.

You must obtain an individual discharge permit to discharge this type of contaminated stormwater.

Sector L – Landfills and Land Application Sites.

L.1 Covered Stormwater Discharges.

The requirements in Sector L apply to stormwater discharges associated with industrial activity from Landfills and Land Application Sites as identified by the Activity Code specified under Sector L in Appendix A of the permit.

L.2 Industrial Activities Covered by Sector L.

This permit may authorize stormwater discharges for Sector L facilities associated with waste disposal at landfills and land application sites that receive or have received industrial waste, including sites subject to regulation under Subtitle D of RCRA. This permit does not cover discharges from landfills that receive only municipal wastes.

L.3 Limitations on Coverage.

L.3.1 *Prohibition of Non-Stormwater Discharges.* (See also Part I.C Limitations on Coverage) The following discharges are not authorized by this permit: leachate, gas collection condensate, drained free liquids, contaminated ground water, laboratory wastewater, and contact washwater from washing truck and railcar exteriors and surface areas that have come in direct contact with solid waste at the landfill facility.

L.4 Definitions.

L.4.1 *Contaminated stormwater* - stormwater that comes into direct contact with landfill wastes, the waste handling and treatment areas, or landfill wastewater. Some areas of a landfill that may produce contaminated stormwater include (but are not limited to) the open face of an active landfill with exposed waste (no cover added); the areas around wastewater treatment operations; trucks, equipment, or machinery that has been in direct contact with the waste; and waste dumping areas.

L.4.2 *Drained free liquids* - aqueous wastes drained from waste containers (e.g., drums) prior to landfiling.

L.4.3 *Landfill wastewater* - as defined in 40 CFR Part 445 (Landfills Point Source Category) all wastewater associated with, or produced by, landfiling activities except for sanitary wastewater, non-contaminated stormwater, contaminated groundwater, and wastewater from recovery pumping wells. Landfill process wastewater includes, but is not limited to, leachate; gas collection condensate; drained free liquids; laboratory-derived wastewater; contaminated stormwater; and contact washwater from washing truck, equipment, and railcar exteriors and surface areas that have come in direct contact with solid waste at the landfill facility.

L.4.4 *Non-contaminated stormwater* - stormwater that does not come into direct contact with landfill wastes, the waste handling and treatment areas, or landfill wastewater. Non-contaminated stormwater includes stormwater that flows off the cap, cover, intermediate cover, daily cover, and/or final cover of the landfill.

L.5 Additional Technology-Based Effluent Limits.

L.5.1 *Preventive Maintenance Program.* (See also Part III.B.1.b.iii) As part of your preventive maintenance program, maintain the following: all elements of leachate collection and treatment systems, to prevent commingling of leachate with stormwater; the integrity and effectiveness of any intermediate or final cover (including repairing the cover as necessary), to minimize the effects of settlement, sinking, and erosion. Note: Any leachate for this sector is considered a wastewater and any stormwater discharge combined with this leachate/wastewater is not authorized under this permit.

L.5.2 *Erosion and Sedimentation Control.* (See also Part III.B.1.b.v) Provide temporary stabilization (e.g., temporary seeding, mulching, and placing geotextiles on the inactive portions of stockpiles) for the following: materials stockpiled for daily, intermediate, and final cover; inactive areas of the landfill; landfills that have gotten final covers but where vegetation has yet to establish itself; and land application sites where waste application has been completed but final vegetation has not yet been established.

L.5.3 *Unauthorized Discharge Test Certification.* (See also Part III.C.3.d: Non-Stormwater Discharges) The discharge test and certification must also be conducted for the presence of leachate and vehicle washwater.

L.5.4 *Use of Chemical Additives.* If you are using chemical additives (defined in Appendix A) for control of sediment (such as polymers or flocculants) at your site, you must comply with the requirements identified in this section. You shall refer to the most current version of Standards for Use of Chemical Additives for Sediment Control document available on the Department's website for specific instructions on information which must be included in your SWPPP, additional requirements, and assistance in applying for additive use.

- The use of chemical additives for sediment control should only be considered in the event that water quality standards cannot be met using conventional best management practices.
- Should the use of chemical additives be necessary, you must utilize conventional best management practices for E&SCs at a location prior to and after the application of chemical additives.
- Additives may only be applied where treated stormwater is directed to a sediment control (e.g., sediment basin, perimeter control) prior to discharge. This permit intends to authorize additives used to create flocculation of suspended materials in stormwater or groundwater. It does not authorize use of additives for bank or soil stabilization.
- Chemical additives must be approved by the Department prior to use. The Department maintains a current list of pre-approved polymers/flocculants including approved application method and maximum allowable dosage concentration or application rate on its website (<https://mdewwp.page.link/MDFlocs>).
- If you wish to use a chemical additive which is not found on the approved list, you must request approval by following the Department's Procedures for Review of Chemical Additives for Sediment Control. You may not begin use of any chemical additive absent from the pre-approved list until you receive written approval from the Department.
- You are required to identify all additives you will be using in your SWPPP, and any cationic chemical additives in your Notice of Intent (pursuant to Part II.A.1 of this permit). If you wish to change to or add another preapproved chemical, you shall provide notification to the Industrial Stormwater Permits Division of the Department within 30 days of commencing the use of the new pre-approved additive.
- You must minimize exposure of stored chemicals to stormwater. Store all treatment chemicals in leakproof containers that are kept under storm-resistant cover and surrounded by secondary containment structures (e.g., spill berms, decks, spill containment pallets), or provide equivalent measures designed and maintained to minimize the potential discharge of treatment chemicals in stormwater or by any other means (e.g., storing chemicals in a covered area, having a spill kit available on site and ensuring personnel are available to respond expeditiously in the event of a leak or spill).
- You must comply with relevant local requirements affecting the use of chemical additives. If requested by the E&SC plan approval authority, provide a Safety Data Sheet (SDS) with your E&SC plan.
- You must use chemical additives and chemical treatment systems in accordance with good engineering practices, and with dosing specifications and sediment removal design specifications provided by the provider/supplier of the applicable chemicals.
- You must document any departures from good engineering practices or dosing specifications and sediment removal design specifications provided by the provider/supplier of the applicable chemicals.
- Selection of additives and dosing rates should be determined based on site-specific test results. Documentation of the chemical selection process and dosing rate determination shall be included in your SWPPP. Dosing rates cannot exceed those found on the Department's list of pre-approved additives.
- Ensure that all persons who handle and use chemical additives at the site are provided with appropriate, product-specific training. At a minimum, this training must cover proper dosing requirements and safe handling practices.

- You must notify and receive written approval from the Department's Industrial Stormwater Permits Division of the Department at least 7 days prior to using cationic chemical additives (as defined in Appendix E). Use of anionic chemical additives requires notice once on the NOI to indicate additives are being used, however when changing additives for better results, only SWPPP updates are required. For anionic the notice to the Department must occur no later than a week (7 days) after you begin using a product.
- To receive authorization to use cationic chemical additives under this permit, you must identify in your SWPPP appropriate controls and implementation procedures (including where the chemical is applied, description of active treatment systems required, dosing, filtering, pH monitoring, etc.) designed to ensure that your use of cationic chemical additives will not lead to a violation of water quality standards. See the Standards for Use of Chemical Additives for Sediment Control document for additional instructions for completing your SWPPP and requesting use of cationic chemical additives.
- A copy of the SWPPP section regarding use of cationic chemical additives must be submitted along with the NOI and Request for Use of Cationic Chemical Additives form. You are required to comply with all such requirements if the Department has authorized you to use cationic chemical additives at your site.
- Depending on the additive selected for use, you may be required to sample discharges and test for residuals or other components. Any such monitoring requirement will be laid out in your authorization letter. Results of required monitoring shall be maintained with the SWPPP and made available if requested by Department personnel.
- Authorization is conditioned on your compliance with additional requirements necessary to ensure that the use of such chemicals will not cause an exceedance of water quality standards. If you use polymers and/or other chemical treatments as part of your controls, you must identify the polymers and/or chemicals used and the purpose in your SWPPP.

L.6 Additional SWPPP Requirements.

L.6.1 *Drainage Area Site Map.* (See also Part III.C.2) Document in your SWPPP where any of the following may be exposed to precipitation or surface runoff: active and closed landfill cells or trenches, active and closed land application areas, locations where open dumping is occurring or has occurred, locations of any known leachate springs or other areas where uncontrolled leachate may commingle with runoff, and leachate collection and handling systems.

L.6.2 *Summary of Potential Pollutant Sources.* (See also Part III.C.3) Document in your SWPPP the following sources and activities that have potential pollutants associated with them: fertilizer, herbicide, and pesticide application; earth and soil moving; waste hauling and loading or unloading; outdoor storage of significant materials, including daily, interim, and final cover material stockpiles as well as temporary waste storage areas; exposure of active and inactive landfill and land application areas; uncontrolled leachate flows; and failure or leaks from leachate collection and treatment systems.

L.7 Additional Inspection Requirements. (See also Part V.A)

L.7.1 *Inspections of Active Sites.* Except in arid and semi-arid climates, inspect operating landfills and land application sites at least once every 7 days. Focus on areas of landfills that have not yet been finally stabilized; active land application areas, areas used for storage of material and wastes that are exposed to precipitation, stabilization, and structural control measures; leachate collection and treatment systems; and locations where equipment and waste trucks enter and exit the site. Ensure that sediment and erosion control measures are operating properly. For stabilized sites and areas where land application has been completed, or where the climate is arid or semi-arid, conduct inspections at least once every month.

L.7.2 *Inspections of Inactive Sites.* Inspect inactive landfills and land application sites at least quarterly. Qualified personnel must inspect landfill stabilization and structural erosion control measures, leachate collection and treatment systems, and all closed land application areas.

L.8 Additional Post-Authorization Documentation Requirements.

L.8.1 *Recordkeeping and Internal Reporting.* Keep records with your SWPPP of the types of wastes disposed of in each cell or trench of a landfill or open dump. For land application sites, track the types and quantities of wastes applied in specific areas.

L.9 Sector-Specific Benchmarks

Tables L-1 and L-2 identify benchmarks that may apply to your specific subsectors of Sector L. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table L-1 - Subsector L1 Benchmarks - Landfills and Land Application Sites

PARAMETER	Benchmark	Units	Frequency	Sample Type
Total Suspended Solids (TSS)	100	mg/L	1/quarter	Grab

Table L-2 - Subsector L2 Benchmarks - Landfills and Land Application Sites, except Municipal Solid Waste Landfill (MSWLF) Areas Closed in Accordance with 40 CFR 258.60

PARAMETER	Benchmark	Units	Frequency	Sample Type
Total Iron	3.0	mg/L	1/quarter	Grab

L.10. Effluent Limitations Based on Effluent Limitations Guidelines.

Discharges from non-hazardous waste landfills are required to meet specific effluent limits (40 CFR Part 445, Subpart B) and are therefore not covered by this permit. As set forth at 40 CFR Part 445 Subpart B, numeric limitations apply to contaminated stormwater discharges from MSWLFs that have not been closed in accordance with 40 CFR 258.60, and to contaminated stormwater discharges from those landfills that are subject to the provisions of 40 CFR Part 257 except for discharges from any of the following facilities:

- (a) landfills operated in conjunction with other industrial or commercial operations, when the landfill receives only wastes generated by the industrial or commercial operation directly associated with the landfill;
- (b) landfills operated in conjunction with other industrial or commercial operations, when the landfill receives wastes generated by the industrial or commercial operation directly associated with the landfill and also receives other wastes, provided that the other wastes received for disposal are generated by a facility that is subject to the same provisions in 40 CFR Subchapter N as the industrial or commercial operation, or that the other wastes received are of similar nature to the wastes generated by the industrial or commercial operation;
- (c) landfills operated in conjunction with CWT facilities subject to 40 CFR Part 437, so long as the CWT facility commingles the landfill wastewater with other non-landfill wastewater for discharge. A landfill directly associated with a CWT facility is subject to this part if the CWT facility discharges landfill wastewater separately from other CWT wastewater or commingles the wastewater from its landfill only with wastewater from other landfills; or

(d) landfills operated in conjunction with other industrial or commercial operations when the landfill receives wastes from public service activities, so long as the company owning the landfill does not receive a fee or other remuneration for the disposal service.

You must obtain an individual discharge permit to discharge this type of effluent.

Sector M – Automobile Salvage Yards.

M.1 Covered Stormwater Discharges.

The requirements in Sector M apply to stormwater discharges associated with industrial activity from Automobile Salvage Yards as identified by the SIC Code specified under Sector M in Appendix A of this permit.

M.2 Additional Technology-Based Effluent Limits.

M.2.1 *Spill and Leak Prevention Procedures.* (See also Part III.B.1.b.iv) Drain vehicles intended to be dismantled of all fluids upon arrival at the site (or as soon thereafter as feasible), or employ some other equivalent means to prevent spills and leaks. You must establish clean-up mechanisms and procedures for all fluids (e.g. anti-freeze, used, oil, used fuel, etc.) for all locations that vehicles will be drained of fluids or any equipment receives fluids, and ensure all batteries from vehicles are protected from exposure to stormwater upon arrival at the site.

M.2.2 *Employee Training.* (See also Part III.B.1.b.ix) If applicable to your facility, address the following areas (at a minimum) in your employee training program: proper handling (collection, storage, clean up, and disposal) of oil, used mineral spirits, anti-freeze, mercury switches, and solvents. Also address leak detection and proper clean up procedures of all fluids.

M.2.3 *Management of Runoff.* (See also Part III.B.1.b.vi) Consider the following management practices: berms or drainage ditches on the property line (to help prevent run-on from neighboring properties); berms for uncovered outdoor storage of oily parts, engine blocks, and above-ground liquid storage; installation of detention ponds; and installation of filtering devices and oil and water separators.

M.3 Additional SWPPP Requirements.

M.3.1 *Drainage Area Site Map.* (See also Part III.C.2) Identify locations used for dismantling, storage, and maintenance of used motor vehicle parts. Also identify where any of the following may be exposed to precipitation or surface runoff: dismantling areas, parts (e.g., engine blocks, tires, hub caps, batteries, hoods, mufflers) storage areas, and liquid storage tanks and drums for fuel and other fluids. Note: To avoid groundwater contamination, draining must occur on impervious areas.

M.3.2 *Potential Pollutant Sources.* (See also Part III.C.3) Assess the potential for the following to contribute pollutants to stormwater discharges: vehicle storage areas, dismantling areas, parts storage areas (e.g., engine blocks, tires, hub caps, batteries, hoods, mufflers), and fueling stations. Facilities that crush vehicles produce a residual fluid that contains petroleum, metal and glass fines. These byproducts will need to be identified as potential pollutants and measures shall be identified to ensure they do not commingle with stormwater. Fluids collected must be handled appropriately.

M.4 Additional Inspection Requirements. (See also Part V.A) Immediately (or as soon thereafter as feasible) inspect vehicles arriving at the site for leaks, and address leaks when identified. Inspect quarterly for signs of leakage all equipment containing oily parts, hydraulic fluids, any other types of fluids, or mercury switches. Also, inspect quarterly for signs of leakage all vessels and areas where hazardous materials and general automotive fluids are stored, including, but not limited to, mercury switches, brake fluid, transmission fluid, radiator water, and antifreeze.

M.5 Sector-Specific Benchmarks.

Table M-1 identifies benchmarks that may apply to your specific subsectors of Sector M. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table M-1 - Sector M Benchmarks (Automobile Salvage Yards)

PARAMETER	Benchmark	Units	Frequency	Sample Type
Total Suspended Solids (TSS)	100	mg/L	1/quarter	Grab
Total Recoverable Aluminum	1.1	mg/L	1/quarter	Grab
Total Iron	3.0	mg/L	1/quarter	Grab
Total Recoverable Lead (freshwater) ¹	0.082	mg/L	1/quarter	Grab
Total Recoverable Lead (saltwater)	0.21	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.

Sector N – Scrap Recycling and Waste Recycling Facilities.

N.1 Covered Stormwater Discharges.

The requirements in Sector N apply to stormwater discharges associated with industrial activity from Scrap Recycling and Waste Recycling facilities as identified by the SIC Code specified under Sector N in Appendix A of the permit.

N.2 Limitation on Coverage.

N.2.1 Prohibition of Non-Stormwater Discharges. (See also Part I.C Limitations on Coverage) Non-stormwater discharges from turnings containment areas are not covered by this permit (see also Part N.3.2.3). Discharges from containment areas in the absence of a storm event are prohibited unless covered by a separate NPDES/State discharge permit.

N.3 Additional Technology-Based Effluent Limits.

N.3.1 Scrap and Waste Recycling Facilities (Non-Source Separated, Nonliquid Recyclable Materials). Requirements for facilities that receive, process, and do wholesale distribution of nonliquid recyclable wastes (e.g., ferrous and nonferrous metals, plastics, glass, cardboard, and paper). These facilities may receive both nonrecyclable and recyclable materials.

N.3.1.1 Inbound Recyclable and Waste Material Control Program. Minimize the chance of accepting materials that could be significant sources of pollutants by conducting inspections of inbound recyclables and waste materials. Following are some control measure options: (a) provide information and education to suppliers of scrap and recyclable waste materials on draining and properly disposing of residual fluids (e.g., from vehicles and equipment engines, radiators and transmissions, oil filled transformers, and individual containers or drums) and removal of mercury switches from vehicles before delivery to your facility; (b) establish procedures to minimize the potential of any residual fluids from coming into contact with precipitation or runoff; (c) establish procedures for accepting scrap lead-acid batteries (additional requirements for the handling, storage, and disposal or recycling of batteries are contained in the scrap lead-acid battery program provisions in Part N.3.2.6); (d) provide training targeted for those personnel engaged in the inspection and acceptance of inbound recyclable materials, including: education on draining and proper disposal of residual fluids (e.g., from vehicles and equipment engines, radiators and transmissions, oil filled transformers, and individual containers or drums) and removal of mercury switches from vehicles when not completed by suppliers; and (e) establish procedures to ensure that liquid wastes, including used oil, are stored in materially compatible and non-leaking containers and are disposed of or recycled in accordance with the Resource Conservation and Recovery Act (RCRA).

N.3.1.2 Scrap and Waste Material Stockpiles and Storage (Outdoor). Minimize contact of stormwater runoff with stockpiled materials, processed materials, and nonrecyclable wastes. Following are some control measure options: (a) permanent or semi-permanent covers; (b) sediment traps, vegetated swales and strips, catch basin filters, and sand filters to facilitate settling or filtering of pollutants; (c) dikes, berms, containment trenches, culverts, and surface grading to divert runoff from storage areas; (d) silt fencing/bio-logs; and (e) oil and water separators, sumps, and dry absorbents for areas where potential sources of residual fluids are stockpiled (e.g., automobile engine storage areas).

N.3.1.3 Stockpiling of Turnings Exposed to Cutting Fluids (Outdoor Storage). Minimize contact of surface runoff with residual cutting fluids by: (a) storing all turnings exposed to cutting fluids under some form of permanent or semi-permanent cover, or (b) establishing dedicated containment areas for all turnings that have been exposed to cutting fluids. Any containment areas must be constructed of concrete, asphalt, or other equivalent types of impermeable material and include a barrier (e.g., berms, curbing, elevated pads) to prevent contact with stormwater run-on. Stormwater runoff from these areas can be discharged, provided that any runoff is first collected and treated by an oil and water separator or its equivalent. You

must regularly maintain the oil and water separator (or its equivalent) and properly dispose of or recycle collected residual fluids.

N.3.1.4 Scrap and Waste Material Stockpiles and Storage (Covered or Indoor Storage). Minimize contact of residual liquids and particulate matter from materials stored indoors or under cover with surface runoff. Following are some control measure options: (a) good housekeeping measures, including the use of dry absorbents or wet vacuuming to contain, dispose of, or recycle residual liquids originating from recyclable containers, or mercury spill kits for spills from storage of mercury switches; (b) not allowing washwater from tipping floors or other processing areas to discharge to the storm sewer system; and (c) disconnecting or sealing off all floor drains connected to the storm sewer system.

N.3.1.5 Scrap and Recyclable Waste Processing Areas. Minimize surface runoff from coming in contact with scrap processing equipment. Pay attention to operations that generate visible amounts of particulate residue (e.g., shredding) to minimize the contact of accumulated particulate matter and residual fluids with runoff (i.e., through good housekeeping, preventive maintenance, etc.). Following are some control measure options: (a) regularly inspect equipment for spills or leaks and malfunctioning, worn, or corroded parts or equipment; (b) establish a preventive maintenance program for processing equipment; (c) use dry-absorbents or other cleanup practices to collect and dispose of or recycle spilled or leaking fluids or use mercury spill kits for spills from storage of mercury switches; (d) on unattended hydraulic reservoirs over 150 gallons in capacity, install protection devices such as low-level alarms or equivalent devices, or secondary containment that can hold the entire volume of the reservoir; (e) containment or diversion structures such as dikes, berms, culverts, trenches, elevated concrete pads, and grading to minimize contact of stormwater runoff with outdoor processing equipment or stored materials; (f) oil and water separators or sumps; (g) permanent or semi-permanent covers in processing areas where there are residual fluids and grease; (h) retention or detention ponds or basins; sediment traps, and vegetated swales or strips (for pollutant settling and filtration); (i) catch basin filters or sand filters.

N.3.1.6 Scrap Lead-Acid Battery Program. Properly handle, store, and dispose of scrap lead-acid batteries. Following are some control measure options (a) segregate scrap lead-acid batteries from other scrap materials; (b) properly handle, store, and dispose of cracked or broken batteries; (c) collect and dispose of leaking lead-acid battery fluid; (d) minimize or eliminate (if possible) exposure of scrap lead-acid batteries to precipitation or runoff; and (e) provide employee training for the management of scrap batteries.

N.3.1.7 Spill Prevention and Response Procedures. (See also Part III.B.1.b.iv) Install alarms and/or pump shutoff systems on outdoor equipment with hydraulic reservoirs exceeding 150 gallons in the event of a line break. Alternatively, a secondary containment system capable of holding the entire contents of the reservoir plus room for precipitation can be used. Use a mercury spill kit for any release of mercury from switches, anti-lock brake systems, and switch storage areas.

N.3.1.8 Supplier Notification Program. As appropriate, notify major suppliers which scrap materials will not be accepted at the facility or will be accepted only under certain conditions.

N.3.2 Waste Recycling Facilities (Liquid Recyclable Materials).

N.3.2.1 Waste Material Storage (Indoor). Minimize or eliminate contact between residual liquids from waste materials stored indoors and from surface runoff. The plan may refer to applicable portions of other existing plans, such as Spill Prevention, Control, and Countermeasure (SPCC) plans required under 40 CFR Part 112. Following are some control measure options (a) procedures for material handling (including labeling and marking); (b) clean up spills and leaks with dry absorbent materials, a wet vacuum system; (c) appropriate maintained containment structures (trenching, curbing, gutters, etc.); and (d) a drainage system, including appurtenances (e.g., pumps or ejectors, manually operated valves), to handle discharges from diked or bermed areas, and properly maintained for continued operation. Drainage should be discharged to an appropriate treatment facility or sanitary sewer system, or otherwise disposed of properly.

These discharges may require coverage under a separate NPDES/ State discharge wastewater permit or industrial user permit under the pretreatment program.

N.3.2.2 Waste Material Storage (Outdoor). Minimize contact between stored residual liquids and precipitation or runoff. The plan may refer to applicable portions of other existing plans, such as SPCC plans required under 40 CFR Part 112. Discharges of precipitation from containment areas containing used oil must also be in accordance with applicable sections of 40 CFR Part 112. Following are some control measure options (a) appropriate containment structures (e.g., dikes, berms, curbing, pits) to store the volume of the largest tank, with sufficient extra capacity for precipitation; (b) drainage control and other diversionary structures; (c) corrosion protection and/or leak detection systems for storage tanks; and (d) dry-absorbent materials or a wet vacuum system to collect spills.

N.3.2.3 Trucks and Rail Car Waste Transfer Areas. Minimize pollutants in discharges from truck and rail car loading and unloading areas. Include measures to clean up minor spills and leaks resulting from the transfer of liquid wastes. Following are two control measure options: (a) containment and diversionary structures to minimize contact with precipitation or runoff, and (b) dry clean-up methods, wet vacuuming, roof coverings, or runoff controls.

N.3.3 Recycling Facilities (Source-Separated Materials). The following identifies considerations for facilities that receive only source-separated recyclables, primarily from non-industrial and residential sources.

N.3.3.1 Inbound Recyclable Material Control. Minimize the chance of accepting nonrecyclables (e.g., hazardous materials) that could be a significant source of pollutants by conducting inspections of inbound materials. Following are some control measure options: (a) providing information and education measures to inform suppliers of recyclables about acceptable and non-acceptable materials, (b) training drivers responsible for pickup of recycled material, (c) clearly marking public drop-off containers regarding which materials can be accepted, (d) rejecting nonrecyclable wastes or household hazardous wastes at the source, and (e) establishing procedures for handling and disposal of nonrecyclable material.

N.3.3.2 Outdoor Storage. Minimize exposure of recyclables to precipitation and runoff. Use good housekeeping measures to prevent accumulation of particulate matter and fluids, particularly in high traffic areas. Following are some control measure options (a) provide totally enclosed drop-off containers for the public; (b) install a sump and pump with each container pit and treat or discharge collected fluids to a sanitary sewer system; (c) provide dikes and curbs for secondary containment (e.g., around bales of recyclable waste paper); (d) divert surface water runoff away from outside material storage areas; (e) provide covers over containment bins, dumpsters, and roll-off boxes; and (f) store the equivalent of one day's volume of recyclable material indoors.

N.3.3.3 Indoor Storage and Material Processing. Minimize the release of pollutants from indoor storage and processing areas. Following are some control measure options (a) schedule routine good housekeeping measures for all storage and processing areas, (b) prohibit tipping floor washwater from draining to the storm sewer system, and (c) provide employee training on pollution prevention practices.

N.3.3.4 Vehicle and Equipment Maintenance. Following are some control measure options for areas where vehicle and equipment maintenance occur outdoors (a) prohibit vehicle and equipment washwater from discharging to the storm sewer system, (b) minimize or eliminate outdoor maintenance areas whenever possible, (c) establish spill prevention and clean-up procedures in fueling areas, (d) avoid topping off fuel tanks, (e) divert runoff from fueling areas, (f) store lubricants and hydraulic fluids indoors, and (g) provide employee training on proper handling and storage of hydraulic fluids and lubricants.

N.4 Additional SWPPP Requirements.

N.4.1 Drainage Area Site Map. (See also Part III.C.2) Document in your SWPPP the locations of any of the following activities or sources that may be exposed to precipitation or surface runoff: scrap and waste material

storage, outdoor scrap and waste processing equipment; and containment areas for turnings exposed to cutting fluids.

N.4.2 *Maintenance Schedules/Procedures for Collection, Handling, and Disposal or Recycling of Residual Fluids at Scrap and Waste Recycling Facilities.* If you are subject to Part N.3.1.3, your SWPPP must identify any applicable maintenance schedule and the procedures to collect, handle, and dispose of or recycle residual fluids.

N.5 Additional Inspection Requirements.

N.5.1 Inspections for Waste Recycling Facilities. The inspections must be performed quarterly, pursuant to Part V.A, and include, at a minimum, all areas where waste is generated, received, stored, treated, or disposed of and that are exposed to either precipitation or stormwater runoff.

N.6 Sector-Specific Benchmarks

Table N-1 identifies benchmarks that may apply to your specific subsectors of Sector N1 for Scrap Recycling and Waste Recycling Facilities except Source-Separated Recycling. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table N-1 - Subsector N1 Benchmarks (Scrap Recycling and Waste Recycling Facilities except Source-Separated Recycling)

PARAMETER	Benchmark	Units	Frequency	Sample Type
Chemical Oxygen Demand (COD)	120	mg/L	1/quarter	Grab
Total Suspended Solids (TSS)	100	mg/L	1/quarter	Grab
Total Recoverable Aluminum	1.1	mg/L	1/quarter	Grab
Total Recoverable Iron	3.0	mg/L	1/quarter	Grab
Total Lead (freshwater) ¹	0.082	mg/L	1/quarter	Grab
Total Lead (saltwater)	0.21	mg/L	1/quarter	Grab
Total Zinc (freshwater) ¹	0.12	mg/L	1/quarter	Grab
Total Zinc (saltwater)	0.09	mg/L	1/quarter	Grab
Total Recoverable Copper (freshwater) ¹	14	µg /L	1/quarter	Grab
Total Recoverable Copper (saltwater)	4.8	µg /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.

Sector O – Steam Electric Generating Facilities.

O.1 Covered Stormwater Discharges.

The requirements in Sector O apply to stormwater discharges associated with industrial activity from Steam Electric Power Generating Facilities as identified by the Activity Code specified under Sector O in Appendix A.

O.2 Industrial Activities Covered by Sector O.

This permit authorizes stormwater discharges from the following industrial activities at Sector O facilities:

O.2.1 steam electric power generation using coal, natural gas, oil, nuclear energy, etc., to produce a steam source, excluding coal handling areas;

O.2.2 Intentionally Left Blank

O.2.3 dual fuel facilities that could employ a steam boiler.

O.3 Limitations on Coverage.

O.3.1 *Prohibition of Non-Stormwater Discharges.* Non-stormwater discharges subject to effluent limitations guidelines are not covered by this permit.

O.3.2 *Prohibition of Stormwater Discharges.* Stormwater discharges from the following are not covered by this permit:

O.3.2.1 ancillary facilities (e.g., fleet centers and substations) that are not contiguous to a steam electric power generating facility;

O.3.2.2 gas turbine facilities (providing the facility is not a dual-fuel facility that includes a steam boiler), and combined-cycle facilities where no supplemental fuel oil is burned (and the facility is not a dual-fuel facility that includes a steam boiler); and

O.3.2.3 cogeneration (combined heat and power) facilities utilizing a gas turbine; and

O.3.2.4 coal pile runoff, including effluent limitations established by 40 CFR Part 423.

O.4 Additional Technology-Based Effluent Limits. The following good housekeeping measures are required in addition to Part III.B.1.b.ii:

O.4.1 *Fugitive Dust Emissions.* Minimize fugitive dust emissions from coal handling areas. To minimize the tracking of coal dust offsite, consider procedures such as installing specially designed tires or washing vehicles in a designated area before they leave the site and controlling the wash water.

O.4.2 *Delivery Vehicles.* Minimize contamination of stormwater runoff from delivery vehicles arriving at the plant site. Consider procedures to inspect delivery vehicles arriving at the plant site and ensure overall integrity of the body or container and procedures to deal with leakage or spillage from vehicles or containers.

O.4.3 *Fuel Oil Unloading Areas.* Minimize contamination of precipitation or surface runoff from fuel oil unloading areas. Consider using containment curbs in unloading areas, having personnel familiar with spill prevention and response procedures present during deliveries to ensure that any leaks or spills are immediately contained and cleaned up, and using spill and overflow protection devices (e.g., drip pans, drip diapers, or other containment devices placed beneath fuel oil connectors to contain potential spillage during deliveries or from leaks at the connectors).

O.4.4 *Chemical Loading and Unloading.* Minimize contamination of precipitation or surface runoff from chemical loading and unloading areas. Consider using containment curbs at chemical loading and unloading areas to contain spills, having personnel familiar with spill prevention and response procedures present during

deliveries to ensure that any leaks or spills are immediately contained and cleaned up, and loading and unloading in covered areas and storing chemicals indoors.

O.4.5 Miscellaneous Loading and Unloading Areas. Minimize contamination of precipitation or surface runoff from loading and unloading areas. Consider covering the loading area; grading, berming, or curbing around the loading area to divert run-on; locating the loading and unloading equipment and vehicles so that leaks are contained in existing containment and flow diversion systems; or equivalent procedures.

O.4.6 Liquid Storage Tanks. Minimize contamination of surface runoff from above-ground liquid storage tanks. Consider protective guards around tanks, containment curbs, spill and overflow protection, dry cleanup methods, or equivalent measures.

O.4.7 Large Bulk Fuel Storage Tanks. Minimize contamination of surface runoff from large bulk fuel storage tanks. Consider containment berms (or their equivalent). You must also comply with applicable State and Federal laws, including Spill Prevention, Control and Countermeasure (SPCC) Plan requirements.

O.4.8 Spill Reduction Measures. Minimize the potential for an oil or chemical spill, or reference the appropriate part of your SPCC plan. Visually inspect as part of your routine facility inspection the structural integrity of all above-ground tanks, pipelines, pumps, and related equipment that may be exposed to stormwater, and make any necessary repairs immediately.

O.4.9 Oil-Bearing Equipment in Switchyards. Minimize contamination of surface runoff from oil-bearing equipment in switchyard areas. Consider using level grades and gravel surfaces to retard flows and limit the spread of spills, or collecting runoff in perimeter ditches.

O.4.10 Residue-Hauling Vehicles. Inspect all residue-hauling vehicles for proper covering over the load, adequate gate sealing, and overall integrity of the container body. Repair vehicles as soon as identified that are without load covering or adequate gate sealing, or with leaking containers or beds and prior to allowing them to transfer material.

O.4.11 Ash Loading Areas. Reduce or control the tracking of ash and residue from ash loading areas. Clear the ash building floor and immediately adjacent roadways of spillage, debris, and excess water before departure of each loaded vehicle.

O.4.12 Areas Adjacent to Disposal Ponds or Landfills. Minimize contamination of surface runoff from areas adjacent to disposal ponds or landfills. Reduce ash residue that may be tracked on to access roads traveled by residue handling vehicles, and reduce ash residue on exit roads leading into and out of residue handling areas.

O.4.13 Landfills, Scrap yards, Surface Impoundments, General Refuse Sites. Minimize the potential for contamination of runoff from these areas.

O.5 Additional SWPPP Requirements.

O.5.1 Drainage Area Site Map. (See also Part III.C.2) Document in your SWPPP the locations of any of the following activities or sources that may be exposed to precipitation or surface runoff: storage tanks, scrap yards, and general refuse areas; short- and long-term storage of general materials (including but not limited to supplies, construction materials, paint equipment, oils, fuels, used and unused solvents, cleaning materials, paint, water treatment chemicals, fertilizer, and pesticides); landfills and construction sites; and stock pile areas (e.g., coal or limestone piles).

O.5.2 Documentation of Good Housekeeping Measures. You must document in your SWPPP the good housekeeping measures implemented to meet the effluent limits in Part O.4.

O.6 Additional Inspection Requirements.

O.6.1 *Comprehensive Site Compliance Inspection.* (See also Part V.A) As part of your inspection, inspect the following areas monthly: coal handling areas, loading or unloading areas, switchyards, fueling areas, bulk storage areas, ash handling areas, areas adjacent to disposal ponds and landfills, maintenance areas, liquid storage tanks, and long term and short term material storage areas.

O.7 Intentionally Left Blank

O.8 Effluent Limitations Based on Effluent Limitations Guidelines.

Discharges from coal storage piles at Steam Electric Generating Facilities are required to meet specific effluent limits (40 CFR Part 423) and are therefore not covered by this permit. You must obtain an individual discharge permit to discharge this type of effluent.

Sector P – Land Transportation and Warehousing.

P.1 Covered Stormwater Discharges.

The requirements in Sector P apply to stormwater discharges associated with industrial activity from Land Transportation and Warehousing facilities as identified by the SIC Codes specified under Sector P in Appendix A of the permit.

P.2 Limitation on Coverage.

P.2.1 *Prohibited Discharges* (See also Part I.C Limitations on Coverage) This permit does not authorize the discharge of vehicle/equipment/surface washwater, including tank cleaning operations. Such discharges must be authorized under a separate NPDES/State discharge permit, discharged to a sanitary sewer in accordance with applicable industrial pretreatment requirements, or recycled on-site.

P.3 Additional Technology-Based Effluent Limits.

P.3.1 *Good Housekeeping Measures*. (See also Part III.B.1.b.ii) In addition to the Good Housekeeping requirements in Part III.B.1, you must do the following. Recommended control measures are discussed as indicated:

P.3.1.1 *Vehicle and Equipment Storage Areas*. Minimize the potential for stormwater exposure to leaky or leak-prone vehicles/equipment awaiting maintenance. Consider the following (or other equivalent measures): use of drip pans under vehicles/equipment, indoor storage of vehicles and equipment, installation of berms or dikes, use of absorbents, roofing or covering storage areas, and cleaning pavement surfaces to remove oil and grease.

P.3.1.2 *Fueling Areas*. Minimize contamination of stormwater runoff from fueling areas. Consider the following (or other equivalent measures): Covering the fueling area; using spill/overflow protection and cleanup equipment; minimizing stormwater run-on/runoff to the fueling area; using dry cleanup methods; and treating and/or recycling collected stormwater runoff.

P.3.1.3 *Material Storage Areas*. Maintain all material storage vessels (e.g., for used oil/oil filters, spent solvents, paint wastes, hydraulic fluids) to prevent contamination of stormwater and plainly label them (e.g., "Used Oil," "Spent Solvents," etc.). Consider the following (or other equivalent measures): storing the materials indoors; installing berms/dikes around the areas; minimizing runoff of stormwater to the areas; using dry cleanup methods; and treating and/or recycling collected stormwater runoff.

P.3.1.4 *Vehicle and Equipment Cleaning Areas*. Minimize contamination of stormwater runoff from all areas used for vehicle/equipment cleaning. Consider the following (or other equivalent measures): performing all cleaning operations indoors; covering the cleaning operation, ensuring that all washwater drains to a proper collection system (i.e., not the stormwater drainage system); treating and/or recycling collected washwater, or other equivalent measures.

P.3.1.5 *Vehicle and Equipment Maintenance Areas*. Minimize contamination of stormwater runoff from all areas used for vehicle/equipment maintenance. Consider the following (or other equivalent measures): performing maintenance activities indoors; using drip pans; keeping an organized inventory of materials used in the shop; draining all parts of fluid prior to disposal; prohibiting wet clean up practices if these practices would result in the discharge of pollutants to stormwater drainage systems; using dry cleanup methods; treating and/or recycling collected stormwater runoff, minimizing run on/runoff of stormwater to maintenance areas.

P.3.1.6 *Locomotive Sanding (Loading Sand for Traction) Areas*. Consider the following (or other equivalent measures): covering sanding areas; minimizing stormwater run on/runoff; or appropriate sediment removal practices to minimize the offsite transport of sanding material by stormwater.

P.3.2 *Employee Training.* (See also Part III.B.1.b.ix) Train personnel at least once a year and address the following activities, as applicable: used oil and spent solvent management; fueling procedures; general good housekeeping practices; proper painting procedures; and used battery management.

P.4 Additional SWPPP Requirements.

P.4.1 *Drainage Area Site Map.* (See also Part III.C.2) Identify in the SWPPP the following areas of the facility and indicate whether activities occurring there may be exposed to precipitation/surface runoff: Fueling stations; vehicle/equipment maintenance or cleaning areas; storage areas for vehicle/equipment with actual or potential fluid leaks; loading/unloading areas; areas where treatment, storage or disposal of wastes occur; liquid storage tanks; processing areas; and storage areas.

P.4.2 *Potential Pollutant Sources.* (See also Part III.C.3) Assess the potential for the following activities and facility areas to contribute pollutants to stormwater discharges: Onsite waste storage or disposal; dirt/gravel parking areas for vehicles awaiting maintenance; illicit plumbing connections between shop floor drains and the stormwater conveyance system(s); and fueling areas. Describe these activities in the SWPPP.

P.4.3 *Description of Good Housekeeping Measures.* You must document in your SWPPP the good housekeeping measures you implement consistent with Part P.3.

P.4.4 *Vehicle and Equipment Washwater Requirements.* (See also Part III.C.3.d: Non-Stormwater Discharges) If applicable, attach to or reference in your SWPPP, a copy of the NPDES/State discharge permit issued for vehicle/equipment washwater or, if an NPDES/ State discharge permit has not been issued, a copy of the pending application. If an industrial user permit is issued under a local pretreatment program, attach a copy to your SWPPP. In any case, implement all non-stormwater discharge permit conditions or pretreatment conditions in your SWPPP. If washwater is handled in another manner (e.g., hauled offsite), describe the disposal method and attach all pertinent documentation/information (e.g., frequency, volume, destination, etc.) in the plan.

P.5 Additional Inspection Requirements. (See also Part V.A) Inspect all the following areas/activities: storage areas for vehicles/equipment awaiting maintenance, fueling areas, indoor and outdoor vehicle/equipment maintenance areas, material storage areas, vehicle/equipment cleaning areas and loading/unloading areas.

Sector Q – Water Transportation.

Q.1 Covered Stormwater Discharges.

The requirements in Sector Q apply to stormwater discharges associated with industrial activity from Water Transportation facilities as identified by the SIC Codes specified under Sector Q in Appendix A of the permit. Note that marinas (SIC 4493) are covered by a separate general permit, Maryland General Permit No. 16-MA or replacement.

Q.2 Limitations on Coverage.

Q.2.1 *Prohibition of Non-Stormwater Discharges.* (See also Part I.C Limitations on Coverage) Not covered by this permit: bilge and ballast water, sanitary wastes, pressure wash water, and cooling water originating from vessels.

Q.3 Additional Technology-Based Effluent Limits.

Q.3.1 *Good Housekeeping Measures.* You must implement the following good housekeeping measures in addition to the requirements of Part III.B.1.b.ii:

Q.3.1.1 *Pressure Washing Area.* If pressure washing is used to remove marine growth from vessels, the discharge water must be permitted by a separate NPDES/State discharge permit. Collect or contain the discharges from the pressures washing area so that they are not co-mingled with stormwater discharges authorized by this permit.

Q.3.1.2 *Blasting and Painting Area.* Minimize the potential for spent abrasives, paint chips, and overspray to discharge into receiving waters or the storm sewer systems. Consider containing all blasting and painting activities or use other measures to minimize the discharge of contaminants (e.g., hanging plastic barriers or tarpaulins during blasting or painting operations to contain debris). When necessary, regularly clean stormwater conveyances of deposits of abrasive blasting debris and paint chips.

Q.3.1.3 *Material Storage Areas.* Store and plainly label all containerized materials (e.g., fuels, paints, solvents, waste oil, antifreeze, batteries) in a protected, secure location away from drains. Minimize the contamination of precipitation or surface runoff from the storage areas. Specify which materials are stored indoors, and consider containment or enclosure for those stored outdoors. If abrasive blasting is performed, discuss the storage and disposal of spent abrasive materials generated at the facility. Consider implementing an inventory control plan to limit the presence of potentially hazardous materials onsite.

Q.3.1.4 *Engine Maintenance and Repair Areas.* Minimize the contamination of precipitation or surface runoff from all areas used for engine maintenance and repair. Consider the following (or their equivalents): performing all maintenance activities indoors, maintaining an organized inventory of materials used in the shop, draining all parts of fluid prior to disposal, prohibiting the practice of hosing down the shop floor, using dry cleanup methods, and treating and/or recycling stormwater runoff collected from the maintenance area.

Q.3.1.5 *Material Handling Area.* Minimize the contamination of precipitation or surface runoff from material handling operations and areas (e.g., fueling, paint and solvent mixing, disposal of process wastewater streams from vessels). Consider the following (or their equivalents): covering fueling areas, using spill and overflow protection, mixing paints and solvents in a designated area (preferably indoors or under a shed), and minimizing runoff of stormwater to material handling areas.

Q.3.1.6 *Drydock Activities.* Routinely maintain and clean the drydock to minimize pollutants in stormwater runoff. Address the cleaning of accessible areas of the drydock prior to flooding, and final cleanup following removal of the vessel and raising the dock. Include procedures for cleaning up oil, grease, and fuel spills

occurring on the drydock. Consider the following (or their equivalents): sweeping rather than hosing off debris and spent blasting material from accessible areas of the drydock prior to flooding and making absorbent materials and oil containment booms readily available to clean up or contain any spills.

Q.3.2 Employee Training. (See also Part III.B.1.b.ix) As part of your employee training program, address, at a minimum, the following activities (as applicable): used oil management, spent solvent management, disposal of spent abrasives, disposal of vessel wastewaters, spill prevention and control, fueling procedures, general good housekeeping practices, painting and blasting procedures, and used battery management.

Q.3.3 Preventive Maintenance. (See also Part III.B.1.b.iii) As part of your preventive maintenance program, perform timely inspection and maintenance of stormwater management devices (e.g., cleaning oil and water separators and sediment traps to ensure that spent abrasives, paint chips, and solids will be intercepted and retained prior to entering the storm drainage system), as well as inspecting and testing facility equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters.

Q.4 Additional SWPPP Requirements.

Q.4.1 Drainage Area Site Map. (See also Part III.C.2) Document in your SWPPP where any of the following may be exposed to precipitation or surface runoff: fueling; engine maintenance and repair; vessel maintenance and repair; pressure washing; painting; sanding; blasting; welding; metal fabrication; loading and unloading areas; locations used for the treatment, storage, or disposal of wastes; liquid storage tanks; liquid storage areas (e.g., paint, solvents, resins); and material storage areas (e.g., blasting media, aluminum, steel, scrap iron).

Q.4.2 Summary of Potential Pollutant Sources. (See also Part III.C.3) Document in the SWPPP the following additional sources and activities that have potential pollutants associated with them: outdoor manufacturing or processing activities (e.g., welding, metal fabricating) and significant dust or particulate generating processes (e.g., abrasive blasting, sanding, and painting.)

Q.5 Additional Inspection Requirements.

(See also Part V.A) Include the following in all quarterly routine facility inspections: pressure washing area; blasting, sanding, and painting areas; material storage areas; engine maintenance and repair areas; material handling areas; drydock area; and general yard area.

Q.6 Sector-Specific Benchmarks.

Table Q-1 identifies benchmarks that apply to Sector Q. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table Q-1 - Subsector Q1 Benchmarks (Water Transportation Facilities SIC 4412-4499)

PARAMETER	Benchmark	Units	Frequency	Sample Type
Total Recoverable Aluminum	1.1	mg/L	1/quarter	Grab
Total Lead (freshwater) ¹	0.082	mg/L	1/quarter	Grab
Total Lead (saltwater)	0.21	mg/L	1/quarter	Grab
Total Zinc (freshwater) ¹	0.12	mg/L	1/quarter	Grab
Total Zinc (saltwater)	0.09	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.

Sector R – Ship and Boat Building and Repair Yards.

R.1 Covered Stormwater Discharges.

The requirements in Sector R apply to stormwater discharges associated with industrial activity from Ship and Boat Building and Repair Yards as identified by the SIC Codes specified under Sector R in Appendix A of the permit.

R.2 Limitations on Coverage.

R.2.1 *Prohibition of Non-Stormwater Discharges.* (See also Part I.C Limitations on Coverage) Discharges containing bilge and ballast water, sanitary wastes, pressure wash water, and cooling water originating from vessels are not covered by this permit.

R.3 Additional Technology-Based Effluent Limits.

R.3.1 *Good Housekeeping Measures.* (See also Part III.B.1.b.ii)

R.3.1.1 *Pressure Washing Area.* If pressure washing is used to remove marine growth from vessels, the discharged water must be permitted as a process wastewater by a separate NPDES/State discharge permit.

R.3.1.2 *Blasting and Painting Area.* Minimize the potential for spent abrasives, paint chips, and overspray to discharging into the receiving water or the storm sewer systems. Consider containing all blasting and painting activities, or use other measures to prevent the discharge of the contaminants (e.g., hanging plastic barriers or tarpaulins during blasting or painting operations to contain debris). When necessary, regularly clean stormwater conveyances of deposits of abrasive blasting debris and paint chips.

R.3.1.3 *Material Storage Areas.* Store and plainly label all containerized materials (e.g., fuels, paints, solvents, waste oil, antifreeze, batteries) in a protected, secure location away from drains. Minimize the contamination of precipitation or surface runoff from the storage areas. If abrasive blasting is performed, discuss the storage and disposal of spent abrasive materials generated at the facility. Consider implementing an inventory control plan to limit the presence of potentially hazardous materials onsite.

R.3.1.4 *Engine Maintenance and Repair Areas.* Minimize the contamination of precipitation or surface runoff from all areas used for engine maintenance and repair. Consider the following (or their equivalents): performing all maintenance activities indoors, maintaining an organized inventory of materials used in the shop, draining all parts of fluid prior to disposal, prohibiting the practice of hosing down the shop floor, using dry cleanup methods, and treating and/or recycling stormwater runoff collected from the maintenance area.

R.3.1.5 *Material Handling Area.* Minimize the contamination of precipitation or surface runoff from material handling operations and areas (e.g., fueling, paint and solvent mixing, disposal of process wastewater streams from vessels). Consider the following (or their equivalents): covering fueling areas, using spill and overflow protection, mixing paints and solvents in a designated area (preferably indoors or under a shed), and minimizing stormwater run-on to material handling areas.

R.3.1.6 *Drydock Activities.* Routinely maintain and clean the drydock to minimize pollutants in stormwater runoff. Clean accessible areas of the drydock prior to flooding and final cleanup following removal of the vessel and raising the dock. Include procedures for cleaning up oil, grease, or fuel spills occurring on the drydock. Consider the following (or their equivalents): sweeping rather than hosing off debris and spent blasting material from accessible areas of the drydock prior to flooding, and having absorbent materials and oil containment booms readily available to clean up and contain any spills.

R.3.2 *Employee Training.* (See also Part III.B.1.b.ix) As part of your employee training program, address, at a minimum, the following activities (as applicable): used oil management, spent solvent management, disposal of

spent abrasives, disposal of vessel wastewaters, spill prevention and control, fueling procedures, general good housekeeping practices, painting and blasting procedures, and used battery management.

R.3.4 *Preventive Maintenance.* (See also Part III.B.1.b.iii) As part of your preventive maintenance program, perform timely inspection and maintenance of stormwater management devices (e.g., cleaning oil and water separators and sediment traps to ensure that spent abrasives, paint chips, and solids will be intercepted and retained prior to entering the storm drainage system), as well as inspecting and testing facility equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters.

R.4 Additional SWPPP Requirements.

R.4.1 *Drainage Area Site Map.* (See also Part III.C.2) Document in your SWPPP where any of the following may be exposed to precipitation or surface runoff: fueling; engine maintenance or repair; vessel maintenance or repair; pressure washing; painting; sanding; blasting; welding; metal fabrication; loading and unloading areas; treatment, storage, and waste disposal areas; liquid storage tanks; liquid storage areas (e.g., paint, solvents, resins); and material storage areas (e.g., blasting media, aluminum, steel, scrap iron).

R.4.2 *Potential Pollutant Sources.* (See also Part III.C.3) Document in your SWPPP the following additional sources and activities that have potential pollutants associated with them (if applicable): outdoor manufacturing or processing activities (e.g., welding, metal fabricating) and significant dust or particulate generating processes (e.g., abrasive blasting, sanding, and painting).

R.4.3 *Documentation of Good Housekeeping Measures.* Document in your SWPPP any good housekeeping measures implemented to meet the effluent limits in Part R.3.

R.4.3.1 *Blasting and Painting Areas.* Document in the SWPPP any standard operating practices relating to blasting and painting (e.g., prohibiting uncontained blasting and painting over open water or prohibiting blasting and painting during windy conditions, which can render containment ineffective).

R.4.3.2 *Storage Areas.* Specify in your SWPPP which materials are stored indoors, and consider containment or enclosure for those stored outdoors.

R.5 Additional Inspection Requirements.

(See also Part V.A) Include the following in all quarterly routine facility inspections: pressure washing area; blasting, sanding, and painting areas; material storage areas; engine maintenance and repair areas; material handling areas; drydock area; and general yard area.

R.6 Sector-Specific Benchmarks.

Table R-1 identifies benchmarks that apply to Sector R. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table R-1 - Subsector R1 Benchmarks (Ship and Boat Building or Repairing Yards for SIC 3731, 3732)

PARAMETER	Benchmark	Units	Frequency	Sample Type
Total Recoverable Aluminum	1.1	mg/L	1/quarter	Grab
Total Lead (freshwater) ¹	0.082	mg/L	1/quarter	Grab
Total Lead (saltwater)	0.21	mg/L	1/quarter	Grab
Total Zinc (freshwater) ¹	0.12	mg/L	1/quarter	Grab

Total Zinc (saltwater)	0.09	mg/L	1/quarter	Grab
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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.

Sector S – Air Transportation.

S.1 Covered Stormwater Discharges.

The requirements in Sector S apply to stormwater discharges associated with industrial activity from Air Transportation facilities identified by the SIC Codes specified under Sector S in Appendix A of the permit.

S.2 Limitation on Coverage

S.2.1 *Limitations on Coverage.*

S.2.1.1 This permit authorizes stormwater discharges from only those portions of the air transportation facility that are involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling and lubrication), equipment cleaning operations or deicing operations.

Note: “deicing” will generally be used to imply both deicing (removing frost, snow or ice) and anti-icing (preventing accumulation of frost, snow or ice) activities, unless specific mention is made regarding anti-icing and/or deicing activities.

S.2.1.2 Existing and new primary airports with 1,000 or more annual jet departures (“non-propeller aircraft”) that generate wastewater associated with airfield pavement deicing using urea-containing deicers must meet a numeric effluent limits for ammonia and are therefore not covered under this general permit.

S.2.2 *Prohibition of Non-Stormwater Discharges.* (See also Part I.C Limitations on Coverage and Part S.3) This permit does not authorize the discharge of aircraft, ground vehicle, runway and equipment washwaters; nor the dry weather discharge of deicing chemicals. Such discharges must be covered by separate NPDES/ State discharge permit(s). Note that a discharge resulting from snowmelt is not a dry weather discharge.

S.3 Additional Technology-Based Effluent Limits.

S.3.1 *Good Housekeeping Measures.* (See also Part III.B.1.b.ii)

S.3.1.1 Aircraft, Ground Vehicle and Equipment Maintenance Areas. Minimize the contamination of stormwater runoff from all areas used for aircraft, ground vehicle and equipment maintenance (including the maintenance conducted on the terminal apron and in dedicated hangers). Consider the following practices (or their equivalents): performing maintenance activities indoors; maintaining an organized inventory of material used in the maintenance areas; draining all parts of fluids prior to disposal; prohibiting the practice of hosing down the apron or hanger floor; using dry cleanup methods; and collecting the stormwater runoff from the maintenance area and providing treatment or recycling.

S.3.1.2 Aircraft, Ground Vehicle and Equipment Cleaning Areas. (See also Part S.3.6) Clearly demarcate these areas on the ground using signage or other appropriate means. Minimize the contamination of stormwater runoff from cleaning areas.

S.3.1.3 Aircraft, Ground Vehicle and Equipment Storage Areas. Store all aircraft, ground vehicles and equipment awaiting maintenance in designated areas only and minimize the contamination of stormwater runoff from these storage areas. Consider the following control measures, including any BMPs (or their equivalents): storing aircraft and ground vehicles indoors; using drip pans for the collection of fluid leaks; and perimeter drains, dikes or berms surrounding the storage areas.

S.3.1.4 Material Storage Areas. Maintain the vessels of stored materials (e.g., used oils, hydraulic fluids, spent solvents, and waste aircraft fuel) in good condition, to prevent or minimize contamination of stormwater. Also plainly label the vessels (e.g., “used oil,” “Contaminated Jet A,” etc.). Minimize contamination of precipitation/runoff from these areas. Consider the following control measures (or their equivalents): storing materials indoors; storing waste materials in a centralized location; and installing berms/dikes around storage areas.

S.3.1.5 Airport Fuel System and Fueling Areas. Minimize the discharge of fuel to the storm sewer/surface waters resulting from fuel servicing activities or other operations conducted in support of the airport fuel system. Consider the following control measures (or their equivalents): implementing spill and overflow practices (e.g., placing absorptive materials beneath aircraft during fueling operations); using only dry cleanup methods; and collecting stormwater runoff.

S.3.1.6 Source Reduction. Minimize, and where feasible eliminate, the use of urea and glycol-based deicing chemicals, in order to reduce the aggregate amount of deicing chemicals used and/or lessen the environmental impact. Chemical options to replace ethylene glycol, propylene glycol and urea include: potassium acetate; magnesium acetate; calcium acetate; and anhydrous sodium acetate.

S.3.1.6.1 Runway Deicing Operation: Minimize contamination of stormwater runoff from runways as a result of deicing operations. Evaluate whether over-application of deicing chemicals occurs by analyzing application rates, and adjust as necessary, consistent with considerations of flight safety. Also consider these control measure options (or their equivalents): metered application of chemicals; pre-wetting dry chemical constituents prior to application; installing a runway ice detection system; implementing anti-icing operations as a preventive measure against ice buildup.

S.3.1.6.2 Aircraft Deicing Operations. Minimize contamination of stormwater runoff from aircraft deicing operations. Determine whether excessive application of deicing chemicals occurs and adjust as necessary, consistent with considerations of flight safety. This evaluation should be carried out by the personnel most familiar with the particular aircraft and flight operations in question (versus an outside entity such as the airport authority). Consider using alternative deicing/anti-icing agents as well as containment measures for all applied chemicals. Also consider these control measure options (or their equivalents) for reducing deicing fluid use: forced-air deicing systems, computer-controlled fixed-gantry systems, infrared technology, hot water, varying glycol content to air temperature, enclosed-basket deicing trucks, mechanical methods, solar radiation, hangar storage, aircraft covers, and thermal blankets for MD-80s and DC-9s. Also consider using ice-detection systems and airport traffic flow strategies and departure slot allocation systems.

S.3.1.7 Management of Runoff. (See also Part III.C.4) Where deicing operations occur, implement a program to control or manage contaminated runoff to minimize the amount of pollutants being discharged from the site. Consider these control measure options (or their equivalents): a dedicated deicing facility with a runoff collection/ recovery system; using vacuum/collection trucks; storing contaminated stormwater/deicing fluids in tanks and releasing controlled amounts to a publicly owned treatment works; collecting contaminated runoff in a wet pond for biochemical decomposition (be aware of attracting wildlife that may prove hazardous to flight operations); and directing runoff into vegetative swales or other infiltration measures. Also consider recovering deicing materials when these materials are applied during non-precipitation events (e.g., covering storm sewer inlets, using booms, installing absorptive interceptors in the drains, etc.) to prevent these materials from later becoming a source of stormwater contamination. Used deicing fluid should be recycled whenever possible.

S.3.2 *Deicing Season*. You must determine the seasonal timeframe (e.g., December- February, October - March, etc.) during which deicing activities typically occur at the facility. Implementation of control measures, including any BMPs, facility inspections and monitoring must be conducted with particular emphasis throughout the defined deicing season.

S.4 Additional SWPPP Requirements.

An airport authority and tenants of the airport are encouraged to work in partnership in the development of a SWPPP. If an airport tenant obtains authorization under this permit and develops a SWPPP for discharges from his own areas of the airport, prior to authorization, that SWPPP must be coordinated and integrated with the SWPPP for the entire airport. Tenants of the airport facility include air passenger or cargo companies, fixed

based operators and other parties who have contracts with the airport authority to conduct business operations on airport property and whose operations result in stormwater discharges associated with industrial activity.

S.4.1 Drainage Area Site Map. (See also Part III.C.2) Document in the SWPPP the following areas of the facility and indicate whether activities occurring there may be exposed to precipitation/surface runoff: aircraft and runway deicing operations; fueling stations; aircraft, ground vehicle and equipment maintenance/cleaning areas; storage areas for aircraft, ground vehicles and equipment awaiting maintenance.

S.4.2 Potential Pollutant Sources. (See also Part III.C.3) In your inventory of exposed materials, describe in your SWPPP the potential for the following activities and facility areas to contribute pollutants to stormwater discharges: aircraft, runway, ground vehicle and equipment maintenance and cleaning; aircraft and runway deicing operations (including apron and centralized aircraft deicing stations, runways, taxiways and ramps). If you use deicing chemicals, you must maintain a record of the types (including the Material Safety Data Sheets [MSDS]) used and the monthly quantities, either as measured or, in the absence of metering, as estimated to the best of your knowledge. This includes all deicing chemicals, not just glycols and urea (e.g., potassium acetate), because large quantities of these other chemicals can still have an adverse impact on receiving waters. Tenants or other fixed-based operations that conduct deicing operations must provide the above information to the airport authority for inclusion with any comprehensive airport SWPPPs.

S.4.3 Vehicle and Equipment Washwater Requirements. Attach to or reference in your SWPPP, a copy of the NPDES/State discharge permit issued for vehicle/equipment washwater or, if an NPDES/State discharge permit has not been issued, a copy of the pending application. If an industrial user permit is issued under a local pretreatment program, include a copy in your SWPPP. In any case, if you are subject to another permit, describe your control measures for implementing all non-stormwater discharge permit conditions or pretreatment requirements in your SWPPP. If washwater is handled in another manner (e.g., hauled offsite, retained onsite), describe the disposal method and attach all pertinent documentation/information (e.g., frequency, volume, destination, etc.) in your SWPPP.

S.4.4 Documentation of Control Measures Used for Management of Runoff: Document in your SWPPP the control measures used for collecting or containing contaminated melt water from collection areas used for disposal of contaminated snow.

S.5 Additional Inspection Requirements.

S.5.1 Inspections. (See also Part V.A) At a minimum conduct routine facility inspections at least monthly during the deicing season (e.g., October through April for most mid-latitude airports). If your facility needs to deice before or after this period, expand the monthly inspections to include all months during which deicing chemicals may be used. The Director may specifically require you to increase inspection frequencies.

S.5.2 Comprehensive Site Inspections. (See also Part V.A) Using only qualified personnel, conduct your annual site inspection during periods of actual deicing operations, if possible. If not practicable during active deicing because of weather, conduct the inspection during the season when deicing operations occur and the materials and equipment for deicing are in place.

S.6 Sector-Specific Benchmarks.

Table S-1 identifies benchmarks that apply to airports where a single permittee, or a combination of permitted facilities use more than 100,000 gallons of pure glycol in glycol-based deicing fluids and/or 100 tons or more of urea on an average annual basis, monitor the four parameters in ONLY those outfalls that collect runoff from areas where deicing activities occur (SIC 4512-4581). These benchmarks apply to both your primary industrial activity and any co-located industrial activities that are not covered under a separate individual permit for discharge containing these deicing fluids.

Table S-1 - Subsector S1 Benchmarks (Airports using more than 100,000 gallons of deicing glycols based fluids

or 100 tons of urea, on an annual basis for SIC 4512 - 4581)

PARAMETER	Benchmark	Units	Frequency	Sample Type
Biochemical Oxygen Demand (BOD5) ¹	30	mg/L	1/quarter	Grab
Chemical Oxygen Demand (COD) ¹	120	mg/L	1/quarter	Grab
Ammonia ¹	2.14	mg/L	1/quarter	Grab
pH ¹	6.0 – 9.0	s.u.	1/quarter	Grab

¹ These are deicing-related parameters. Collect the four benchmark samples, and any required follow-up benchmark samples, during the timeframe defined in Part V.C.7 when deicing activities are occurring..

S.7 Effluent Limitations Based on Effluent Limitations Guidelines and New Source Performance Standards.

Discharges from runoff containing urea from airfield pavement deicing at existing and new primary airports with 1,000 or more annual non-propeller aircraft are required to meet specific effluent limits (40 CFR Part 423) and are therefore not covered by this permit. You must obtain an individual discharge permit to discharge this type of effluent.

Sector T – Treatment Works.

T.1 Covered Stormwater Discharges.

The requirements in Sector T apply to stormwater discharges associated with industrial activity from Treatment Works as identified by the Activity Code specified under Sector T in Appendix A of the permit.

T.2 Industrial Activities Covered by Sector T.

The requirements listed under this part apply to all existing point source stormwater discharges associated with the following activities:

T.2.1 Treatment works treating domestic sewage, or any other sewage sludge or wastewater treatment device or system used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge; that are located within the confines of a facility with a design flow of 1.0 million gallons per day (MGD) or more; or are required to have an approved pretreatment program under 40 CFR Part 403.

T.2.2 The following are not required to have permit coverage: farm lands, domestic gardens or lands used for sludge management where sludge is beneficially reused and which are not physically located within the facility, or areas that are in compliance with Section 405 of the CWA.

T.3 Limitations on Coverage.

T.3.1 *Prohibition of Non-Stormwater Discharges.* (See also Part I.C Limitations on Coverage) Sanitary and industrial wastewater and equipment and vehicle washwater are not authorized by this permit.

T.4 Additional Technology-Based Effluent Limits.

T.4.1 *Control Measures.* (See also Part III.C.4) In addition to the other control measures, consider the following: routing stormwater to the treatment works; or covering exposed materials (i.e., from the following areas: grit, screenings, and other solids handling, storage, or disposal areas; sludge drying beds; dried sludge piles; compost piles; and septage or hauled waste receiving station).

T.4.2 *Employee Training.* (See also Part III.B.1.b.ix) At a minimum, training must address the following areas when applicable to a facility: petroleum product management; process chemical management; spill prevention and controls; fueling procedures; general good housekeeping practices; and proper procedures for using fertilizer, herbicides, and pesticides.

T.5 Additional SWPPP Requirements.

T.5.1 *Site Map.* (See also Part III.C.2) Document in your SWPPP where any of the following may be exposed to precipitation or surface runoff: grit, screenings, and other solids handling, storage, or disposal areas; sludge drying beds; dried sludge piles; compost piles; septage or hauled waste receiving station; and storage areas for process chemicals, petroleum products, solvents, fertilizers, herbicides, and pesticides.

T.5.2 *Potential Pollutant Sources.* (See also Part III.C.3) Document in your SWPPP the following additional sources and activities that have potential pollutants associated with them, as applicable: grit, screenings, and other solids handling, storage, or disposal areas; sludge drying beds; dried sludge piles; compost piles; septage or hauled waste receiving station; and access roads and rail lines.

T.5.3 *Wastewater and Washwater Requirements.* Keep a copy of all your current NPDES/ State discharge permits issued for wastewater and industrial, vehicle and equipment washwater discharges or, if an NPDES/ State discharge permit has not yet been issued, a copy of the pending application(s) with your SWPPP. If the washwater is handled in another manner, the disposal method must be described and all pertinent documentation must be retained onsite.

T.6 Additional Inspection Requirements.

(See also Part V.A) Include the following areas in all inspections: access roads and rail lines; grit, screenings, and other solids handling, storage, or disposal areas; sludge drying beds; dried sludge piles; compost piles; and septage or hauled waste receiving station.

Sector U – Food and Kindred Products.

U.1 Covered Stormwater Discharges.

The requirements in Sector U apply to stormwater discharges associated with industrial activity from Food and Kindred Products facilities as identified by the SIC Codes specified in Appendix A of the permit.

U.2 Limitations on Coverage.

U.2.1 *Prohibition of Non-Stormwater Discharges.* (See also Part I.C Limitations on Coverage) The following discharges are not authorized by this permit: discharges containing boiler blowdown, cooling tower overflow and blowdown, ammonia refrigeration purging, and vehicle washing and clean-out operations.

U.3 Additional Technology-Based Limitations.

U.3.1 *Employee Training.* (See also Part III.B.1.b.ix) Address pest control in your employee training program.

U.4 Additional SWPPP Requirements.

U.4.1 *Drainage Area Site Map.* (See also Part III.C.2) Document in your SWPPP the locations of the following activities if they are exposed to precipitation or runoff: vents and stacks from cooking, drying, and similar operations; dry product vacuum transfer lines; animal holding pens; spoiled product; and broken product container storage areas.

U.4.2 *Potential Pollutant Sources.* (See also Part III.C.3) Document in your SWPPP, in addition to food and kindred products processing-related industrial activities, application and storage of pest control chemicals (e.g., rodenticides, insecticides, fungicides) used on plant grounds.

U.5 Additional Inspection Requirements.

(See also Part V.A) Inspect on a quarterly basis, at a minimum, the following areas where the potential for exposure to stormwater exists: loading and unloading areas for all significant materials; storage areas, including associated containment areas; waste management units; vents and stacks emanating from industrial activities; spoiled product and broken product container holding areas; animal holding pens; staging areas; and air pollution control equipment.

U.6 Sector-Specific Benchmarks

These tables are for two subsectors of Food and Kindred Products. These benchmarks apply to both your primary industrial activity and any co-located industrial activities, which describe your site activities.

Table U-1 - Subsector U1. Grain Mill Products (SIC 2041-2048)

PARAMETER	Benchmark	Units	Frequency	Sample Type
Total Suspended Solids (TSS)	100	mg/L	1/quarter	Grab

Table U-2 - Subsector U2. Fats and Oils Products (SIC 2074-2079)

PARAMETER	Benchmark	Units	Frequency	Sample Type
Biochemical Oxygen Demand (BOD5)	30	mg/L	1/quarter	Grab
Chemical Oxygen Demand (COD)	120	mg/L	1/quarter	Grab
Nitrate plus Nitrite Nitrogen	0.68	mg/L	1/quarter	Grab
Total Suspended Solids (TSS)	100	mg/L	1/quarter	Grab

Sector V – Textile Mills, Apparel, and Other Fabric Products.

V.1 Covered Stormwater Discharges.

The requirements in Sector V apply to stormwater discharges associated with industrial activity from Textile Mills, Apparel, and Other Fabric Product manufacturing as identified by the SIC Codes specified under Sector V in Appendix A of the permit.

V.2 Limitations on Coverage.

V.2.1 Prohibition of Non-Stormwater Discharges. (See also Part I.C Limitations on Coverage) The following are not authorized by this permit: discharges of wastewater (e.g., wastewater resulting from wet processing or from any processes relating to the production process), reused or recycled water, and waters used in cooling towers. If you have these types of discharges from your facility, you must cover them under a separate NPDES/State discharge permit.

V.2.2 Prohibition of Certain Stormwater Discharges. (See also Part I.C Limitations on Coverage) The following are not authorized by this permit from owner or operator who uses benzidine-based dyes in the dyeing textiles: All discharges of wastes containing benzidine from the manufacturing areas, loading and unloading areas, storage areas, and other areas subject to direct contamination by benzidine or benzidine-containing product as a result of the manufacturing process, including but not limited to: stormwater and other runoff; and water used for routine cleanup or cleanup of spills. These limitations do not apply to stormwater runoff or other discharges from areas subject to contamination solely by fallout from air emissions of benzidine; or to stormwater runoff that exceeds that from the ten-year 24-hour rainfall event. If you have these types of discharges from your facility, you must cover them under a separate NPDES/State discharge permit.

V.3 Additional Technology-Based Limitations.

V.3.1 Good Housekeeping Measures. (See also Part III.B.1.b.ii)

V.3.1.1 Material Storage Areas. Plainly label and store all containerized materials (e.g., fuels, petroleum products, solvents, and dyes) in a protected area, away from drains. Minimize contamination of the stormwater runoff from such storage areas. Also consider an inventory control plan to prevent excessive purchasing of potentially hazardous substances. For storing empty chemical drums or containers, ensure that the drums and containers are clean (consider triple-rinsing) and that there is no contact of residuals with precipitation or runoff. Collect and dispose of washwater from these cleanings properly.

V.3.1.2 Material Handling Areas. Minimize contamination of stormwater runoff from material handling operations and areas. Consider the following (or their equivalents): use of spill and overflow protection; covering fueling areas; and covering or enclosing areas where the transfer of material may occur. When applicable, address the replacement or repair of leaking connections, valves, transfer lines, and pipes that may carry chemicals, dyes, or wastewater.

V.3.1.3 Fueling Areas. Minimize contamination of stormwater runoff from fueling areas. Consider the following (or their equivalents): covering the fueling area, using spill and overflow protection, minimizing run-on of stormwater to the fueling areas, using dry cleanup methods, and treating and/or recycling stormwater runoff collected from the fueling area.

V.3.1.4 Above-Ground Storage Tank Area. Minimize contamination of the stormwater runoff from above-ground storage tank areas, including the associated piping and valves. Consider the following (or their equivalents): regular cleanup of these areas; including measures for tanks, piping and valves explicitly in your SPCC program; minimizing runoff of stormwater from adjacent areas; restricting access to the area; inserting filters in adjacent catch basins; providing absorbent booms in unbermed fueling areas; using dry cleanup methods; and permanently sealing drains within critical areas that may discharge to a storm drain.

V.3.2 *Employee Training.* (See also Part III.B.1.b.ix) As part of your employee training program, address, at a minimum, the following activities (as applicable): use of reused and recycled waters, solvents management, proper disposal of dyes, proper disposal of petroleum products and spent lubricants, spill prevention and control, fueling procedures, and general good housekeeping practices.

V.4 Additional SWPPP Requirements.

V.4.1 *Potential Pollutant Sources.* (See also Part III.C.3) Document in your SWPPP the following additional sources and activities that have potential pollutants associated with them: industry-specific significant materials and industrial activities (e.g., backwinding, beaming, bleaching, backing bonding, carbonizing, carding, cut and sew operations, desizing, drawing, dyeing locking, fulling, knitting, mercerizing, opening, packing, plying, scouring, slashing, spinning, synthetic-felt processing, textile waste processing, tufting, turning, weaving, web forming, winging, yarn spinning, and yarn texturing).

V.4.2 *Description of Good Housekeeping Measures for Material Storage Areas.* Document in the SWPPP your containment area or enclosure for materials stored outdoors in connection with Part V.3.1.1 above.

V.5 Additional Inspection Requirements.

(See also Part V.A) Inspect, at least monthly, the following activities and areas (at a minimum): transfer and transmission lines, spill prevention, good housekeeping practices, management of process waste products, and all structural and nonstructural management practices.

Sector W – Furniture and Fixtures.

W.1 Covered Stormwater Discharges.

The requirements in Sector W apply to stormwater discharges associated with industrial activity from Furniture and Fixtures facilities as identified by the SIC Codes specified under Sector W in Appendix A of the permit.

W.2 Additional SWPPP Requirements.

W.2.1 Drainage Area Site Map. (See also Part III.C.2) Document in your SWPPP where any of the following may be exposed to precipitation or surface runoff: material storage (including tanks or other vessels used for liquid or waste storage) areas; outdoor material processing areas; areas where wastes are treated, stored, or disposed of; access roads; and rail spurs.

Sector X – Printing and Publishing.

X.1 Covered Stormwater Discharges.

The requirements in Sector X apply to stormwater discharges associated with industrial activity from Printing and Publishing facilities as identified by the SIC Codes specified under Sector X in Appendix A of the permit.

X.2 Additional Technology-Based Effluent Limits.

X.2.1 *Good Housekeeping Measures.* (See also Part III.B.1.b.ii)

X.2.1.1 *Material Storage Areas.* Plainly label and store all containerized materials (e.g., skids, pallets, solvents, bulk inks, hazardous waste, empty drums, portable and mobile containers of plant debris, wood crates, steel racks, and fuel oil) in a protected area, away from drains. Minimize contamination of the stormwater runoff from such storage areas. Also consider an inventory control plan to prevent excessive purchasing of potentially hazardous substances.

X.2.1.2 *Material Handling Area.* Minimize contamination of stormwater runoff from material handling operations and areas (e.g., blanket wash, mixing solvents, loading and unloading materials). Consider the following (or their equivalents): using spill and overflow protection, covering fueling areas, and covering or enclosing areas where the transfer of materials may occur. When applicable, address the replacement or repair of leaking connections, valves, transfer lines, and pipes that may carry chemicals or wastewater.

X.2.1.3 *Fueling Areas.* Minimize contamination of stormwater runoff from fueling areas. Consider the following (or their equivalents): covering the fueling area, using spill and overflow protection, minimizing runoff of stormwater to the fueling areas, using dry cleanup methods, and treating and/or recycling stormwater runoff collected from the fueling area.

X.2.1.4 *Above Ground Storage Tank Area.* Minimize contamination of the stormwater runoff from above-ground storage tank areas, including the associated piping and valves. Consider the following (or their equivalents): regularly cleaning these areas, explicitly addressing tanks, piping and valves in the SPCC program, minimizing stormwater runoff from adjacent areas, restricting access to the area, inserting filters in adjacent catch basins, providing absorbent booms in unbermed fueling areas, using dry cleanup methods, and permanently sealing drains within critical areas that may discharge to a storm drain.

X.2.2 *Employee Training.* (See also Part III.B.1.b.ix) As part of your employee training program, address, at a minimum, the following activities (as applicable): spent solvent management, spill prevention and control, used oil management, fueling procedures, and general good housekeeping practices.

X.3 Additional SWPPP Requirements.

X.3.1 *Description of Good Housekeeping Measures for Material Storage Areas.* In connection with Part X.2.1.1, describe in the SWPPP the containment area or enclosure for materials stored outdoors.

Sector Y – Rubber, Miscellaneous Plastic Products, and Miscellaneous Manufacturing Industries.

Y.1 Covered Stormwater Discharges.

The requirements in Sector Y apply to stormwater discharges associated with industrial activity from Rubber, Miscellaneous Plastic Products, and Miscellaneous Manufacturing Industries facilities as identified by the SIC Codes specified under Sector Y in Appendix A of the permit.

Y.2 Additional Technology-Based Effluent Limits.

Y.2.1 Controls for Rubber Manufacturers. (See also Part III.C.4) Minimize the discharge of zinc in your stormwater discharges. Parts Y.2.1.1 to Y.2.1.5 give possible sources of zinc to be reviewed and list some specific control measures to be considered for implementation (or their equivalents). Following are some general control measure options to consider: using chemicals purchased in pre-weighed, sealed polyethylene bags; storing in-use materials in sealable containers, ensuring an airspace between the container and the cover to minimize “puffing” losses when the container is opened, and using automatic dispensing and weighing equipment.

Y.2.1.1 Zinc Bags. Ensure proper handling and storage of zinc bags at your facility. Following are some control measure options: employee training on the handling and storage of zinc bags, indoor storage of zinc bags, cleanup of zinc spills without washing the zinc into the storm drain, and the use of 2,500-pound sacks of zinc rather than 50- to 100-pound sacks.

Y.2.1.2 Dumpsters. Minimize discharges of zinc from dumpsters. Following are some control measure options: covering the dumpster, moving the dumpster indoors, or providing a lining for the dumpster.

Y.2.1.3 Dust Collectors and Baghouses. Minimize contributions of zinc to stormwater from dust collectors and baghouses. Replace or repair, as appropriate, improperly operating dust collectors and baghouses.

Y.2.1.4 Grinding Operations. Minimize contamination of stormwater as a result of dust generation from rubber grinding operations. One control measure option is to install a dust collection system.

Y.2.1.5 Zinc Stearate Coating Operations. Minimize the potential for stormwater contamination from drips and spills of zinc stearate slurry that may be released to the storm drain. One control measure option is to use alternative compounds to zinc stearate.

Y.2.2 Controls for Plastic Products Manufacturers. Minimize the discharge of plastic resin pellets in your stormwater discharges. Control measures to be considered for implementation (or their equivalents) include minimizing spills, cleaning up of spills promptly and thoroughly, sweeping thoroughly, pellet capturing, employee education, and disposal precautions.

Y.3 Additional SWPPP Requirements.

Y.3.1 Potential Pollutant Sources for Rubber Manufacturers. (See also Part III.C.3) Document in your SWPPP the use of zinc at your facility and the possible pathways through which zinc may be discharged in stormwater runoff.

Y.4 Sector-Specific Benchmarks

Table Y-1 identifies benchmarks that apply to Sector Y. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table Y-1 - Subsector Y1 Benchmarks (Tires and Inner Tubes, Rubber and Plastics Footwear, Gaskets, Packing and Sealing Devices, and Rubber and Plastic Hoses and Belting, Fabricated Rubber Products, Not Elsewhere

Classified for SIC 3011, 3021, 3052, 3053, 3061, 3069)

PARAMETER	Benchmark	Units	Frequency	Sample Type
Total Zinc (freshwater) ¹	0.12	mg/L	1/quarter	Grab
Total Zinc (saltwater)	0.09	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.

Sector Z – Leather Tanning and Finishing.

Z.1 Covered Stormwater Discharges.

The requirements in Sector Z apply to stormwater discharges associated with industrial activity from Leather Tanning and Finishing facilities as identified by the SIC Code specified under Sector Z in Appendix A of the permit.

Z.2 Limitations on Coverage.

Prohibition of Certain Stormwater Discharges. (See also Part I.C Limitations on Coverage) The following are not authorized by this permit from owner or operator who uses benzidine-based dyes in the dyeing leather: All discharges of wastes containing benzidine from the manufacturing areas, loading and unloading areas, storage areas, and other areas subject to direct contamination by benzidine or benzidine-containing product as a result of the manufacturing process, including but not limited to: stormwater and other runoff; and water used for routine cleanup or cleanup of spills. These limitations do not apply to stormwater runoff or other discharges from areas subject to contamination solely by fallout from air emissions of benzidine; or to stormwater runoff that exceeds that from the ten-year 24-hour rainfall event. If you have these types of discharges from your facility, you must cover them under a separate NPDES/State discharge permit.

Z.3 Additional Technology-Based Effluent Limits.

Z.3.3 Good Housekeeping Measures. (See also Part III.B.1.b.ii)

Z.3.3.1 Storage Areas for Raw, Semiprocessed, or Finished Tannery By-products. Minimize contamination of stormwater runoff from pallets and bales of raw, semiprocessed, or finished tannery by-products (e.g., splits, trimmings, shavings). Consider indoor storage or protection with polyethylene wrapping, tarpaulins, roofed storage, etc. Consider placing materials on an impermeable surface and enclosing or putting berms (or equivalent measures) around the area to prevent stormwater run-on and runoff.

Z.3.3.2 Material Storage Areas. Label storage containers of all materials (e.g., specific chemicals, hazardous materials, spent solvents, waste materials) minimize contact of such materials with stormwater.

Z.3.3.3 Buffing and Shaving Areas. Minimize contamination of stormwater runoff with leather dust from buffing and shaving areas. Consider dust collection enclosures, preventive inspection and maintenance programs, or other appropriate preventive measures.

Z.3.3.4 Receiving, Unloading, and Storage Areas. Minimize contamination of stormwater runoff from receiving, unloading, and storage areas. If these areas are exposed, consider the following (or their equivalents): covering all hides and chemical supplies, diverting drainage to the process sewer, or grade berming or curbing the area to prevent stormwater runoff.

Z.3.3.5 Outdoor Storage of Contaminated Equipment. Minimize contact of stormwater with contaminated equipment. Consider the following (or their equivalents): covering equipment, diverting drainage to the process sewer, and cleaning thoroughly prior to storage.

Z.3.3.6 Waste Management. Minimize contamination of stormwater runoff from waste storage areas. Consider the following (or their equivalents): covering dumpsters, moving waste management activities indoors, covering waste piles with temporary covering material such as tarpaulins or polyethylene, and minimizing stormwater runoff by enclosing the area or building berms around the area.

Z.4 Additional SWPPP Requirements.

Z.4.1 Drainage Area Site Map. (See also Part III.C.2) Identify in your SWPPP where any of the following may be exposed to precipitation or surface runoff: processing and storage areas of the beamhouse, tanyard, and re-tan wet finishing and dry finishing operations.

Z.4.2 Potential Pollutant Sources. (See also Part III.C.3) Document in your SWPPP the following sources and activities that have potential pollutants associated with them (as appropriate): temporary or permanent storage of fresh and brine-cured hides; extraneous hide substances and hair; leather dust, scraps, trimmings, and shavings.

Sector AA – Fabricated Metal Products.

AA.1 Covered Stormwater Discharges.

The requirements in Sector AA apply to stormwater discharges associated with industrial activity from Fabricated Metal Products facilities as identified by the SIC Codes specified under Sector AA in Appendix A of the permit.

AA.2 Additional Technology-Based Effluent Limits.

AA.2.1 *Good Housekeeping Measures.* (See also Part III.B.1.b.ii)

AA.2.1.1 *Raw Steel Handling Storage.* Minimize the generation of and/or recover and properly manage scrap metals, fines, and iron dust. Include measures for containing materials within storage handling areas.

AA.2.1.2 *Paints and Painting Equipment.* Minimize exposure of paint and painting equipment to stormwater.

- Conduct outdoor painting over a suitable groundcover (i.e., tarp) to capture any residuals.
- Paint mixing, solvent transfer, and equipment cleanup operations must be contained, and shall not enter floor or storm drains or the environment.

AA.2.2 *Spill Prevention and Response Procedures.* (See also Part III.B.1.b.iv) Ensure that the necessary equipment to implement a cleanup is available to personnel, so that immediate clean-up is possible. The following areas should be addressed

AA.2.2.1 *Metal Fabricating Areas.* Maintain clean, dry, orderly conditions in these areas. Consider using dry clean-up techniques.

AA.2.2.2 *Storage Areas for Raw Metal.* Keep these areas free of conditions that could cause, or impede appropriate and timely response to, spills or leakage of materials. Consider the following (or their equivalents): maintaining storage areas so that there is easy access in the event of a spill, and labeling stored materials to aid in identifying spill contents.

AA.2.2.3 *Metal Working Fluid Storage Areas.* Minimize the potential for stormwater contamination from storage areas for metal working fluids.

AA.2.2.4 *Cleaners and Rinse Water.* Control and clean up spills of solvents and other liquid cleaners, control sand buildup and disbursement from sand-blasting operations, and prevent exposure of recyclable wastes. Substitute environmentally benign cleaners when possible.

AA.2.2.5 *Lubricating Oil and Hydraulic Fluid Operations.* Minimize the potential for stormwater contamination from lubricating oil and hydraulic fluid operations. Consider using monitoring equipment or other devices to detect and control leaks and overflows. Consider installing perimeter controls such as dikes, curbs, grass filter strips, or equivalent measures.

AA.2.2.6 *Chemical Storage Areas.* Minimize stormwater contamination and accidental spillage in chemical storage areas. Include a program to inspect containers and identify proper disposal methods.

AA.2.2.7 *Blasting Operations.* Capture airborne particles by performing operations inside permanent structures or temporary protective measures such as drop cloths and shrouding secured around the activity. A suitable ground cover (i.e., tarp, rubber mat) should be placed under activity area in order to collect any debris, followed by proper disposal, to minimize potential to minimize stormwater contamination.

AA.2.3 *Spills and Leaks*. (See also Part III.C.3.c) In your spill prevention and response procedures, required by Part III.B.1.b.iv, pay attention to the following materials (at a minimum): chromium, toluene, pickle liquor, sulfuric acid, zinc and other water priority chemicals, and hazardous chemicals and wastes.

AA.3 Additional SWPPP Requirements.

AA.3.1 *Drainage Area Site Map*. (See also Part III.C.2) Document in your SWPPP where any of the following may be exposed to precipitation or surface runoff: raw metal storage areas; finished metal storage areas; scrap disposal collection sites; equipment storage areas; retention and detention basins; temporary and permanent diversion dikes or berms; right-of-way or perimeter diversion devices; sediment traps and barriers; processing areas, including outside painting areas; wood preparation; recycling; and raw material storage.

AA.3.2 *Potential Pollutant Sources*. (See also Part III.C.3) Document in your SWPPP the following additional sources and activities that have potential pollutants associated with them: loading and unloading operations for paints, chemicals, and raw materials; outdoor storage activities for raw materials, paints, empty containers, corn cobs, chemicals, and scrap metals; outdoor manufacturing or processing activities such as grinding, cutting, degreasing, buffing, and brazing; onsite waste disposal practices for spent solvents, sludge, pickling baths, shavings, ingot pieces, and refuse and waste piles.

AA.4 Additional Inspection Requirements

AA.4.1 *Inspections*. (See also Part V.A) At a minimum, include the following areas in all inspections: raw metal storage areas, finished product storage areas, material and chemical storage areas, recycling areas, loading and unloading areas, equipment storage areas, paint areas, and vehicle fueling and maintenance areas.

AA.4.2 *Comprehensive Site Inspections*. (See also Part V.A) As part of your inspection, also inspect areas associated with the storage of raw metals, spent solvents and chemicals storage areas, outdoor paint areas, and drainage from roof. Potential pollutants include chromium, zinc, lubricating oil, solvents, aluminum, oil and grease, methyl ethyl ketone, steel, and related materials.

AA.5 Sector-Specific Benchmarks.

Table AA-1 identifies benchmarks that apply to Sector AA. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table AA-1 - Sector AA Benchmarks (Fabricated Metal Products, Fabricated Metal Coating and Engraving, and Allied Services, Jewelry, Silverware, and Plated Ware)

PARAMETER	Benchmark	Units	Frequency	Sample Type
Nitrate plus Nitrite Nitrogen	0.68	mg/L	1/quarter	Grab
Total Zinc (freshwater) ¹	0.12	mg/L	1/quarter	Grab
Total Zinc (saltwater)	0.09	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.

Sector AB – Transportation Equipment, Industrial or Commercial Machinery Facilities.

AB.1 Covered Stormwater Discharges.

The requirements in Sector AB apply to stormwater discharges associated with industrial activity from Transportation Equipment, Industrial or Commercial Machinery facilities as identified by the SIC Codes specified under Sector AB in Appendix A of the permit.

AB.2 Additional SWPPP Requirements.

Drainage Area Site Map. (See also Part III.C.2) Identify in your SWPPP where any of the following may be exposed to precipitation or surface runoff: vents and stacks from metal processing and similar operations.

Sector AC –Electronic and Electrical Equipment and Components, Photographic and Optical Goods.

AC.1 Covered Stormwater Discharges.

The requirements in Sector AC apply to stormwater discharges associated with industrial activity from facilities that manufacture Electronic and Electrical Equipment and Components, Photographic and Optical goods as identified by the SIC Codes specified in Appendix A of the permit.

AC.2 Limitations on Coverage.

Prohibition of Certain Stormwater Discharges. (See also Part I.C Limitations on Coverage) The following are not authorized by this permit from manufacturers of either electrical capacitors or electrical transformers, who produce the product in which Polychlorinated Biphenyls (PCB) or Polychlorinated Biphenyls (PCB)-containing compounds are part of the dielectric: All discharges from the manufacturing or incineration areas, loading and unloading areas, storage areas and other areas which are subject to direct contamination by PCBs as a result of the manufacturing process, including but not limited to: stormwater and other runoff; and water used for routine cleanup or cleanup of spills. These limitations do not apply to stormwater runoff or other discharges from areas subject to contamination solely by fallout from air emissions of PCBs; or to stormwater runoff that exceeds that from the ten-year 24-hour rainfall event.

Sector AD.a – Department of Public Works and Highway Maintenance Facilities.

AD.a.1 Covered Stormwater Discharges.

The requirements are for the fleet and equipment maintenance at Public Works and Highway Maintenance Operations in Sector AD.a apply to stormwater discharges associated with industrial activity from Department of Public Works and Highway Maintenance facilities as identified by the SIC Codes specified under Sector AD.a in Appendix A of the permit.

AD.a.2 Additional SWPPP Requirements.

In addition to the requirements of Part III, the SWPPP shall include, at a minimum, the requirements listed for Sector P - Land Transportation and Warehousing. Any dewatering of either street sweeping or storm drain inlet cleaning debris must drain either to sanitary sewer or be collected and hauled to a treatment facility. Any storage of material must be protected from stormwater by either roof or temporary measures such as tarps.

AD. a.3 Sector-Specific Benchmarks.

Table AD.a.-1 identifies benchmarks that apply to Sector AD.a, whose operations include storage of street sweeping or storm drain inlet cleaning debris left uncovered. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table 1 - Subsector AD.a.1 Benchmarks required for stormwater that has come into contact with street sweeping or storm drain inlet cleaning debris

PARAMETER	Benchmark	Units	Frequency	Sample Type
Nitrate plus Nitrite Nitrogen	0.68	mg/L	1/quarter	Grab
Phosphorus	2	mg/L	1/quarter	Grab
TSS	100	mg/L	1/quarter	Grab

Sector AD.b – School Bus Maintenance Facilities.

AD.b.1 Covered Stormwater Discharges.

The requirements in Sector AD.b apply to stormwater discharges associated with industrial activity from School Bus Maintenance facilities as identified by the SIC Codes specified under Sector AD.b in Appendix A of the permit.

AD.b.2 Additional SWPPP Requirements.

In addition to the requirements of Part III, the SWPPP shall include, at a minimum, the requirements listed for Sector P - Land Transportation and Warehousing.

Sector AD.d – Salt Terminals.

AD.d.1 Covered Stormwater Discharges.

The requirements in Sector AD.d apply to stormwater discharges associated with industrial activity from Salt Terminal as identified by the SIC Codes specified under Sector AD.d in Appendix A of the permit.

AD.d.2 Additional SWPPP Requirements.

In addition to the requirements of Part III, the SWPPP shall include, at a minimum, the requirements as they apply to your operation listed for Sector P - Land Transportation and Warehousing or for Sector Q: Water Transportation.

AD.d.3 Additional Technology-Based Effluent Limits.

Salt Storage Piles or Piles Containing Salt.(See also Part III.B.1.b.vii) Enclose or cover storage piles of salt, or piles containing salt, used for deicing or other commercial or industrial purposes, including maintenance of paved surfaces. This requirement is inclusive of all staged piles containing salt, where “staged” indicates that there is no planned salt movement (either being added to, or shipped off) within the next 2 months. Implement appropriate measures (e.g., good housekeeping, diversions, containment) to minimize exposure resulting from adding to or removing materials from the pile.

AD. d.4 Sector-Specific Reporting.

Table AD.d.-1 identifies monitoring and reporting requirements that apply to Sector AD.d, when piles are not covered between April and September, and therefore exposed to stormwater. In these cases monitoring and reporting are required, using the benchmark techniques as described in Part V of the permit, including “substantially identical outfall”. The monitoring must include the parameters in the following table. However, unlike the benchmarks, this monitoring condition continues for the duration of the permit. This monitoring is in addition to the required visual monitoring of the permit. These reporting requirements apply to all outfalls associated with this activity. Since terminal outfalls are often below the surface of the water, or contain commingled stormwater flows, the samples for drainage from salt piles will be taken at the stormdrain inlet(s).

Table AD.d-1 - Sector AD.d Reporting (Salt Terminals)

PARAMETER	Benchmark	Units	Frequency	Sample Type
Flow	Report	GPD	2/year ¹	Estimate ²
Chloride	Report	mg/L	2/year ¹	Grab
Free Amenable Cyanide	Report	mg/L	2/year ¹	Grab
Iron	Report	mg/L	2/year ¹	Grab

¹ When piles are not covered between April and September, and therefore exposed to stormwater, quarterly monitoring and reporting is required.

² An estimated flow in (gallons per day) will be reported based on the volume (gallons) of runoff from the first hour of rain must also be calculated and reported, based on the rain quantity x area of storage of uncovered pile(s). The volume may be estimated based on a local rain gauge on site, or a relatively local weather station. This flow may be used by the Department calculate potential loading of salt into the receiving waters.

Sector AD.e – Inactive Landfills.

AD.e.1 Covered Stormwater Discharges.

The requirements in Sector AD.b apply to stormwater discharges associated with industrial activity from inactive landfills as identified by the Activity Code specified under Sector AD.e in Appendix A of the permit.

AD.e.2 Additional SWPPP Requirements.

In addition to the requirements of Part III, the SWPPP shall include, at a minimum, the requirements listed for Sector L - Landfills and Land Application Sites.

Sector AD – Stormwater Discharges Designated by the Department as Requiring Permits.

AD.1 Covered Stormwater Discharges.

Sector AD is used to provide permit coverage for facilities designated by the Department as needing a stormwater permit, and any discharges of stormwater associated with industrial activity that do not meet the description of an industrial activity covered by Sectors A-AC.

AD.1 Eligibility for Permit Coverage. Because this sector is primarily intended for use by discharges designated by the Department as needing a stormwater permit (which is an atypical circumstance), and your facility may or may not normally be discharging stormwater associated with industrial activity, you must obtain the Department's written permission to use this permit prior to submitting an NOI. If you are authorized to use this permit, you will still be required to ensure that your discharges meet the basic eligibility provisions in Part I of this permit.

AD.2 Sector-Specific Benchmarks and Effluent Limits. (See also Part V of the permit.)

The Department will establish any additional monitoring and reporting requirements for your facility prior to authorizing you to be covered by this permit. Additional monitoring requirements would be based on the nature of activities at your facility and your stormwater discharges.

Appendix E: Definitions & Acronyms

The Definitions provided in this Appendix E are for reference. Where State or Federal law provides more stringent applicable definitions, the more stringent requirements prevail.

a. Definitions

Accounting Guidance – The Department’s ‘Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated’ dated June 2011, or its replacement, excluding section 9, entitled “Alternative BMPs for Consideration”. Available at <https://mdewwp.page.link/ChesBayGuidance>.

Action Area – all areas to be affected directly or indirectly by the stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities, and not merely the immediate area involved in these discharges and activities.

Appropriate Demonstration – for purposes of this permit, this means the submission of information sufficient to demonstrate a clear and immovable impediment to completing a required action.

Base Flood Elevation (BFE) - the elevation of surface water resulting from a flood that has a 1% chance of equaling or exceeding that level in any given year, also known as the “100-year flood plain”, as determined by U.S. Federal Emergency Management Administration mapping tool available at <https://msc.fema.gov/portal/search>.

Best Management Practices (BMPs) –activities, practices, prohibited practices, structures, vegetation, maintenance procedures, and other management practices that prevent or reduce the Discharge of Pollutants to Waters of the State. BMPs include treatment requirements, operating procedures, and other practices that control runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Cationic Chemical Additive – Chemical Additives that contain an overall positive charge. Among other things, they are used to reduce turbidity in stormwater discharges by chemically bonding to the overall negative charge of suspended silts and other soil materials and causing them to bind together and settle out. Common examples of cationic treatment chemicals are chitosan and cationic PAM.

Chemical Additive - waste water treatment chemicals or products added to water prior to discharge, such as polymers or flocculants. Additives are added to the water so that the discharge water is in compliance with the permit limits.

Co-located Industrial Activities – Any industrial activities, excluding your primary industrial activity(ies), located on-site that are defined by the stormwater regulations at 122.26(b)(14)(i)-(ix) and (xi). An activity at a facility is not considered co-located if the activity, when considered separately, does not meet the description of a category of industrial activity covered by the stormwater regulations or identified by the SIC code list in Appendix A.

Control Measure – refers to any BMP or other method (including narrative effluent limitations) used to prevent or reduce the discharge of pollutants to Waters of the State.

Department - the Maryland Department of the Environment.

Design Manual - the “Maryland Stormwater Design Manual, Volumes I & II (Design Manual)”, available at <https://mdewwp.page.link/MDSWDesign> or its replacement. The Design Manual contains information regarding Stormwater Management principles, methods, and practices for new development, redevelopment, retrofits and restoration including ESD.

Discharge - the (a) addition, introduction, leaking, spilling, or emitting of a Pollutant into the Waters of the State; or (b) placing of a Pollutant in a location where the Pollutant is likely to pollute.

Discharge of a Pollutant – any addition of any “pollutant” or combination of pollutants to “Waters of the State” from any “point source,” or any addition of any pollutant or combination of pollutants to the waters of the “contiguous zone” or the ocean from any point source other than a vessel or other floating craft which is being

used as a means of transportation. This includes additions of pollutants into waters of this State from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. See 40 CFR 122.2.

Discharge-Related Activities – activities that cause, contribute to, or result in stormwater and allowable non-stormwater point source discharges, and measures such as the siting, construction and operation of BMPs to control, reduce, or prevent pollution in the discharges.

Discharge Monitoring Report - the form, including any subsequent additions, revisions, or modifications for the reporting of self-monitoring results by Permittees.

Effluent Limitation - for the purposes of this permit, any of the Part III.A and Part III.B requirements.

Effluent Limitations Guideline (ELG) – defined in 40 CFR § 122.2 as a regulation published by the EPA Administrator under section 304(b) of CWA to adopt or revise effluent limitations.

EJScore – for purposes of this permit, the environmental justice score is obtained by using the mapping tool developed by the University of Maryland (Dr. Sacoby Wilson and Jan-Michael Archer) as an EJ screening tool (<https://p1.cgis.umd.edu/ejscreen/>). This permit memorializes the results of the tool from October 2021 with exported shapefiles of census tracts with an EJScore of ≥ 0.76 . Those census tracts are the communities with a 0.76 or above EJScore and represent the communities that are confronted with environmental justice concerns that are more significant than 76 percent of other census tracts in Maryland.

EPA Approved or Established Total Maximum Daily Loads (TMDLs) – “EPA Approved TMDLs” are those that are developed by a State and approved by EPA. “EPA Established TMDLs” are those that are developed by EPA.

Existing Discharger – an operator applying for coverage under this permit for discharges authorized previously under an NPDES general or individual permit.

Feasible – for the purposes of this permit, feasible means technologically possible and economically practicable and achievable in light of best industry practices.

Facility or Activity – any NPDES “point source” (including land or appurtenances thereto) that is subject to regulation under the NPDES program. See 40 CFR 122.2.

General permit - a State discharge permit issued for a class of dischargers.

Grab sample - an individual sample collected in less than 15 minutes.

Groundwater - underground water in a zone of saturation.

Hardness Dependent - refers to benchmark values for some metals that are determined as a function of hardness (in units of mg/L) in water. For these parameters, permittees whose discharges exceed the lowest benchmark level of the metal must determine the hardness of the receiving water (see Appendix C), to identify the benchmark value applicable to their facility.

Hazardous Waste – for the purposes of this permit, any liquid, solid, or contained gas that contain properties that are dangerous or potentially harmful to human health or the environment. See also 40 CFR §261.2.

Hazardous Substance – any substance, liquid, solid, or contained gas that

- a. is defined as a hazardous substance under § 101(14) of CERCLA,
- b. is identified as a controlled hazardous substance by the Department in COMAR, or
- c. has properties that are dangerous or potentially harmful to human health or the environment.

Impaired Water (or “**Water Quality Impaired Water**”) – a body of water identified by the Department or EPA pursuant to Section 303(d) of the Clean Water Act as not meeting applicable State water quality standards (these waters are called “water quality limited segments” under 40 CFR 30.2(j)). Impaired waters include both

waters with approved or established TMDLs, and those for which a TMDL has not yet been approved or established. Impaired waters compilations are included in Maryland's most current List of Impaired Surface Waters as Category 4a, 4b, 4c or 5 waterbodies.

Impervious Surface - any surface that does not allow stormwater to infiltrate into the ground, including any area that is paved or used for vehicular storage or traffic, building rooftops, sidewalks, driveways, etc. The surfaces considered impervious for nutrient reduction requirements are further specified in Part III.A of the permit.

Industrial Activity – the 10 categories of industrial activities included in the definition of “stormwater discharges associated with industrial activity” as defined below and in 40 CFR 122.26(b)(14)(i)-(ix) and (xi).

Industrial Stormwater – stormwater runoff from industrial activity.

Infeasible – there is a site-specific constraint making it not technologically possible, or not economically practicable and achievable in light of best industry practices, to achieve the required control measures on-site. The burden is on the permittee to demonstrate to the permitting authority that the requirement is infeasible.

Leachate – liquid that has passed through or emerged from solid waste and contains soluble, suspended, or miscible materials removed from such waste.

Measured flow - any method of liquid volume measurement; the accuracy of which has been previously demonstrated in engineering practice, or for which a relationship to absolute volume has been obtained.

Minimize – to reduce and/or eliminate to the extent achievable using control measures (including best management practices) that are technologically available and economically practicable and achievable in light of best industry practice.

Municipal Separate Storm Sewer System (MS4) – in Maryland we have several MS4 NPDES Permits. The following are a summary of how they are broken down by size. For a full listing and explanation, visit the Department website for “Maryland’s NPDES Municipal Separate Storm Sewer System (MS4) Permits” or at this link <https://mdewwp.page.link/MDMS4s>.

- Phase I MS4s are for large jurisdictions, which are municipalities with populations of greater than 250,000, and medium jurisdictions, which are municipalities with populations between 100,000 and 250,000. The large Phase I MS4 jurisdictions are Anne Arundel County, Baltimore County, Baltimore City, Montgomery County, and Prince George’s County. The medium Phase I MS4 jurisdictions are Carroll County, Charles County, Frederick County, Harford County, and Howard County. One statewide MS4 under this category has been issued to the State Highway Administration.
- Phase II MS4s include smaller jurisdictions or approximately 60 cities and towns in Maryland with populations greater than 1,000 located in Census defined urbanized areas. They also include State and Federal facilities.

NetDMR – a national tool for regulated Clean Water Act permittees to submit discharge monitoring reports (DMRs) electronically via a secure Internet application to U.S. EPA through the Environmental Information Exchange Network. NetDMR allows participants to discontinue mailing in hard copy forms under 40 CFR 122.41 and 403.12.

New Discharger – a facility from which there is a discharge, that did not commence the discharge at a particular site prior to August 13, 1979, which is not a new source, and which has never received a finally effective NPDES permit for discharges at that site. See 40 CFR 122.2.

New Source – any building, structure, facility, or installation from which there is or may be a “discharge of pollutants,” the construction of which commenced:

- after promulgation of standards of performance under section 306 of the CWA which are applicable to such source, or

- after proposal of standards of performance in accordance with section 306 of the CWA which are applicable to such source, but only if the standards are promulgated in accordance with section 306 within 120 days of their proposal. See 40 CFR 122.2.

New Source Performance Standards (NSPS) – technology-based standards for facilities that qualify as new sources under 40 CFR 122.2 and 40 CFR 122.29.

No Exposure – all industrial materials or activities are protected by a storm-resistant shelter to prevent exposure to rain, snow, snowmelt, and/or runoff. See 40 CFR 122.26(g).

Non-Stormwater Discharges – discharges that do not originate from storm events. They can include, but are not limited to, discharges of process water, air conditioner condensate, noncontact cooling water, pavement wash water, external building washdown, irrigation water, or uncontaminated ground water or spring water.

Notice of Intent (NOI) – the form (electronic or paper) required for authorization of coverage under the 20-SW General Permit.

Notice of Termination (NOT) – the form (electronic or paper) required for terminating coverage under the 20-SW General Permit.

National Pollutant Discharge Elimination System (NPDES) - the EPA permit program that addresses water Pollution by regulating Point Sources that Discharge Pollutants to Waters of the United States.

NPDES Permit - means a discharge permit that authorizes a facility to Discharge a specified amount of a Pollutant into a receiving water.

Oil - oil of any kind and in any liquid form including: petroleum; petroleum by-products; fuel oil; sludge containing oil or oil residue; oil refuse; oil mixed with or added to or otherwise contaminating soil, waste, or any other liquid or solid media; crude oils; aviation fuel; gasoline; kerosene; light and heavy fuel oils; diesel motor fuel, including biodiesel fuel, regardless of whether the fuel is petroleum based; asphalt; ethanol; and regardless of specific gravity, every other nonedible, nonsubstituted liquid petroleum fraction unless that fraction is specifically identified as a Hazardous Substance.

Operator – any entity with a stormwater discharge associated with industrial activity that meets either of the following two criteria:

1. The entity has operational control over industrial activities, including the ability to make modifications to those activities; or
2. The entity has day-to-day operational control of activities at a facility necessary to ensure compliance with the permit (e.g., the entity is authorized to direct workers at a facility to carry out activities required by the permit).

Outfall – locations where collected and concentrated stormwater flows are discharged from the facility, including pipes, ditches, swales, and other structures that transport stormwater.

Owner - a person who has a legal interest in the facility or in the property on which the facility is located, or the owner's agent.

Permittee - the person holding a permit issued by the Department, or authorized for coverage under a general permit by the Department.

Person – an individual, association, partnership, corporation, municipality, State or Federal agency, or an agent or employee thereof. See 40 CFR 122.2.

Point source – any discernible, confined and discrete conveyance, including any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, large animal feeding operation, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are, or may be, discharged. See 40 CFR Part 122.2.

Pollutant – dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal and agricultural waste discharged into Waters of the State.

Pollutant of concern – A pollutant which causes or contributes to a violation of a water quality standard, including a pollutant which is identified as causing an impairment in a state's 303(d) list.

Pollution – means any contamination or other alteration of the physical, chemical, or biological properties of any waters of this State, including a change in temperature, taste, color, turbidity, or odor of the waters or the discharge or deposit of any organic matter, harmful organism, or liquid, gaseous, solid, radioactive, or other substance into any waters of this State that will render the waters harmful, or detrimental, to:

- (a) Public health, safety, or welfare;
- (b) Domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses;
- (c) Livestock, wild animals, birds; or
- (d) Fish or other aquatic life.

Primary industrial activity – includes any activities performed on-site which are (1) identified by the facility's primary SIC code; or (2) included in the narrative descriptions of 122.26(b)(14)(i), (iv), (v), or (vii), and (ix). [For co-located activities covered by multiple SIC codes, it is recommended that the primary industrial determination be based on the value of receipts or revenues or, if such information is not available for a particular facility, the number of employees or production rate for each process may be compared. The operation that generates the most revenue or employs the most personnel is the operation in which the facility is primarily engaged. In situations where the vast majority of on-site activity falls within one SIC code, that activity may be the primary industrial activity.] Narrative descriptions in 40 CFR 122.26(b)(14) identified above include: (i) activities subject to stormwater effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards; (iv) hazardous waste treatment storage, or disposal facilities including those that are operating under interim status or a permit under subtitle C of the Resource Conservation and Recovery Act (RCRA); (v) landfills, land application sites and open dumps that receive or have received industrial wastes; (vii) steam electric power generating facilities; and (ix) sewage treatment works with a design flow of 1.0 mgd or more.

Proprietary Practices – Stormwater controls approved through the Department's Review Process for New Technologies as described in the Department's 2005 Proprietary Stormwater Practice Guidance titled "Facts about ...Maryland's Stormwater Program & Proprietary Practices" found on the Departments website or at this link <https://mdewwp.page.link/InnovativeSWTech>.

Qualified Personnel – Qualified personnel are those who possess the knowledge and skills to assess conditions and activities that could impact stormwater quality at your facility, and who can also evaluate the effectiveness of control measures.

Reportable Quantity Release – a release of a hazardous substance at or above the established legal threshold that requires emergency notification. Refer to 40 CFR Parts 110, 117, and 302 for complete definitions and reportable quantities for which notification is required.

Restoration of Impervious Surfaces – Treatment of untreated impervious surfaces with structural or non-structural stormwater management practices based upon designs that treat the volume from one inch of rainfall. Approved practices for industrial sites are identified in Part III.A of the permit.

Runoff - that portion of stormwater that, once having fallen to the ground, is in excess of the evaporative or infiltrative capacity of soils, and the retentive capacity of surface features, which flows or will flow off the land by surface runoff to Waters of the State.

Runoff coefficient – the fraction of total rainfall that will appear at the conveyance as runoff. See 40 CFR 122.26(b)(11).

Run-on - water from outside the industrial stormwater area that flows into the area. Run-on includes

stormwater from rainfall or the melting of snow or ice that falls directly on the unit, as well as the water that drains from adjoining areas.

Section 313 water priority chemical - a chemical or chemical categories that: 1) are listed at 40 CFR 372.65 pursuant to Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986, also titled the Emergency Planning and Community Right-to-Know Act of 1986; 2) are present at or above threshold levels at a facility subject to SARA Title III, Section 313 reporting requirements; and 3) that meet at least one of the following criteria: (i) are listed in Appendix D of 40 CFR 122 on either Table II (organic priority pollutants), Table III (certain metals, cyanides, and phenols) or Table V (certain toxic pollutants and hazardous substances); (ii) are listed as a hazardous substance pursuant to Section 311(b)(2)(A) of the Clean Water Act at 40 CFR 116.4; or (iii) are pollutants for which EPA has published acute or chronic water quality criteria.

Significant materials – includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under section 101(14) of CERCLA, commonly known as Superfund; any chemical the facility is required to report pursuant to section 313 of Title III of SARA; fertilizers; pesticides; and waste products such as ashes, slag and sludge that have the potential to be released with stormwater discharges. See 40 CFR 122.26(b)(12).

Significant spills - includes, but is not limited to, releases of oil or hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (40 CFR 110.10 and 40 CFR 117.21) or Section 102 of CERCLA (40 CFR 302.4).

State discharge permit - the discharge permit issued under the Environment Article, Title 9, Subtitle 3, Annotated Code of Maryland.

Stormwater – stormwater runoff, snow melt runoff, and surface runoff and drainage. See 40 CFR 122.26(b)(13).

Stormwater Discharges Associated with Construction Activity – a discharge of pollutants in stormwater runoff from areas where soil disturbing activities (e.g., clearing, grading, or excavating) occur, or construction materials, or equipment storage or maintenance (e.g., fill piles, borrow areas, concrete truck washout, fueling), or other industrial stormwater directly related to the construction process are located. See 40 CFR 122.26(b)(14)(x) and 40 CFR 122.26(b)(15).

Stormwater Discharges Associated with Industrial Activity – the discharge from any conveyance that is used for collecting and conveying stormwater and that is directly related to manufacturing, processing or raw materials storage areas at an industrial plant. The term does not include discharges from facilities or activities excluded from the NPDES program under Part 122. For the categories of industries identified in 40 CFR 122.26, the term includes, but is not limited to, stormwater discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process waste waters; sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and final products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to stormwater. For the purposes of this paragraph, material handling activities include storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, final product, by-product or waste product. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with stormwater drained from the above described areas. Industrial facilities include those that are federally, State, or municipally owned or operated that meet the description of the facilities listed in 40 CFR 122.26(b)(14). The term also includes those facilities designated under the provisions of 40 CFR 122.26(a)(1)(v). See 40 CFR 122.26(b)(14).

Stormwater Management – is, as described in the Design Manual, any

1. quantitative control, a system of vegetative and structural measures that control the increased volume and rate of surface runoff caused by man-made changes to the land; and
2. qualitative control, a system of vegetative, structural, and other measures that reduce or eliminate pollutants that might otherwise be carried by runoff.

Stormwater Team – the group of individuals responsible for oversight of the development and modifications of the SWPPP, and oversight of compliance with the permit requirements. The individuals on the “Stormwater Team” must be identified in the SWPPP.

Storm Event – a precipitation event that results in a measurable amount of precipitation.

Surface waters - all Waters of this State which are not groundwaters.

Tier 2 Waters – For antidegradation purposes, pursuant to 40 CFR 131.12(a)(2), Tier 2 waters are characterized as having water quality that exceeds the levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water.

Total Maximum Daily Loads (TMDLs) – A TMDL is a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and an allocation of that amount to the pollutant's sources. A TMDL includes wasteload allocations (WLAs) for point source discharges; load allocations (LAs) for nonpoint sources and/or natural background, and must include a margin of safety (MOS) and account for seasonal variations. (See section 303(d) of the Clean Water Act and 40 CFR 130.2 and 130.7).

Treatment of Impervious Surfaces - Implementing the requirements for stormwater management as prescribed in the Department's “2000 Maryland Stormwater Design Manual, Volumes I & II” or the Design Manual for impervious area. The manual spells out both design and implementation requirements using appropriately sized Best Management Practices or Environmental Site Design, based upon designs that manage on-site the water quality volume (WQv) resulting from the first one inch of rainfall from a 24-hour storm preceded by 48 hours of no measurable precipitation.

Wastewater - any:

1. liquid waste substance derived from industrial, commercial, municipal, residential, agricultural, recreational, or other operations or establishments; and
2. other liquid waste substance containing liquid, gaseous or solid matter and having characteristics that will pollute any waters of the State.

Water Quality Impaired – See ‘Impaired Water’.

Water Quality Standards – The water quality goals promulgated by the Department at [COMAR 26.08.02](#) Error! Hyperlink reference not valid. for a water body, or portion thereof, by designating the use or uses to be made of the water and by setting criteria necessary to protect the uses.

Waters of the State – includes:

1. both surface and underground waters within the boundaries of this State subject to its jurisdiction, including that part of the Atlantic Ocean within the boundaries of this State, the Chesapeake Bay and its tributaries, and all ponds, lakes, rivers, streams, tidal and nontidal wetlands, public ditches, tax ditches, and public drainage systems within this State, other than those designed and used to collect, convey, or dispose of sanitary sewage; and
2. the flood plain of free-flowing waters determined by the Department of Natural Resources on the basis of the 100-year flood frequency.

“You” and “Your” – as used in this permit are intended to refer to the permittee, the operator, or the discharger as the context indicates and that party's facility or responsibilities. The use of “you” and “your” refers to a particular facility and not to all facilities operated by a particular entity. For example, “you must submit” means the permittee must submit something for that particular facility. Likewise, “all your discharges” would refer only to discharges at that one facility.

b. Acronyms

BAT – Best Available Technology Economically Achievable

BFE – Base Flood Elevation

BOD5 – Biochemical Oxygen Demand (5-day test)

BPJ – Best Professional Judgment

BPT – Best Practicable Control Technology Currently Available

CERCLA – Comprehensive Environmental Response, Compensation and Liability Act

CFR - Code of Federal Regulations

COD – Chemical Oxygen Demand

COMAR - Code of Maryland Regulations

CWA – Clean Water Act (or the Federal Water Pollution Control Act, 33 U.S.C. §1251 et seq)

DMR – Discharge Monitoring Report

EPA – U. S. Environmental Protection Agency

ESD – Environmental Site Design

MGD – Million Gallons per Day

MSDS – Material Safety Data Sheet

MSGP – EPA’s Multi-Sector General Permit

NPDES – National Pollutant Discharge Elimination System

NRC – National Response Center

NSPS – New Source Performance Standard

NTU – Nephelometric Turbidity Unit

POTW – Publicly Owned Treatment Works

RCRA – Resource Conservation and Recovery Act

RQ – Reportable Quantity

SARA – Superfund Amendments and Reauthorization Act

SIC – Standard Industrial Classification

SPCC – Spill Prevention, Control, and Countermeasures

SWPPP – Stormwater Pollution Prevention Plan

TMDL - Total Maximum Daily Loads

TSDf – Treatment, Storage, or Disposal Facility

TSS – Total Suspended Solids

USGS – United States Geological Survey

WLA – Waste Load Allocation

SECTION I: Owner/Operator Information

- (A) Provide the name, address and size (in acres) of the facility covered under the registration. This should match the information submitted in the NOI or reflect any changes in property size.
- (B) Provide the registration number provided by the Department for your coverage under this permit. This number will start with 20SR, and end with 4 numbers (i.e. 20SR1234).

- (C) This part provides the baseline data for requirements related to impervious surfaces.

Total impervious surface area in square feet is determined in Part III.A.2.a of the permit.

Untreated impervious surface area in square feet is determined in Part III.A.2.d of the permit.

Impervious surface area subject to 20% restoration requirement in acres is determined in Part III.A.2.e of the permit.

- (D) This part provides the update on your restoration activities consistent with Part III.A.1.c or Part III.A.1.d.

- The planned completion date is based on your current best estimate of the restoration requirements of this permit. If all the work is complete, simply use the date of completion.
- The practices listed are the options provided in the permit. Simply indicate here the amount of work under each control measure you have planned or implemented.

Restored Impervious Surfaces are control measures in either the Design Manual or Proprietary Practices (Part III.A.1.c.i) you have selected to meet the 20% restoration requirement. This is reported in acres of impervious surface treated.

Accounting Guidance Practices are control measures in the Accounting Guidance (Part III.A.1.c.ii) you have selected to meet the 20% restoration requirement. This is reported in acres of impervious surface treated.

Sediment and Erosion Control is one of the new equivalent control measures (Part III.A.1.c.iii) you have implemented to meet the requirements of this permit, with the calculated reduction in Total Nitrogen (TN) in lbs/year.

Reduced fertilizer is one of the new equivalent control measures (Part III.A.1.c.iii) you have implemented to meet the requirements of this permit, with the calculated reduction in Total Nitrogen (TN) in lbs/year.

Reduced nitrogen to achieve benchmarks is one of the new equivalent control measures (Part III.A.1.c.iii) you have implemented to meet the requirements of this permit, with the calculated reduction in Total Nitrogen (TN) in lbs/year.

Reallocated TN load is one of the new equivalent control measures (Part III.A.1.c.iii) you have implemented to meet the requirements of this permit, with the calculated reduction in Total Nitrogen (TN) in lbs/year.

Off-site work should be acknowledged by indicating Yes if any work was performed off-site to meet the permit requirements, or indicate No if it was all performed at your site. (Part III.A.1.d)

Provide the date of the **Latest Comprehensive Site Compliance Evaluation** (Part V.A.2)

- Brief description section should be a high level description of tasks related to the remaining surfaces yet to be restored. Include a summary of each area on-site being treated, including the treatment strategy you will employ. Include types of BMPs implemented, and describe any equivalent measures you employed. Confirm if all work was performed at your facility or off-site.
-

- Indicate the last report date Comprehensive Site Compliance Evaluation Report, under Part V.A.2, which includes an evaluation of your restoration BMPs and verifies your maintenance activities.

SECTION II: Certification

To be completed by as detailed in Part II.C of the permit. An original signature and date is required. Your contact information is essential so that if the Department has questions they can contact you.

HOW TO SUBMIT:

You must ensure that the form is completely filled out. Completed reports should be sent to:
Maryland Department of the Environment, Industrial Stormwater Permits Division, 1800 Washington Blvd, Ste 455, Baltimore, MD 21230.

Appendix G: Reporting and Verification Requirements for Trading

Trading Must Abide by the Requirements of COMAR 26.08.11

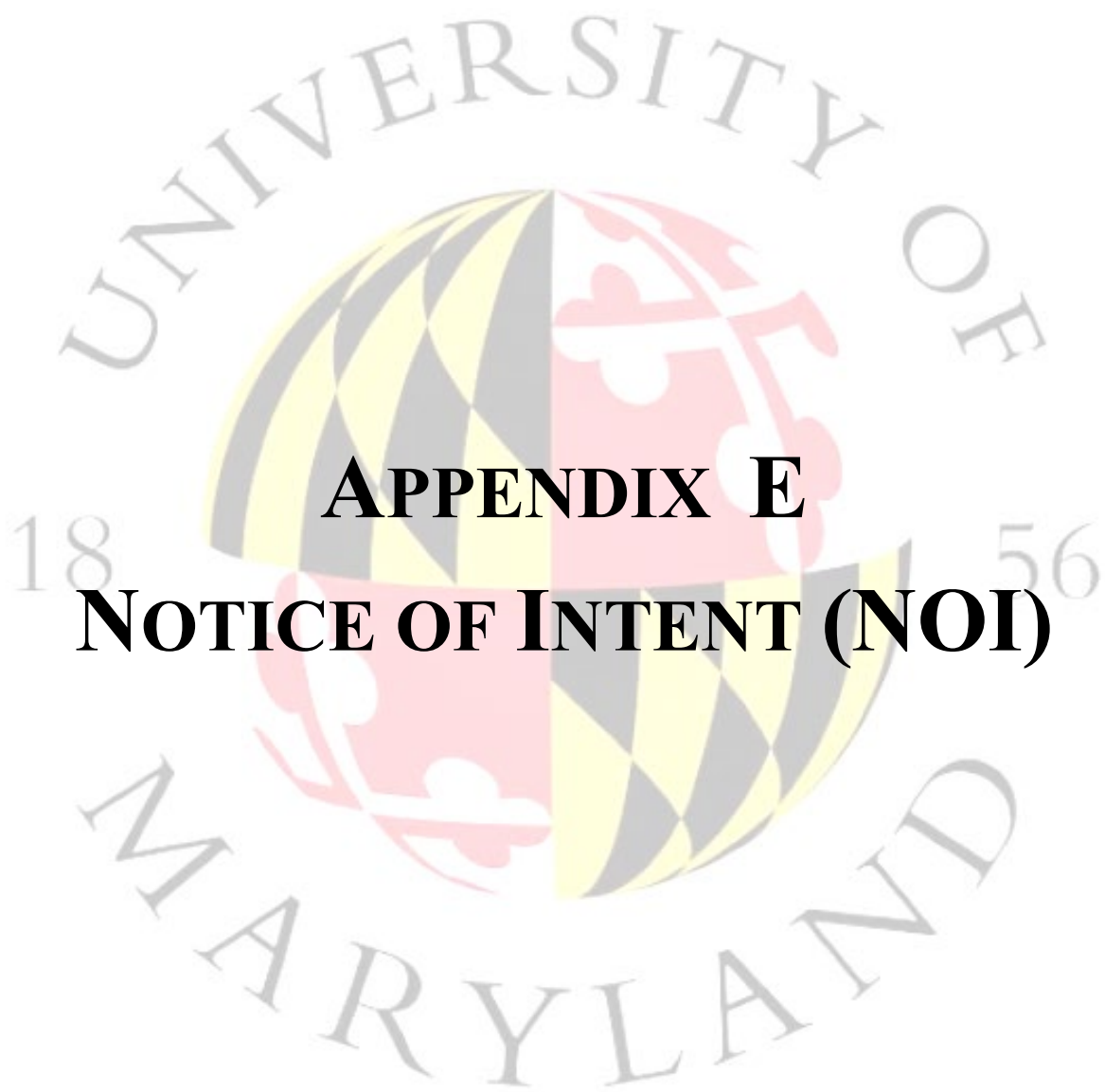
The following requirements support the reporting and verification portions of the regulation (COMAR 26.08.11) and must be followed for those either generating a marketable credit, or those who are trading/acquiring credits to meet the restoration requirements of this permit.

Additional Requirements for Facilities Generating a Marketable Credit:

- 1) Calculation of Credits. You must use assessment tools consistent with the Chesapeake Bay Program modeling tools and accepted by the Department to calculate credits. Any assumptions or backup data used in the calculation of credits must be maintained on-site.
- 2) Procedure for Certification. Your generated credits are not valid or tradable until placed on the Registry. The registration of the credits requires completion of a Certification and Registration Form as provided by the Department, which includes documentation that the generator either owns the property or has the permission of the landowner to install, access and maintain the BMP. Credits are only available for a trade when the Certification and Registration Form is completed and the credits are placed on the Registry. As a condition for the certification, you (and the landowner if different from the permittee) must agree in writing to provide the Department, the verifier, and their agent's access to the BMP during the lifespan of the credit. You are required to provide additional notification if the BMP changes or the ownership of the property changes.
- 3) Verification and Reporting Requirements. You shall ensure that all generated credits are verified in accordance with COMAR 26.08.11, which shall be no less than every 3 years. Verification of credits generated must be performed by a State or county inspector, a professional engineer registered in Maryland, or a Department approved verifier. Each report prepared by an inspector or verifier in accordance with B(2) of the regulation (COMAR 26.08.11) shall include documentation that the BMP implemented continues to meet baseline compliance and that the credit generating BMP continues to be operated and maintained in accordance with the trading contract. If deficiencies exist and resulting corrective measures are needed, you must immediately implement them or jeopardize your trade. You may be required to perform additional inspections to ensure the BMP continues to perform as required. The specific details associated with implementing the verification requirement shall be incorporated into your SWPPP monitoring plans.
- 4) The above calculations, permittee copies of all completed forms, and any correspondence with the Department must be kept onsite at all times and be made available to an inspector upon request.
- 5) While generating credits, the permittee is required to email a scanned copy of the Comprehensive Site Compliance Evaluation report (Part V.A.2.b) to the Department at swppp.permit@maryland.gov, by December 1 of every year that the BMP generates credit.

Additional Requirements for Facilities Satisfying their Restoration Requirements via a Trade:

- 1) In the event of a default in a trade contract, expiration of a credit, or suspension or revocation of a credit, the buyer using the credit remains responsible for complying with the terms and conditions of the permit. In any of these events, the permittee must update the SWPPP and inform the Department of how they intend to regain compliance with the restoration requirement of the permit.
- 2) Registration of Trades. The permittee must notify the Department about each trade they are involved in by filing a form provided by the Department within 15 days after the trade, after which time the Department will update the Registry to include the registration number. The permittee must update the SWPPP to include this registration number and explain in the SWPPP how this trade is being used to satisfy the restoration requirement in the permit.
- 3) Verification and Reporting Requirements. The permittee must include the status of any trades they have initiated to meet the permit restoration requirement in their Comprehensive Site Compliance Evaluation report (Part V.A.2.b). The permittee must email a scanned copy of the Comprehensive Site Compliance Evaluation report to the Department at swppp.permit@maryland.gov, by December 1 of every year that they used credits to satisfy the restoration requirement.
- 4) Copies of the contract, the annual Department notification and any other correspondence with the Department regarding the trade must be kept onsite at all times and be made available to an inspector upon request.



APPENDIX E
NOTICE OF INTENT (NOI)

MARYLAND DEPARTMENT OF THE ENVIRONMENT

General Discharge Permit for Discharges of Stormwater Associated with
 Industrial Activity No. 20-SW
 Notice of Intent (NOI)

DISCHARGE PERMIT NO. 20-SW-0000**NPDES PERMIT NO. MDR00000****SECTION I: Facility Operator Information**

(A) Owner/Operator Name		
University of Maryland		
(B) Primary Contact Name	Title	
Carlo Colella	Vice President & Chief Administrative Officer	
Telephone Number	Email Address	
301-405-2987	ccolella@umd.edu	
(C) Mailing Address		
Street		
7901 Regents Drive		
2119 Thomas V. Miller, Jr. Administration Building		
City	State	ZIP Code
College Park	MD	20742-5035
(D) IRS Employer Identification Number (EIN)	(E) Ownership Type - check below	
52-6002033	<input type="checkbox"/> Private <input type="checkbox"/> Federal <input checked="" type="checkbox"/> State/Local	
(F) Worker's Compensation Insurance:	Insurance Company Name	Policy Number
	Injured Workers Insurance Fund	#902317

SECTION II: Facility Information

(G) Name of Facility			
University of Maryland, College Park			
(H) Facility Address (if different than your mailing address)			
Street			
7901 Regents Drive			
2119 Thomas V. Miller, Jr. Administration Building			
City	State	ZIP Code	County
College Park	MD	20742-5035	Prince George's

	Facility #	Receipt #	Date:
For MDE use only:			
PCA 13710	Comp Object 5707	Suffix 406	

MARYLAND DEPARTMENT OF THE ENVIRONMENT
NOI for Permit No. 20-SW

Submission of this NOI constitutes notice that the party identified in Section I of this form intends to be authorized by a State/ National Pollutant Discharge Elimination System (NPDES) permit issued for discharges from stormwater associated with industrial activities identified in Section II of this form. All information requested must be provided in order to be considered for authorization to discharge under this permit. Instructions are provided at the end of this form.

SECTION II (continued): Facility Information

(I) Provide the primary four-digit SIC code that best represents the principal products or activities provided by the facility, and any co-located SIC codes.			
Primary SIC: 8221	Co-located SICs: SE 4911, HZ 4953	Description of your primary industrial activity: Furnishing academic courses and granting academic degrees	
(J) Latitude 38.984707 (in decimal degrees)	Longitude -76.966173 (in decimal degrees)	(K) <input type="checkbox"/> Check here if you a new discharger.	
		If not a new discharger, provide the previous registration (e.g., 12SW1234)	12SW1381A
(L) Total property size 1,335 (in acres)	(M) <input type="checkbox"/> Check if your facility is inactive and unstaffed.		
(N) Identify the 8 digit identifier(s) and name(s) of the receiving water(s). 02140205 , Anacostia River			
Identify which of these impairments have been identified for the receiving water(s). (Category 4a, 4b, 4c, or 5 waterbodies)	<input checked="" type="checkbox"/> Bacteria <input type="checkbox"/> Biological <input checked="" type="checkbox"/> Ions <input type="checkbox"/> Metals <input checked="" type="checkbox"/> Nutrients <input checked="" type="checkbox"/> PCBs	<input checked="" type="checkbox"/> Pesticides <input type="checkbox"/> pH <input checked="" type="checkbox"/> Stream Modifications <input type="checkbox"/> Sediments <input checked="" type="checkbox"/> Toxics <input checked="" type="checkbox"/> Trash	
<input checked="" type="checkbox"/>	Check here if your facility is required to preform impaired water monitoring based on your selection above.		
<input type="checkbox"/> Check here if any of the receiving water(s) are listed as high quality (Tier 2)			
Check if stream is protected for <input type="checkbox"/> Use III <input type="checkbox"/> Use IV			
Identify your local MS4 jurisdiction or N/A if your facility is not within an MS4: University of Maryland			

SECTION III: Restoration

<input type="checkbox"/>	(O) Check here if your facility is subject to the Chesapeake Bay Restoration Requirements.
<input type="checkbox"/>	Check here if you failed to complete restoration under your previous authorization (12SW).
(P) If you are subject to Chesapeake Bay Restoration Requirements, provide these 3 values:	
Total impervious surface area (square feet)	<input type="text"/>
Untreated impervious surface area (in square feet)	<input type="text"/>
Impervious surface area subject to 20% restoration requirement (in acres)	<input type="text"/>

MARYLAND DEPARTMENT OF THE ENVIRONMENT
 NOI for Permit No. 20-SW

SECTION IV: Discharge Information

Use the table in the instructions to choose the appropriate benchmarks and effluent limitations that apply for the stormwater discharges at each of the outfalls at your facility and fill out the information in the table below:

Outfalls Information: (Attach a separate list if necessary)

Indicate here if the discharge is to Salt or Fresh water.

List all of outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g. 001, 002).		Benchmark Table(s)				
Outfall ID	001	<input type="checkbox"/> A-1	<input type="checkbox"/> C-2	<input type="checkbox"/> F-1	<input type="checkbox"/> L-1	<input type="checkbox"/> S-1
Latitude (decimal)	38.996234	<input type="checkbox"/> A-2	<input type="checkbox"/> C-3	<input type="checkbox"/> F-2	<input type="checkbox"/> L-2	<input type="checkbox"/> U-1
Longitude (decimal)	-76.943367	<input type="checkbox"/> A-3	<input type="checkbox"/> C-4	<input type="checkbox"/> F-3	<input type="checkbox"/> M-1	<input type="checkbox"/> U-2
* Identical Outfalls		<input type="checkbox"/> A-4	<input type="checkbox"/> D-1	<input type="checkbox"/> F-4	<input type="checkbox"/> N-1	<input type="checkbox"/> Y-1
		<input type="checkbox"/> B-1	<input type="checkbox"/> E-1	<input type="checkbox"/> I-1	<input type="checkbox"/> Q-1	<input type="checkbox"/> AA-1
		<input type="checkbox"/> C-1	<input type="checkbox"/> E-2	<input checked="" type="checkbox"/> K-2	<input type="checkbox"/> R-1	<input type="checkbox"/> AD-A-1
						<input type="checkbox"/> AD-D-1
Outfall ID		<input type="checkbox"/> A-1	<input type="checkbox"/> C-2	<input type="checkbox"/> F-1	<input type="checkbox"/> L-1	<input type="checkbox"/> S-1
Latitude (decimal)		<input type="checkbox"/> A-2	<input type="checkbox"/> C-3	<input type="checkbox"/> F-2	<input type="checkbox"/> L-2	<input type="checkbox"/> U-1
Longitude (decimal)		<input type="checkbox"/> A-3	<input type="checkbox"/> C-4	<input type="checkbox"/> F-3	<input type="checkbox"/> M-1	<input type="checkbox"/> U-2
* Identical Outfalls		<input type="checkbox"/> A-4	<input type="checkbox"/> D-1	<input type="checkbox"/> F-4	<input type="checkbox"/> N-1	<input type="checkbox"/> Y-1
		<input type="checkbox"/> B-1	<input type="checkbox"/> E-1	<input type="checkbox"/> I-1	<input type="checkbox"/> Q-1	<input type="checkbox"/> AA-1
		<input type="checkbox"/> C-1	<input type="checkbox"/> E-2	<input type="checkbox"/> K-2	<input type="checkbox"/> R-1	<input type="checkbox"/> AD-A-1
						<input type="checkbox"/> AD-D-1
Outfall ID		<input type="checkbox"/> A-1	<input type="checkbox"/> C-2	<input type="checkbox"/> F-1	<input type="checkbox"/> L-1	<input type="checkbox"/> S-1
Latitude (decimal)		<input type="checkbox"/> A-2	<input type="checkbox"/> C-3	<input type="checkbox"/> F-2	<input type="checkbox"/> L-2	<input type="checkbox"/> U-1
Longitude (decimal)		<input type="checkbox"/> A-3	<input type="checkbox"/> C-4	<input type="checkbox"/> F-3	<input type="checkbox"/> M-1	<input type="checkbox"/> U-2
* Identical Outfalls		<input type="checkbox"/> A-4	<input type="checkbox"/> D-1	<input type="checkbox"/> F-4	<input type="checkbox"/> N-1	<input type="checkbox"/> Y-1
		<input type="checkbox"/> B-1	<input type="checkbox"/> E-1	<input type="checkbox"/> I-1	<input type="checkbox"/> Q-1	<input type="checkbox"/> AA-1
		<input type="checkbox"/> C-1	<input type="checkbox"/> E-2	<input type="checkbox"/> K-2	<input type="checkbox"/> R-1	<input type="checkbox"/> AD-A-1
						<input type="checkbox"/> AD-D-1
Outfall ID		<input type="checkbox"/> A-1	<input type="checkbox"/> C-2	<input type="checkbox"/> F-1	<input type="checkbox"/> L-1	<input type="checkbox"/> S-1
Latitude (decimal)		<input type="checkbox"/> A-2	<input type="checkbox"/> C-3	<input type="checkbox"/> F-2	<input type="checkbox"/> L-2	<input type="checkbox"/> U-1
Longitude (decimal)		<input type="checkbox"/> A-3	<input type="checkbox"/> C-4	<input type="checkbox"/> F-3	<input type="checkbox"/> M-1	<input type="checkbox"/> U-2
* Identical Outfalls		<input type="checkbox"/> A-4	<input type="checkbox"/> D-1	<input type="checkbox"/> F-4	<input type="checkbox"/> N-1	<input type="checkbox"/> Y-1
		<input type="checkbox"/> B-1	<input type="checkbox"/> E-1	<input type="checkbox"/> I-1	<input type="checkbox"/> Q-1	<input type="checkbox"/> AA-1
		<input type="checkbox"/> C-1	<input type="checkbox"/> E-2	<input type="checkbox"/> K-2	<input type="checkbox"/> R-1	<input type="checkbox"/> AD-A-1
						<input type="checkbox"/> AD-D-1
Outfall ID		<input type="checkbox"/> A-1	<input type="checkbox"/> C-2	<input type="checkbox"/> F-1	<input type="checkbox"/> L-1	<input type="checkbox"/> S-1
Latitude (decimal)		<input type="checkbox"/> A-2	<input type="checkbox"/> C-3	<input type="checkbox"/> F-2	<input type="checkbox"/> L-2	<input type="checkbox"/> U-1
Longitude (decimal)		<input type="checkbox"/> A-3	<input type="checkbox"/> C-4	<input type="checkbox"/> F-3	<input type="checkbox"/> M-1	<input type="checkbox"/> U-2
* Identical Outfalls		<input type="checkbox"/> A-4	<input type="checkbox"/> D-1	<input type="checkbox"/> F-4	<input type="checkbox"/> N-1	<input type="checkbox"/> Y-1
		<input type="checkbox"/> B-1	<input type="checkbox"/> E-1	<input type="checkbox"/> I-1	<input type="checkbox"/> Q-1	<input type="checkbox"/> AA-1
		<input type="checkbox"/> C-1	<input type="checkbox"/> E-2	<input type="checkbox"/> K-2	<input type="checkbox"/> R-1	<input type="checkbox"/> AD-A-1
						<input type="checkbox"/> AD-D-1

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SECTION V: Environmental Justice and Climate Change Considerations

<input type="checkbox"/>	(Q) Check here if your facility is located within a census tract with an EJScore >=0.76.
<input checked="" type="checkbox"/>	Check here if your operations are within the Base Flood Elevation (BFE).

SECTION VI: Stormwater Pollution Prevention Plan (SWPPP) and Monitoring

The 20-SW permit does require you to evaluate and implement specific control measures and effluent limits. It requires you to perform quarterly visual monitoring, may include numeric limits, benchmark monitoring and reporting for specific industrial sectors. It requires you to update your SWPPP to encompass the new controls required and provide this in conjunction with your NOI, and then keep an updated SWPPP onsite.

(R) Has the SWPPP been prepared in advance of filing this NOI, as required? Yes No

(S) Stormwater Pollution Prevention Plan (SWPPP) Primary Contact (if different than section I.B)

Name	Jason Baer	
Title	Assistant Director, Office of Environmental Affairs	
Telephone Number	Email Address	jbaer123@umd.edu
	301-405-3163	
SWPPP Delivery Method (URL, email, etc.)	Email	

SECTION VII: Chemical Additives

(T) Will you use chemical additives? Yes Will you use cationic chemical additives? Yes

The use of any cationic chemical additives, that will mix with stormwater or that might otherwise become part of the effluent discharged, is prohibited without prior approval. To obtain approval, refer submit a signed *Request for Cationic Chemical Additive Form* and refer to the *Use of Treatment Chemicals Guidance Document* for further requirements.

SECTION VIII: Permit Fee Selection


<u>Annual Payment</u> – Select this fee structure if you prefer to pay annually. The first \$120 annual payment shall be submitted with this NOI and then paid annually by July 1 thereafter.	\$120	<input type="checkbox"/>
<u>One-Time Payment</u> – Select this fee structure if you prefer to pay one-time for the term of the permit (until January 31, 2028). Additional annual fees may apply after that time, if the permit is administratively extended. Send check for this amount with this completed NOI.	\$550	<input type="checkbox"/>
Select this if you are State or Local Government.	No Fee	<input checked="" type="checkbox"/>

MARYLAND DEPARTMENT OF THE ENVIRONMENT
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SECTION IX: Certification

To be completed by a responsible corporate officer, proprietor, general partner, principal executive officer, or ranking elected official or their duly authorized representative, as detailed in Part II.C of the permit.

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature/Certifier	Date
	Jul 14, 2023

Signatory Name/Title: Typed or Printed	Telephone Number
Carlo Colella, Vice President & Chief Administrative Officer	301-405-2987

NOI Preparer (Complete if NOI was prepared by someone other than the certifier)

Prepared by: Jason Baer

Telephone Number	Email Address
301-405-3163	jbaer123@umd.edu

Submit completed form and FEE (payable to Maryland Department of the Environment) to:
Maryland Department of the Environment, P.O. Box 2057, Baltimore, MD 21203-2057

MARYLAND DEPARTMENT OF THE ENVIRONMENT
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FORM INSTRUCTIONS

WHO MUST FILE

The operator of a facility that is requesting to discharge water from stormwater associated with industrial activity must submit a Notice of Intent (NOI) to obtain coverage under the National Pollutant Discharge Elimination System (NPDES) General Discharge Permit No. 20-SW. If you have a question about whether you need this permit or any NPDES permit, contact the Maryland Department of the Environment (MDE), Wastewater Permits Program, at 410-537-3323.

Submission of this NOI constitutes notice that the party identified in Section I of this form intends to be authorized by a State/ NPDES permit issued for stormwater discharges from industrial facilities identified in Section II of this form. Authorization to discharge begins upon notification of registration by MDE. The permit is available using this link <https://mdewwp.page.link/ISW> or via MDE's website.

SECTION I: Owner/Operator Information

- (A) Provide the legal name of the person, firm, public organization, or other entity that operates the industrial facility described in Section II of this application. An operator of a facility is a legal entity that controls the operation of the facility.
- (B) Provide the name of the Primary Contact; title of Primary Contact; Primary Contact phone number; Primary Contact e-mail address.
- (C) Provide the primary facility contact mailing address; city; state; zip. All correspondence will be sent to this address.
- (D) Provide the IRS Employer Identification Number (EIN).
- (E) Identify whether the owner/operator is private, federal or state/local government.
- (F) Provide worker's compensation insurance information for the facility identified in this section of the application.

SECTION II: Facility Information

- (G) Provide the name of facility – enter "same" if the name does not differ from the information in Section I(A).
- (H) Provide the physical address; city; state; zip – enter "same" if the address does not differ from the information in Section I(C); Provide the County where the facility is located. If this is a contiguous system spanning multiple counties or cities, list all county or city associated with mailing address.
- (I) Provide the primary and any co-located four-digit Standard Industrial Classification (SIC) code describing the facility. Also provide a short written explanation of the industrial process category (e.g., scrap recycling of automobiles). The current Department of Labor's - Occupation, Safety and Health Administration (OSHA) website <http://www.osha.gov/pls/imis/sicsearch.html> provides a detailed written description of SIC codes.
- (J) Provide latitude and longitude of the discharge/outfalls requesting to be permitted. To obtain coordinates, you may use a GPS to find location within your site. There are internet options that you can also use, such as Google's Tool. A step by step method can be found at this URL: <https://mdewwp.page.link/FindGPS>. We require the coordinates be in degrees decimal. An example of this for Maryland Department of the Environment at 1800 Washington Blvd, Baltimore, MD would be latitude of 39.276027, longitude of - 76.644779.
- (K) Identify if you are a new discharger, or previously covered under another permit. Identify any previously obtained NPDES permit (general or individual) for your stormwater discharges. If applicable, include the permit number. (e.g., 12SW1234 general permit or 12DP1234 individual permit, where 1234 was the unique 4 digit designation for your coverage).
- (L) Provide the total property size at the address, including both the industrial and non-industrial portions of your property (e.g., 2 acres).
- (M) Indicate whether your facility is currently inactive and unstaffed (Part V.A.4 of the permit). Note that if your facility becomes inactive and unstaffed during the permit term, you must notify the Department immediately.
- (N) This section is to verify information about where the stormwater is discharged. Identify the name(s) and 8 digit identifier of the receiving stream or water (e.g., Gwynns Falls 02130905), using the Department's "FindMyWatershed" tool at this link <https://mdewwp.page.link/MDWatershedMap>. When using they "FindMyWatershed" tool type in your address, and then place your mouse at your discharge points and left-click to bring up the identifier and receiving water.

To verify if receiving waters are impaired (Category 4a, 4b, 4c, or 5 water bodies), use the Departments "Integrated Report Water Quality Assessment Maps" at this link <https://mdewwp.page.link/MDIRMap> and

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review each of the impairments provided on that website (bacteria, biological, ions, metals, nutrients, PCBs, pesticides, pH, stream modifications, sediments, toxics or trash) for your facility location. When looking at each of the maps, you can use the Legend Button on the upper right side of the map to identify what each color or shading means.

To verify if the receiving waters are designated as high quality waters, use the Department's "Tier 2" tools at this link <https://mdewwp.page.link/Tier2Map> to locate your facility location and identify if the stream or catchment are categorized as Tier 2. The "Tier 2" tools have shaded areas that indicate where waters are designated as high quality or Tier 2 waters.

To verify whether your receiving stream is a Use III or Use IV, use the Department's "Designated Use" map at this link <https://mdewwp.page.link/MDUseMap>.

If your facility discharges to a municipal storm sewer system (MS4), you are required to contact the jurisdiction. Local storm sewer systems under NPDES permits are listed at: <https://mdewwp.page.link/MDMS4s>. If you are uncertain of the MS4 operator, contact your local government department of public works for that information.

SECTION III: Restoration

- (O) Confirm if your facility is subject to the Chesapeake Bay Restoration Requirements (see below). You must comply with the Chesapeake Bay Restoration Requirements (Part III.A of the permit) if you meet ALL of these criteria: your facility is within the Chesapeake Bay Watershed; your facility is 5 acres or greater in size; any portion of your facility is located within a Phase I or Phase II municipal separate storm sewer system (MS4) jurisdiction; and your facility is not owned by or leased from an entity that is permitted as an MS4.

If you failed to complete restoration in the timeline provided under your previous authorization (12SW). You must contact MDE's compliance program to receive a consent order prior to being registered under the 20SW

To determine if your property is in the Chesapeake Bay Watershed, you can use the results from your assessment above or using the Department's "FindMyWatershed" tool at this link <https://mdewwp.page.link/MDWatershedMap>. Although most of the state is in the Chesapeake Bay Watershed, there are exceptions on the western and eastern sides of the state. The exceptions in western Maryland are those that drain to the Youghiogheny River (eight digit codes 05020201 and 05020202), including Deep Creek Lake (05020203), and areas that drain to the Casselman River (05020204). The exceptions in eastern Maryland are areas that drain to the Christina River (02130607), Isle of Wight Bay (02130103), Assawoman Bay (02130102), Newport Bay (02130105), Chincoteague Bay (02130106), or Sinepuxent Bay (02130104) and areas that drain directly to the Atlantic Ocean (02130101).

Whether you are within the MS4 jurisdiction (e.g. it is located in Frederick County) can be verified by contacting your local government or the Department if you are unsure.

Facilities owned by or leased from an entity that is permitted as an MS4 will perform restoration through the MS4 permit and are therefore not required to do additional work under this permit.

The second question indicates whether restoration was complete under the previous permit. If it wasn't the Department will need to verify if you are meeting the requirements through trading or a consent order. This may delay processing.

- (P) These three values are part of the calculations required in the permit, for those who are subject to the Chesapeake Bay Restoration Requirements.

Total impervious surface area in square feet is determined in the permit Part III.A.2.a.

Untreated impervious surface area in square feet is determined in the permit Part III.A.2.d.

Impervious surface area subject to 20% restoration requirement in acres is determined in the Part III.A.2.e.

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SECTION IV: Discharge Information

Depending on your industrial activities, your facility may be subject to benchmarks or federal effluent limitation guidelines which include additional effluent limits and monitoring requirements for your facility. Review the summary table below in order to check the appropriate box(es) in the table in section IV where you must provide information for each of the outfalls on site. If there are any substantially identical outfalls, indicate it in the table by listing the outfall ID(s) in the appropriate box. Some Subsectors have different requirements for discharges into saltwater. To see if your facility discharges into fresh or salt water see COMAR 26.08.03.03-1.

Discharge Type	Table*
SUBSECTOR A1 BENCHMARKS (GENERAL SAWMILLS AND PLANING MILLS FOR SIC 2421)	A-1
SUBSECTOR A2 BENCHMARKS (WOOD PRESERVING FOR SIC 2491)	A-2
SUBSECTOR A3 BENCHMARKS (LOG STORAGE AND HANDLING FOR SIC 2411)	A-3
SUBSECTOR A4 BENCHMARKS (SPECIAL PRODUCTS SAWMILLS, NOT ELSEWHERE CLASSIFIED AND WOOD PRODUCTS FACILITIES NOT ELSEWHERE CLASSIFIED FOR SIC 2426 AND 2499)	A-4
SUBSECTOR B1 BENCHMARKS (PAPERBOARD MILLS FOR SIC CODE 2631)	B-1
SUBSECTOR C1 BENCHMARKS (AGRICULTURAL CHEMICALS FOR SIC 2873-2879)	C-1
SUBSECTOR C2 (INDUSTRIAL INORGANIC CHEMICALS FOR SIC 2812-2819) BENCHMARKS	C-2
SUBSECTOR C3 (SOAPS, DETERGENTS, COSMETICS AND PERFUMES FOR SIC 2841 – 2844) BENCHMARKS	C-3
SUBSECTOR C4 (PLASTICS, SYNTHETICS, AND RESINS FOR SIC 2821-2824) BENCHMARKS	C-4
SUBSECTOR D1 BENCHMARKS (ASPHALT PAVING AND ROOFING MATERIALS SIC 2951, 2952)	D-1
SUBSECTOR E1 BENCHMARKS (CLAY PRODUCT MANUFACTURERS SIC 3251-3259, 3261-3269)	E-1
SUBSECTOR E2 BENCHMARKS (CONCRETE AND GYPSUM PRODUCT MANUFACTURERS SIC 3271-3275)	E-2
SUBSECTOR F1 BENCHMARKS (STEEL WORKS, BLAST FURNACES, AND ROLLING AND FINISHING MILLS FOR SIC 3312-3317)	F-1
SUBSECTOR F2 BENCHMARKS (IRON AND STEEL FOUNDRIES FOR SIC 3321-3325)	F-2
SUBSECTOR F3 BENCHMARKS (ROLLING, DRAWING, AND EXTRUDING OF NONFERROUS METALS FOR SIC 3351-3357)	F-3
SUBSECTOR F4 BENCHMARKS (NONFERROUS FOUNDRIES (SIC 3363-3369)	F-4
SUBSECTOR I1 BENCHMARKS (CRUDE PETROLEUM AND NATURAL GAS; NATURAL GAS LIQUIDS; OIL AND GAS FIELD SERVICES (SIC 1311, 1321, 1381-1389)	I-1
SUBSECTOR K1 BENCHMARKS (ALL - INDUSTRIAL ACTIVITY CODE "HZ". BENCHMARKS ONLY APPLICABLE TO DISCHARGES NOT SUBJECT TO EFFLUENT LIMITATIONS IN 40 CFR PART 445 SUBPART A)	K-1
SUBSECTOR L1 BENCHMARKS - LANDFILLS AND LAND APPLICATION SITES	L-1
SUBSECTOR L2 BENCHMARKS - LANDFILLS AND LAND APPLICATION SITES, EXCEPT MUNICIPAL SOLID WASTE LANDFILL (MSWLF) AREAS CLOSED IN ACCORDANCE WITH 40 CFR 258.60	L-2
SECTOR M BENCHMARKS (AUTOMOBILE SALVAGE YARDS)	M-1
SUBSECTOR N1 BENCHMARKS (SCRAP RECYCLING AND WASTE RECYCLING FACILITIES EXCEPT SOURCE-SEPARATED RECYCLING)	N-1
SUBSECTOR Q1 BENCHMARKS (WATER TRANSPORTATION FACILITIES SIC 4412-4499)	Q-1
SUBSECTOR R1 BENCHMARKS (SHIP AND BOAT BUILDING OR REPAIRING YARDS FOR SIC 3731, 3732)	R-1
SUBSECTOR S1 BENCHMARKS (AIRPORTS USING MORE THAN 100,000 GALLONS OF DEICING GLYCOLS BASED FLUIDS OR 100 TONS OF UREA, ON AN ANNUAL BASIS FOR SIC 4512 - 4581)	S-1
SUBSECTOR U1. GRAIN MILL PRODUCTS (SIC 2041-2048)	U-1
SUBSECTOR U2. FATS AND OILS PRODUCTS (SIC 2074-2079)	U-2
SUBSECTOR Y1 BENCHMARKS (TIRES AND INNER TUBES, RUBBER AND PLASTICS FOOTWEAR, GASKETS, PACKING AND SEALING DEVICES, AND RUBBER AND PLASTIC HOSES AND BELTING, FABRICATED RUBBER PRODUCTS, NOT ELSEWHERE CLASSIFIED FOR SIC 3011, 3021, 3052, 3053, 3061, 3069)	Y-1
SECTOR AA BENCHMARKS (FABRICATED METAL PRODUCTS, FABRICATED METAL COATING AND ENGRAVING, AND ALLIED SERVICES, JEWELRY, SILVERWARE, AND PLATED WARE)	AA-1
SUBSECTOR AD.A1 BENCHMARKS REQUIRED FOR STORMWATER THAT HAS COME INTO CONTACT WITH STREET SWEEPING OR STORM DRAIN INLET CLEANING DEBRIS	AD.A-1
TABLE AD.D-1 - SECTOR AD.D REPORTING (SALT TERMINALS)	AD.D-1

* Please see the referenced tables in Appendix D of the permit.

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FORM INSTRUCTIONS

SECTION V: Environmental Justice and Climate Change Considerations

(Q) The first question will determine if you are responsible for additional reporting in areas considered to have an EJ Score equal to or greater than 0.76. You can determine this in two ways.

- 1) By using the KMZ file available on the 20SW website <https://mdewwp.page.link/ISW> opening it in a program like Google Earth and typing in your address. Any facility located in a red shaded area has an EJ score greater than 0.76
- 2) By using the JPEG available <https://mdewwp.page.link/EJMap> and comparing it to your facility location.

The second question relates to whether your operations are in a flood prone area and may require additional consideration in the SWPPP. <https://gisapps.dnr.state.md.us/coastalatl2019/MERLIN/index.html>. Select the floodplain option on the left of the map to see if any portion of your facility operates in a floodplain.

SECTION VI: Stormwater Pollution Prevention Plan (SWPPP) and Monitoring

(R) Preparation and delivery of the SWPPP is required prior to the submittal of the NOI.

(S) Indicate how you are providing your SWPPP to the Department, either online with appropriate URL (provide your URL in the space on the form), by email, or other methods provided in the permit. Also, identify the name, telephone number, and email address of the person who will serve as a contact for the Department on issues related to stormwater management at your facility. This person should be able to answer questions related to stormwater discharges, the SWPPP and other issues related to stormwater permit coverage, or have immediate access to individuals with that knowledge.

SECTION VII: Chemical Additives

(T) Confirm whether any Chemical Additives are used in the treatment of water, and whether you use cationic chemical additives (Part III.B.1.b.v) which you are requesting approval for use (Part I.E.5). The use of polymers, flocculants, or other treatment chemicals, including use of cationic treatment chemicals (Part III.B.1.b.v), require that you include documentation in your SWPPP of the appropriate controls and implementation procedures designed to ensure that your use of treatment chemicals will not lead to a violation of water quality standards.

SECTION VIII: Permit Fee

Indicate the amount sent with this NOI form. The permit fee for stormwater discharges associated with industrial activity is \$120 per year if submitted with the NOI and then annually on July 1st thereafter. Alternatively, an upfront payment of \$550 (January 31, 2028). Additional annual fees may apply after that time, if the permit is administratively extended. The fee shall be submitted with the NOI. Local and State Government are exempt from the fee. The annual rate and application fee may change over time, so you are encouraged to check COMAR 26.08.04.09-1 (C) at the time of your application.

SECTION IX: Certification

Signatures and Certifications are detailed in the permit Part II.C. Individuals who discharge to waters of the State without an individual State or general State/NPDES discharge permit, are in violation of the Federal Clean Water Act and of the Environment Article, Annotated Code of Maryland, and may be subject to penalties. An original signature and date is required.

A completed form will not be processed until the fee has been paid-in-full and your SWPPP has been received.

HOW TO SUBMIT:

Send the completed NOI and fee (see permit) to **Maryland Department of the Environment, P.O. Box 2057, Baltimore, MD 21203-2057** and provide the SWPPP in one of the allowed formats (Part II.A.3.b of the permit). You must ensure that the form is completely filled out and payment is enclosed, and the SWPPP follows all permit requirements and is successfully provided to the Department. Your permit application will be handled as efficiently as possible. However, if you fail to provide us with the information we request, we will be unable to process your registration for the permit.

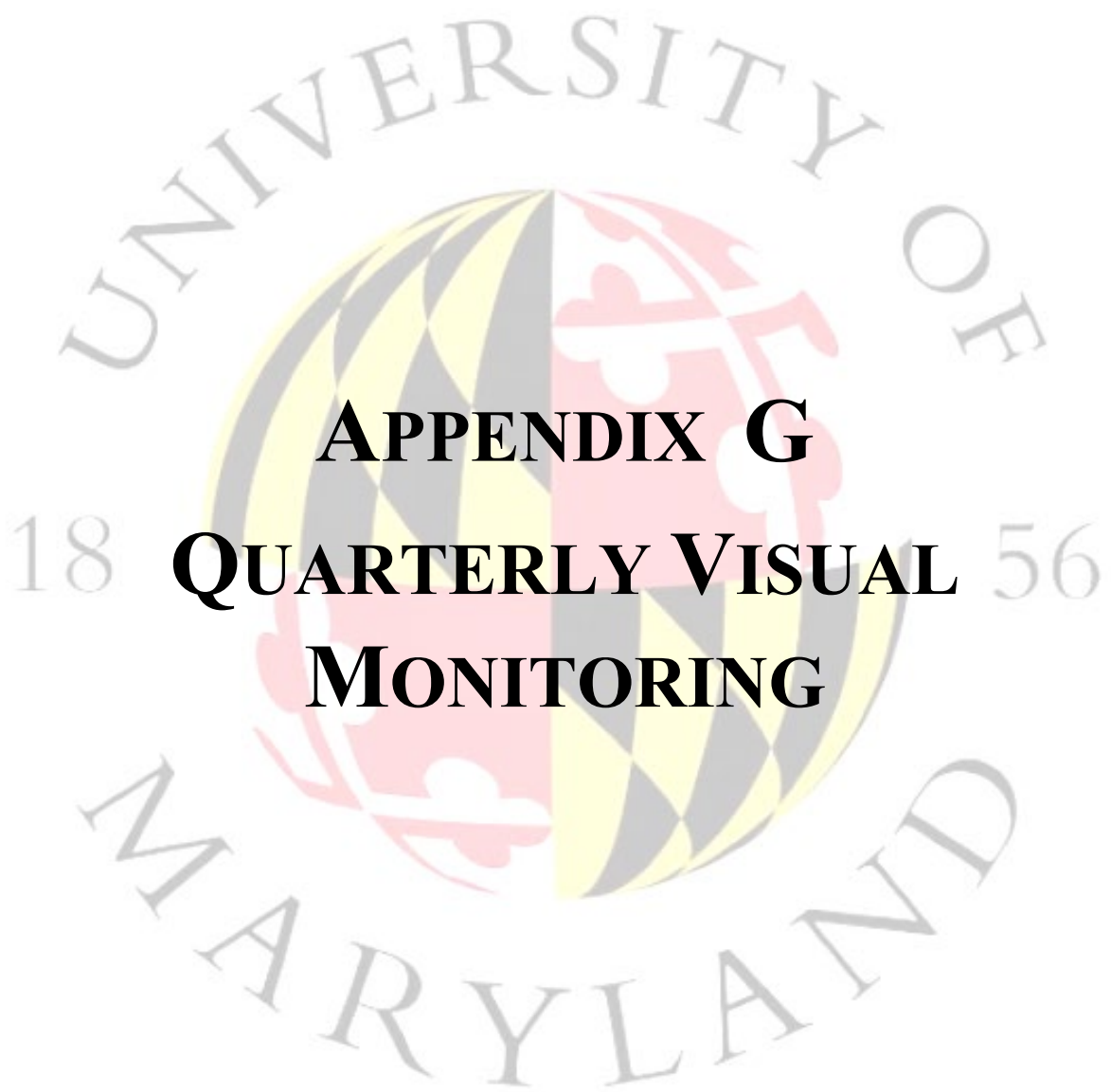


APPENDIX F
EXPOSED MATERIALS

Exposed Significant Materials

Updated May 2023

Drainage Area	Tank ID	Material	Exposure Period	Quantity	Location	Storage Method
DA - 2	52A	Gasoline	Year Round	1,000 Gallons	Adjacent to building #328	Double Walled AST
DA - 2	52B	Diesel Fuel	Year Round	1,500 Gallons	Adjacent to building #328	Double Walled AST
DA - 2	52C	Waste Oil	Year Round	280 Gallons	Adjacent to building #328	Double Walled AST
DA - 2	84	Diesel Fuel	Year Round	521 Gallons	Across building #428	Double Walled AST
DA - 2	n/a	Landscaping Equipment	Year Round	Varies	Adjacent to building #326	Covering exposed equipment during rain events
DA - 2	n/a	Gravel/Sand & Yard Waste	Varies	Varies	Adjacent to building #124	Contained with walls and hay bales
DA - 3	n/a	55-gallon drums containing Oil Products (30 Max)	Varies	1,650 Gallons	Outside of building #424	55-Gallon Drums in secondary containment
DA - 3	78B	Diesel Fuel	Year Round	20,000 Gallons	Southeast corner of the drainage area	Double walled AST
DA - 3	78C	Waste Oil	Year Round	550 Gallons	South side of building #424	AST with secondary containment
DA - 3	n/a	Diesel Exhaust Fluid	Year Round	330 Gallons	Southeast corner of the drainage area	Inmediate Bulk Container (IBC) Tote
DA - 3	n/a	Tires	Year Round	Varies	Southwest corner of the drainage area	Covering during rain events
DA - 3	n/a	Scrap Metal	Year Round	Varies	Outside of building #424	55-Gallon Drums
DA - 4	n/a	Landscaping Bulk Material	Year Round	Varies	Inside fenced area within drainage area	Covering exposed piles during rain events and contained with walls and hay bales
DA - 4	n/a	Stroage	Year Round	Varies	Inside fenced area within drainage area	Source seperated recycling roll-off containers
DA - 4	n/a	Trash and debris	Year Round	Varies	Inside fenced area within drainage area	Source seperated recycling roll-off containers
DA - 5	79A	Fuel Oil	Year Round	12,000 Gallons	Southern portion of the drainage area	Double Walled AST in a diked containment
DA - 5	79B	Gasoline	Year Round	10,000 Gallons	Fueling Area	Double Walled AST with zipper drains
DA - 5	79C	Gasoline	Year Round	10,000 Gallons	Fueling Area	Double Walled AST with zipper drains
DA - 5	79F	E-85 Gasoline	Year Round	10,000 Gallons	Fueling Area	Double Walled AST with zipper drains
DA - 5	n/a	Scrap Metal	Year Round	Varies	South side of building #810	Covering during rain events
DA - 5	n/a	C&D Material	Year Round	Varies	South side of building #810	Covering during rain events
DA - 6	1B	Diesel Fuel	Year Round	8,000 Gallons	Southern portion of the drainage area	Double Walled AST in a diked containment
DA - 6	2A	Fuel Oil	Year Round	252,752 Gallons	Southern portion of the drainage area	Double Walled ASTs in a diked containment
DA - 6	2B	Fuel Oil	Year Round	252,752 Gallons	Southern portion of the drainage area	Double Walled ASTs in a diked containment
DA - 6	3	Waste Oil	Year Round	250 Gallons	Southernmost portion of the drainage area	Double Walled AST
DA - 6	7	Waste Oil	Year Round	250 Gallons	North corner of the drainage area, adjacent to Building #001	AST in secondary containment
DA - 6	62	Waste Oil	Year Round	280 Gallons	Southernmost portion of the drainage area	Double Walled AST
DA - 6	n/a	Steam Additives	Year Round	Varies	Northwestern end of Building #001	55-Gallon Drums in secondary containment



APPENDIX G

18 QUARTERLY VISUAL 56
MONITORING

Appendix B: 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: <i>Yellow Brown Red Gray Other:</i>	
2. Clarity		Is the stormwater <u>not</u> clear? Yes No		If not clear, which of the following best describes the clarity of the stormwater? <i>Suspended Solids Milky/Cloudy Opaque Other:</i>	
3. Oil Sheen		Can you see a rainbow effect or sheen on the water surface? Yes No		Which best describes the sheen? <i>Rainbow sheet Floating oil globules Other:</i>	
4. Odor		Does the sample have an odor? Yes No		If Yes, describe: <i>Chemical Musty Rotten Eggs Sewage Sour Milk Oil/Petroleum Other:</i>	
5. Floating Solids		Is there anything on the surface of the sample? Yes No		If Yes, describe: <i>Suds Oily Film Garbage Sewage Water Fowl Excrement Other:</i>	
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: <i>(note type, size and material after sample is not disturbed for 30 minutes)</i>	
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:

Note – Sample should be collected and analyzed in a colorless glass or plastic bottle.

Instructions for Completing the Visual Monitoring Form

Per PART V. INSPECTIONS, MONITORING, AND REPORTING, you must collect a stormwater sample from each outfall once each quarter for the entire permit term and conduct a visual assessment of each sample. You must follow the monitoring procedures outlined in Part V.C. These samples should be collected in such a manner that they are representative of the stormwater discharge from that outfall. Each assessment must be kept onsite with your SWPPP and available for inspection and review by the Department at anytime.

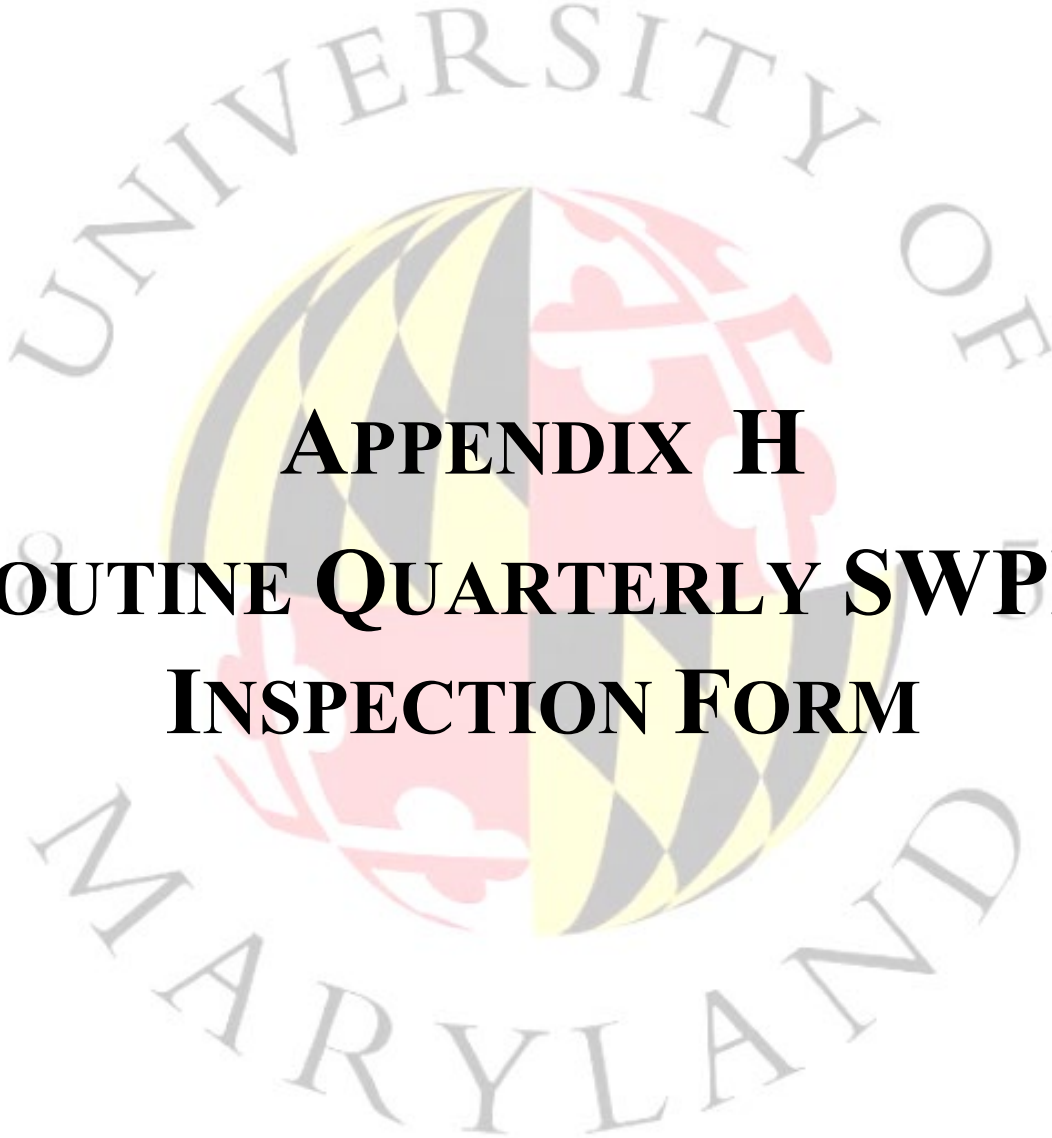
First, fill out all information on the top of the visual monitoring form. A qualifying storm event is any storm where there is a measurable discharge. Then, take a grab sample in a clear container. Evaluate the sample in a well-lit area for the following parameters:

1. **Color:** Record the best description of the sample color in the appropriate space on the form.
2. **Clarity:** This parameter refers to how cloudy the sample is. It is *usually* an indication of fewer pollutants in the water if the sample is clear or transparent. If the clarity has changed since the last sample, try to identify what might have caused this to happen.
 - **Clear** – Sample doesn't block any light; can be seen through regardless of color.
 - **Cloudy** – Sample blocks some light; objects not clear but can be identified looking through the sample.
 - **Very Cloudy** – Sample blocks most light; objects cannot be identified looking through the sample.
 - **Opaque** – Sample blocks all light; objects cannot be seen when looking through the sample.
3. **Oil Sheen:** Record whether or not an oil sheen is present. If a film of iridescent color is noted on the surface of the sample or a rainbow effect appears to be floating on the surface of the water, this usually indicates oil is present.
4. **Odor:** If sample has no odor other than natural rainwater or snowmelt, write "NO" on the visual monitoring form. Note the presence of any of the following odors if detected, such as gasoline, diesel, oil, solvents (WD-40, other petroleum products, etc.), garbage, fishy, sweet/sugary, any other unusual odors not normally present in clean runoff from the area sampled.
5. **Floating Solids:** A contaminated flow may contain solids or liquids floating on the surface. Identifying floatables can aid in finding the source of the contamination. Examples of floatables are spoiled food products, oils, plant parts, solvents, sawdust, foams and fuel. Give a general description of the type of floating solids present (wood chips, leaf debris, algae, etc) in the general comments section for each sample. Identify amount of floating solids as described below.
 - **High** – More than 20% of the surface of the sample is covered with floating solids.
 - **Moderate** – Less than 20% of the surface of the sample is covered with floating solids.
 - **Slight** – Only a few floating particles observed on the surface of the sample.
 - **None** – No floating solids present on the surface of the sample.
6. **Suspended solids:** Record whether or not suspended solids are present in the sample. Suspended solids are particles floating inside the column of water, not on top, and may contribute to changes in water color or clarity. Cracked or deteriorated concrete or peeling surface paint at an outfall usually indicates the presence of severely contaminated discharges. Contaminants causing this type of damage are usually very acidic or basic.

----- **WAIT 30 MINUTES** -----

Leave the sample undisturbed for 30 minutes to allow the water and anything in it to settle.

7. **Settled Solids:** After 30 minutes has passed, give a general description of the type of settled solids present (sand, decayed plant matter, rust particles, etc.) in the general comments section.
 8. **Foam:** After completing #7, shake the bottle gently. Record foam results on the form as they most closely match one of the descriptions listed below.
 - **None** – Most bubbles break down within ten (10) seconds of shaking; only a few large bubbles persist longer than ten (10) seconds.
 - **Moderate** – Many small bubbles are present but these bubbles persist for less than two (minutes) after shaking.
 - **High** – Many small bubbles are present and they persist longer than two (2) minutes after shaking.
 9. Detail any concerns, corrective actions taken and any other indicators of pollution present in the sample. This should include the identified source if there are visible indicators present in the sample. The person performing test must sign and date each form.
-

The background features a large, faint watermark of the University of Maryland logo. The logo is circular and contains the text "UNIVERSITY OF" at the top and "MARYLAND" at the bottom. In the center is a shield with a yellow and black checkered pattern on the left and a red and white checkered pattern on the right, with a white cross in the center.

APPENDIX H
ROUTINE QUARTERLY SWPPP
INSPECTION FORM

UNIVERSITY OF MARYLAND

QUARTERLY STORMWATER COMPLIANCE INSPECTION REPORT

Are copies of inspections being maintained onsite?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are follow-ups or corrective actions to inspections being completed and documented?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are materials stored, handled, or disposed of as addressed in the SWPPP?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are copies of training documentation maintained on campus?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are aboveground storage tanks being inspected accordingly with the SPCC Plan?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Is Pollution Prevention Training being conducted?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are copies of training documentation maintained on campus?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Is the Facility's SWPPP adequate and NOT in need of any revisions?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

UNIVERSITY OF MARYLAND

QUARTERLY STORMWATER COMPLIANCE INSPECTION REPORT

Drainage Area 1 (Sector K) Hazardous waste Facility

Are materials stored, handled, or disposed of as addressed in the SWPPP?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are copies of training documentation maintained on campus?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are vehicles and equipment being properly maintained?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Is the maintenance being documented?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are the Best Management Practices at the Facility and associated Good Housekeeping effective in minimizing exposure to stormwater? If no, please recommend additional BMPs or Good Housekeeping procedures.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are the Good Housekeeping practices as part of the BMPs being implemented at the Facility? If no, please explain and revise the Appropriate BMP in the SWPPP Appendix.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are Spill Prevention and Response Procedures posted at the appropriate locations around the facility? If not, please post.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are spill response materials stocked at appropriate locations and are they adequate?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Is the Facility free of spill and leaks that could be exposed to stormwater?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Remarks and Notes from Visual Inspection of the Site:

Building(s):

Site Perimeter:

Stormwater BMP(s):

Other Observations:

Facility Supervisor/Responsible P2 Team Member

Name and Signature

Date

UNIVERSITY OF MARYLAND

QUARTERLY STORMWATER COMPLIANCE INSPECTION REPORT

Drainage Area 2 (Sector Ab.a) Building & Landscape Maintenance Facility

Are materials stored, handled, or disposed of as addressed in the SWPPP?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are pre-startup inspections being completed?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are vehicles and equipment being properly maintained?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Is the maintenance being documented?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are the Best Management Practices at the Facility and associated Good Housekeeping effective in minimizing exposure to stormwater? If no, please recommend additional BMPs or Good Housekeeping procedures.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are the Good Housekeeping practices as part of the BMPs being implemented at the Facility? If no, please explain and revise the Appropriate BMP in the SWPPP Appendix.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are Spill Prevention and Response Procedures posted at the appropriate locations around the facility? If not, please post.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are spill response materials stocked at appropriate locations and are they adequate?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Is the Facility free of spill and leaks that could be exposed to stormwater?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Remarks and Notes from Visual Inspection of the Site:

Building(s):

Site Perimeter:

Stormwater BMP(s):

Other Observations:

Facility Supervisor/Responsible P2 Team Member

Name and Signature

Date

UNIVERSITY OF MARYLAND

QUARTERLY STORMWATER COMPLIANCE INSPECTION REPORT

Drainage Area 3 (Sector Ab.b) Shuttle Bus Facility

Are materials stored, handled, or disposed of as addressed in the SWPPP?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are pre-startup inspections being completed?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are vehicles and equipment being properly maintained?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Is the maintenance being documented?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are the Best Management Practices at the Facility and associated Good Housekeeping effective in minimizing exposure to stormwater? If no, please recommend additional BMPs or Good Housekeeping procedures.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are the Good Housekeeping practices as part of the BMPs being implemented at the Facility? If no, please explain and revise the Appropriate BMP in the SWPPP Appendix.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are Spill Prevention and Response Procedures posted at the appropriate locations around the facility? If not, please post.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are spill response materials stocked at appropriate locations and are they adequate?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Is the Facility free of spill and leaks that could be exposed to stormwater?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Remarks and Notes from Visual Inspection of the Site:

Building(s):

Site Perimeter:

Stormwater BMP(s):

Other Observations:

Facility Supervisor/Responsible P2 Team Member

Name and Signature

Date

UNIVERSITY OF MARYLAND

QUARTERLY STORMWATER COMPLIANCE INSPECTION REPORT

Drainage Area 4 (Sector N) Metzertott Landfill

Are materials stored, handled, or disposed of as addressed in the SWPPP?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are pre-startup inspections being completed?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are vehicles and equipment being properly maintained?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Is the maintenance being documented?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are the Best Management Practices at the Facility and associated Good Housekeeping effective in minimizing exposure to stormwater? If no, please recommend additional BMPs or Good Housekeeping procedures.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are the Good Housekeeping practices as part of the BMPs being implemented at the Facility? If no, please explain and revise the Appropriate BMP in the SWPPP Appendix.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are Spill Prevention and Response Procedures posted at the appropriate locations around the facility? If not, please post.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are spill response materials stocked at appropriate locations and are they adequate?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Is the Facility free of spill and leaks that could be exposed to stormwater?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Remarks and Notes from Visual Inspection of the Site:

Building(s):

Site Perimeter:

Stormwater BMP(s):

Other Observations:

Facility Supervisor/Responsible P2 Team Member

Name and Signature

Date

UNIVERSITY OF MARYLAND

QUARTERLY STORMWATER COMPLIANCE INSPECTION REPORT

Drainage Area 5 (Sector P) Severn Building

Are materials stored, handled, or disposed of as addressed in the SWPPP?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are pre-startup inspections being completed?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are vehicles and equipment being properly maintained?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Is the maintenance being documented?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are the Best Management Practices at the Facility and associated Good Housekeeping effective in minimizing exposure to stormwater? If no, please recommend additional BMPs or Good Housekeeping procedures.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are the Good Housekeeping practices as part of the BMPs being implemented at the Facility? If no, please explain and revise the Appropriate BMP in the SWPPP Appendix.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are Spill Prevention and Response Procedures posted at the appropriate locations around the facility? If not, please post.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are spill response materials stocked at appropriate locations and are they adequate?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Is the Facility free of spill and leaks that could be exposed to stormwater?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Remarks and Notes from Visual Inspection of the Site:

Building(s):

Site Perimeter:

Stormwater BMP(s):

Other Observations:

Facility Supervisor/Responsible P2 Team Member

Name and Signature

Date

UNIVERSITY OF MARYLAND

QUARTERLY STORMWATER COMPLIANCE INSPECTION REPORT

Drainage Area 6 (Sector O) Combined Heat & Power Facility

Are materials stored, handled, or disposed of as addressed in the SWPPP?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are pre-startup inspections being completed?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are vehicles and equipment being properly maintained?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Is the maintenance being documented?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are the Best Management Practices at the Facility and associated Good Housekeeping effective in minimizing exposure to stormwater? If no, please recommend additional BMPs or Good Housekeeping procedures.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are the Good Housekeeping practices as part of the BMPs being implemented at the Facility? If no, please explain and revise the Appropriate BMP in the SWPPP Appendix.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are Spill Prevention and Response Procedures posted at the appropriate locations around the facility? If not, please post.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are spill response materials stocked at appropriate locations and are they adequate?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Is the Facility free of spill and leaks that could be exposed to stormwater?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Remarks and Notes from Visual Inspection of the Site:

Building(s):

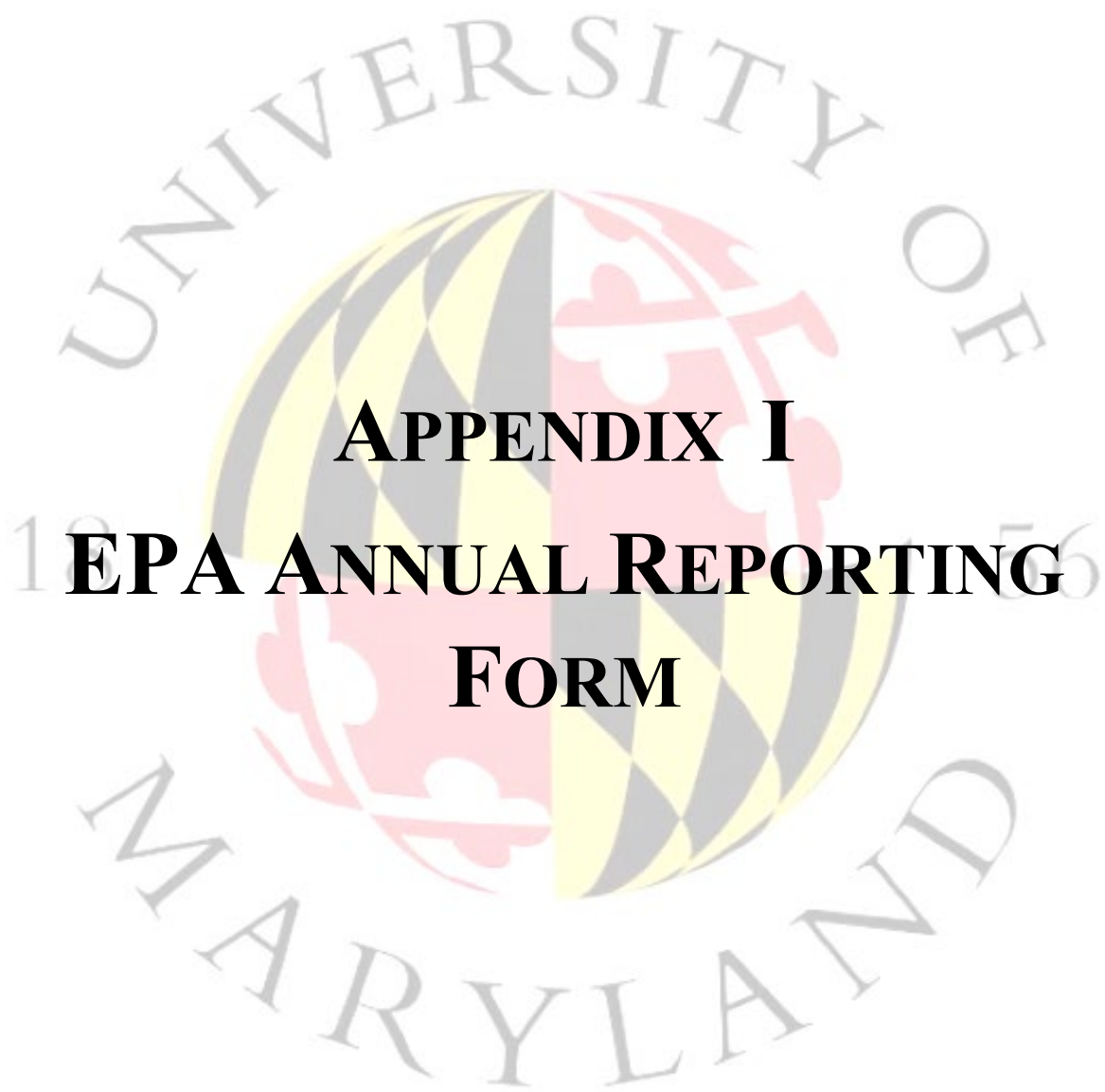
Site Perimeter:

Stormwater BMP(s):

Other Observations:

Facility Supervisor/Responsible P2 Team Member

Name and Signature Date



APPENDIX I
EPA ANNUAL REPORTING
FORM

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Annual Reporting Form

A. GENERAL INFORMATION

1. Facility Name:

2. NPDES Permit Tracking No.:

3. Facility Physical Address:

a. Street:

b. City: c. State: d. Zip Code: -

4. Lead Inspectors Name: Title:

Additional Inspectors Name(s):

5. Contact Person: Title:

Phone: - - Ext. E-mail:

6. Inspection Date: / /

B. GENERAL INSPECTION FINDINGS

1. As part of this comprehensive site inspection, did you inspect all potential pollutant sources, including areas where industrial activity may be exposed to stormwater?

YES NO

If NO, describe why not:

NOTE: Complete Section C of this form for each industrial activity area inspected and included in your SWPPP or as newly identified in B.2 or B.3 below where pollutants may be exposed to stormwater.

2. Did this inspection identify any stormwater or non-stormwater outfalls not previously identified in your SWPPP? YES NO

If YES, for each location, describe the sources of those stormwater and non-stormwater discharges and any associated control measures in place:

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

3. Did this inspection identify any sources of stormwater or non-stormwater discharges not previously identified in your SWPPP? YES NO

If YES, describe these sources of stormwater or non-stormwater pollutants expected to be present in these discharges, and any control measures in place:

4. Did you review stormwater monitoring data as part of this inspection to identify potential pollutant hot spots? YES NO NA, no monitoring performed

If YES, summarize the findings of that review and describe any additional inspection activities resulting from this review:

5. Describe any evidence of pollutants entering the drainage system or discharging to surface waters, and the condition of and around outfalls, including flow dissipation measures to prevent scouring:

6. Have you taken or do you plan to take any corrective actions, as specified in Part 3 of the permit, since your last annual report submission (or since you received authorization to discharge under this permit if this is your first annual report), including any corrective actions identified as a result of this annual comprehensive site inspection?

YES NO

If YES, how many conditions requiring review for correction action as specified in Parts 3.1 and 3.2 were addressed by these corrective actions?

--	--	--

NOTE: Complete the attached Corrective Action Form (Section D) for each condition identified, including any conditions identified as a result of this comprehensive stormwater inspection.

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

NOTE: Copy this page and attach additional pages as necessary

INDUSTRIAL ACTIVITY AREA _____:

1. Brief Description:

2. Are any control measures in need of maintenance or repair? YES NO

3. Have any control measures failed and require replacement? YES NO

4. Are any additional/revised BMPs necessary in this area? YES NO

If YES to any of these three questions, provide a description of the problem: (Any necessary corrective actions should be described on the attached Corrective Action Form)

INDUSTRIAL ACTIVITY AREA _____:

1. Brief Description:

2. Are any control measures in need of maintenance or repair? YES NO

3. Have any control measures failed and require replacement? YES NO

4. Are any additional/revised BMPs necessary in this area? YES NO

If YES to any of these three questions, provide a description of the problem: (Any necessary corrective actions should be described on the attached Corrective Action Form)

INDUSTRIAL ACTIVITY AREA _____:

1. Brief Description:

2. Are any control measures in need of maintenance or repair? YES NO

3. Have any control measures failed and require replacement? YES NO

4. Are any additional/revised BMPs necessary in this area? YES NO

If YES to any of these three questions, provide a description of the problem: (Any necessary corrective actions should be described on the attached Corrective Action Form)

D. CORRECTIVE ACTIONS

Complete this page for each specific condition requiring a corrective action or a review determining that no corrective action is needed. Copy this page for additional corrective actions or reviews.

Include both corrective actions that have been initiated or completed since the last annual report, and future corrective actions needed to address problems identified in this comprehensive stormwater inspection. Include an update on any outstanding corrective actions that had not been completed at the time of your previous annual report.

1. Corrective Action # of for this reporting period.

2. Is this corrective action:

- An update on a corrective action from a previous annual report; or
- A new corrective action?

3. Identify the condition(s) triggering the need for this review:

- Unauthorized release or discharge
- Numeric effluent limitation exceedance
- Control measures inadequate to meet applicable water quality standards
- Control measures inadequate to meet non-numeric effluent limitations
- Control measures not properly operated or maintained
- Change in facility operations necessitated change in control measures
- Average benchmark value exceedance
- Other (describe): _____

4. Briefly describe the nature of the problem identified:

5. Date problem identified: / /

6. How problem was identified:

- Comprehensive site inspection
- Quarterly visual assessment
- Routine facility inspection
- Benchmark monitoring
- Notification by EPA or State or local authorities
- Other (describe): _____

7. Description of corrective action(s) taken or to be taken to eliminate or further investigate the problem (e.g., describe modifications or repairs to control measures, analyses to be conducted, etc.) or if no modifications are needed, basis for that determination:

8. Did/will this corrective action require modification of your SWPPP? YES NO

9. Date corrective action initiated: / /

10. Date correction action completed: / / or expected to be completed: / /

11. If corrective action not yet completed, provide the status of corrective action at the time of the comprehensive site inspection and describe any remaining steps (including timeframes associated with each step) necessary to complete corrective action:

E. ANNUAL REPORT CERTIFICATION

1. Compliance Certification

Do you certify that your annual inspection has met the requirements of Part 4.2 of the permit, and that, based upon the results of this inspection, to the best of your knowledge, you are in compliance with the permit? YES NO

If NO, summarize why you are not in compliance with the permit:

2. Annual Report Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Authorized Representative
Printed Name:

Jason Baer | | | | | | | | | | | | | | | | | |

Title: Assistant Director of Office of Env

Signature: _____

Date Signed: _____



APPENDIX J

18 **PREVIOUS ANNUAL** 56
INSPECTIONS



Annual Reporting Form

A. GENERAL INFORMATION

1. Facility Name: University of Maryland

2. NPDES Permit Tracking No.: MDR003281

3. Facility Physical Address:

a. Street: 7901 Regents Drive

b. City: College Park

c. State: MD

d. Zip Code: 20742

4. Lead Inspectors Name: Kaitlyn Peterson

Title: Program Manager

Additional Inspectors Name(s):

5. Contact Person: Jason Baer

Title: Assistant Director

Phone: 301 - 405 - 3163 Ext. E-mail: jbaer123@umd.edu

6. Inspection Date: 12 / 07 / 2022

B. GENERAL INSPECTION FINDINGS

1. As part of this comprehensive site inspection, did you inspect all potential pollutant sources, including areas where industrial activity may be exposed to stormwater?

YES NO

If NO, describe why not:

NOTE: Complete Section C of this form for each industrial activity area inspected and included in your SWPPP or as newly identified in B.2 or B.3 below where pollutants may be exposed to stormwater.

2. Did this inspection identify any stormwater or non-stormwater outfalls not previously identified in your SWPPP? YES NO

If YES, for each location, describe the sources of those stormwater and non-stormwater discharges and any associated control measures in place:

3. Did this inspection identify any sources of stormwater or non-stormwater discharges not previously identified in your SWPPP? YES NO

If YES, describe these sources of stormwater or non-stormwater pollutants expected to be present in these discharges, and any control measures in place:

4. Did you review stormwater monitoring data as part of this inspection to identify potential pollutant hot spots? YES NO NA, no monitoring performed

If YES, summarize the findings of that review and describe any additional inspection activities resulting from this review:

5. Describe any evidence of pollutants entering the drainage system or discharging to surface waters, and the condition of and around outfalls, including flow dissipation measures to prevent scouring:

Within Drainage Area 3, Shuttle Bus Facility, there was evidence of oil sheen and slicks within the parking lot. These slicks were flowing from the addition of the stormwater, into the stormwater conveyance and BMPs adjacent to the fence line. There are filter soxs placed at the entrance of the BMPs.

6. Have you taken or do you plan to take any corrective actions, as specified in Part 3 of the permit, since your last annual report submission (or since you received authorization to discharge under this permit if this is your first annual report), including any corrective actions identified as a result of this annual comprehensive site inspection?

YES NO

If YES, how many conditions requiring review for correction action as specified in Parts 3.1 and 3.2 were addressed by these corrective actions?

05

NOTE: Complete the attached Corrective Action Form (Section D) for each condition identified, including any conditions identified as a result of this comprehensive stormwater inspection.

C. INDUSTRIAL ACTIVITY AREA SPECIFIC FINDINGS

Complete one block for each industrial activity area where pollutants may be exposed to stormwater. Copy this page for additional industrial activity areas.

In reviewing each area, you should consider:

- Industrial materials, residue, or trash that may have or could come into contact with stormwater;
- Leaks or spills from industrial equipment, drums, tanks, and other containers;
- Offsite tracking of industrial or waste materials from areas of no exposure to exposed areas; and
- Tracking or blowing of raw, final, or waste materials from areas of no exposure to exposed areas.

INDUSTRIAL ACTIVITY AREA 1:

1. Brief Description:

Building #344, employee parking area, a loading and unloading area, and storage of new empty 55-gallon drums. The 55-gallon drums are new/unused and are stored within a three-sided enclosed area. Hazardous waste from the campus, particularly the University's labs, is collected, transported, and stored onsite in accordance with UMD's RCRA permit until it is transported off-site for disposal/destruction. Loading and unloading of hazardous materials are completed at the covered loading/unloading areas.

2. Are any control measures in need of maintenance or repair? YES NO
3. Have any control measures failed and require replacement? YES NO
4. Are any additional/revised control measures necessary in this area? YES NO

If YES to any of these three questions, provide a description of the problem: (Any necessary corrective actions should be described on the attached Corrective Action Form)

INDUSTRIAL ACTIVITY AREA 2:

1. Brief Description:

s the Wye Oak Building, Grounds Material & Equipment Building, Grounds Operations & Maintenance Building, Heavy Equipment Building, Ground Storage Building, vehicle and equipment storage, chemical storage, sand/gravel stock piles, a salt storage dome, and a small yard waste storage area. Fuel tanks and waste oil tank contained within drainage area.

2. Are any control measures in need of maintenance or repair? YES NO
3. Have any control measures failed and require replacement? YES NO
4. Are any additional/revised c necessary in this area? YES NO

If YES to any of these three questions, provide a description of the problem: (Any necessary corrective actions should be described on the attached Corrective Action Form)

Excess salt from dome needs to be swept back in on a regular basis. Current BMPs in place at the gravel/sand stockpiles and yard waste storage include the strategic placement of hay bales to prevent sediment from entering the stormwater system, and concrete walls on three sides to contain the stockpiles. The hay bales were not present at the time of the inspection. They need to be replaced.

INDUSTRIAL ACTIVITY AREA 3:

Brief Description:

University bus washing and maintenance operations conducted within DA3. Shuttle Bus Facility, University Bus parking and maintenance, and fueling operations. Drainage area includes 1 fueling tank, 1 used oil tank, 2 motor oil tanks, and multiple 55-gallon drums with varying contents. The oil/water separator in the southeast corner drains to a stormwater pond adjacent to the 20,000-gallon double-walled diesel AST. The oil/water separator south of Building #424 drains to the sanitary sewer lines.

2. Are any control measures in need of maintenance or repair? YES NO
3. Have any control measures failed and require replacement? YES NO
4. Are any additional/revised BMPs necessary in this area? YES NO

If YES to any of these three questions, provide a description of the problem: (Any necessary corrective actions should be described on the attached Corrective Action Form)

Current BMPs in place for the tire storage include covering the materials with a tarp to prevent contact with stormwater. This was not present during the inspection. Oil sheens/slick observed around fuel pad and in the parking lot. Indications of improper fueling procedures and maintenance being conducted outside.

NOTE: Copy this page and attach additional pages as necessary

INDUSTRIAL ACTIVITY AREA 4 _____:

1. Brief Description:

This metal is feedstock for the smelter and used for the production of art containing a metal storage and a smelter. One (1) roll-off dumpster is located within the drainage area and contains municipal solid waste and discarded metal. The scrap metal storage and smelting operations are contained within a fenced area with a locked gate. Access to the drainage area is only permitted to art students and University faculty/staff.

2. Are any control measures in need of maintenance or repair? YES NO3. Have any control measures failed and require replacement? YES NO4. Are any additional/revised BMPs necessary in this area? YES NO

If YES to any of these three questions, provide a description of the problem: (Any necessary corrective actions should be described on the attached Corrective Action Form)

INDUSTRIAL ACTIVITY AREA 5 _____:

1. Brief Description:

. DA5 encompasses the Severn Building (Building #810) and contains a fueling area in the northeastern portion of the facility with two (2) 10,000-gallon double-walled gasoline ASTs and one (1) 10,000-gallon double-walled E-85 gasoline AST. The fueling area contains zipper drains that flow to an oil water separator and then to the storm drain system. In the southeastern portion of the drainage area, there is one (1) 12,000-gallon double-walled fuel oil AST. Spill kits are located within DA5. There are multiple loading/unloading docks along the north side of the Severn Building. A maintenance shop is located at the northern most portion of the maintenance facility. All vehicle maintenance is conducted within the shop. There is a scrap metal dumpster and a construction/demolition debris (C&D) dumpster outside the north side of Building #810. BMPs for the metal and C&D include covering the materials with a tarp to prevent contact with stormwater.

2. Are any control measures in need of maintenance or repair? YES NO3. Have any control measures failed and require replacement? YES NO4. Are any additional/revised BMPs necessary in this area? YES NO

If YES to any of these three questions, provide a description of the problem: (Any necessary corrective actions should be described on the attached Corrective Action Form)

Metal and C&D not covered as stated in SWPPP.

INDUSTRIAL ACTIVITY AREA 6 _____:

1. Brief Description:

DA6 encompasses employee parking, the Service Building (Building #003), Energy Plant (Building #001), Plant Operations & Maintenance Shops (Building #006), and a fuel unloading area containing one (1) 8,000-gallon diesel AST in a diked containment that is surrounded by two (2) zipper drains to the sanitary sewer. There are two (2) 250,000-gallon fuel oil ASTs in a diked containment area in the southern portion of the drainage area. Additives for the steam are stored in 55-gallon drums located outside within a contained pad on the northwestern end of the Energy Plant.

2. Are any control measures in need of maintenance or repair? YES NO3. Have any control measures failed and require replacement? YES NO4. Are any additional/revised BMPs necessary in this area? YES NO

If YES to any of these three questions, provide a description of the problem: (Any necessary corrective actions should be described on the attached Corrective Action Form)

D. CORRECTIVE ACTIONS

Complete this page for each specific condition requiring a corrective action or a review determining that no corrective action is needed. Copy this page for additional corrective actions or reviews.

Include both corrective actions that have been initiated or completed since the last annual report, and future corrective actions needed to address problems identified in this comprehensive stormwater inspection. Include an update on any outstanding corrective actions that had not been completed at the time of your previous annual report.

1. Corrective Action # 01 of 05 for this reporting period.

2. Is this corrective action:

- An update on a corrective action from a previous annual report; or
 A new corrective action?

3. Identify the condition(s) triggering the need for this review:

- Unauthorized release or discharge
 Numeric effluent limitation exceedance
 Control measures inadequate to meet applicable water quality standards
 Control measures inadequate to meet non-numeric effluent limitations
 Control measures not properly operated or maintained
 Change in facility operations necessitated change in control measures
 Average benchmark value exceedance
 Other (describe): _____

4. Briefly describe the nature of the problem identified:

A diesel fuel spill adjacent to the fuel pad and stormwater BMP was detected by the UMD Fire Marshall's office. The contractor, JRP Fueling was delivering diesel fuel to the Shuttle Bus Facility when a seal between the tank and a discharge valve failed. Should be noted this was not a University personnel or site failure.

5. Date problem identified: 11 / 22 / 2021

6. How problem was identified:

- Comprehensive site inspection
 Quarterly visual assessment
 Routine facility inspection
 Benchmark monitoring
 Notification by EPA or State or local authorities
 Other (describe): CRC On-Call notification

7. Description of corrective action(s) taken or to be taken to eliminate or further investigate the problem (e.g., describe modifications or repairs to control measures, analyses to be conducted, etc.) or if no modifications are needed, basis for that determination:

Instillation of signage dictating that all fueling activities must be done on the fuel pad where the OWS is located.

8. Did/will this corrective action require modification of your SWPPP? YES NO

9. Date corrective action initiated: 11 / 22 / 2021

10. Date correction action completed: 11 / 25 / 2021 or expected to be completed: / /

11. If corrective action not yet completed, provide the status of corrective action at the time of the comprehensive site inspection and describe any remaining steps (including timeframes associated with each step) necessary to complete corrective action:

D. CORRECTIVE ACTIONS

Complete this page for each specific condition requiring a corrective action or a review determining that no corrective action is needed. Copy this page for additional corrective actions or reviews.

Include both corrective actions that have been initiated or completed since the last annual report, and future corrective actions needed to address problems identified in this comprehensive stormwater inspection. Include an update on any outstanding corrective actions that had not been completed at the time of your previous annual report.

1. Corrective Action # 02 of 05 for this reporting period.

2. Is this corrective action:

- An update on a corrective action from a previous annual report; or
 A new corrective action?

3. Identify the condition(s) triggering the need for this review:

- Unauthorized release or discharge
 Numeric effluent limitation exceedance
 Control measures inadequate to meet applicable water quality standards
 Control measures inadequate to meet non-numeric effluent limitations
 Control measures not properly operated or maintained
 Change in facility operations necessitated change in control measures
 Average benchmark value exceedance
 Other (describe): _____

4. Briefly describe the nature of the problem identified:

Fuel spill from human error (<1 gallon) at fuel pump 3 on the fuel island.

5. Date problem identified: 06 / 21 / 2022

6. How problem was identified:

- Comprehensive site inspection
 Quarterly visual assessment
 Routine facility inspection
 Benchmark monitoring
 Notification by EPA or State or local authorities
 Other (describe): _____

7. Description of corrective action(s) taken or to be taken to eliminate or further investigate the problem (e.g., describe modifications or repairs to control measures, analyses to be conducted, etc.) or if no modifications are needed, basis for that determination:

Retrain employees on proper fueling procedures

8. Did/will this corrective action require modification of your SWPPP? YES NO

9. Date corrective action initiated: 06 / 21 / 2022

10. Date correction action completed: ON / GO / ING or expected to be completed: / /

11. If corrective action not yet completed, provide the status of corrective action at the time of the comprehensive site inspection and describe any remaining steps (including timeframes associated with each step) necessary to complete corrective action:

This is a continuous ongoing training for any new employees.

D. CORRECTIVE ACTIONS

Complete this page for each specific condition requiring a corrective action or a review determining that no corrective action is needed. Copy this page for additional corrective actions or reviews.

Include both corrective actions that have been initiated or completed since the last annual report, and future corrective actions needed to address problems identified in this comprehensive stormwater inspection. Include an update on any outstanding corrective actions that had not been completed at the time of your previous annual report.

1. Corrective Action # 03 of 05 for this reporting period.

2. Is this corrective action:

- An update on a corrective action from a previous annual report; or
 A new corrective action?

3. Identify the condition(s) triggering the need for this review:

- Unauthorized release or discharge
 Numeric effluent limitation exceedance
 Control measures inadequate to meet applicable water quality standards
 Control measures inadequate to meet non-numeric effluent limitations
 Control measures not properly operated or maintained
 Change in facility operations necessitated change in control measures
 Average benchmark value exceedance
 Other (describe): _____

4. Briefly describe the nature of the problem identified:

During a waste oil transfer from a portable drum to the waste oil tank outside, the hose became detached and approximately 2 gallons of oil spilled.

5. Date problem identified: 07 / 22 / 2022

6. How problem was identified:

- Comprehensive site inspection
 Quarterly visual assessment
 Routine facility inspection
 Benchmark monitoring
 Notification by EPA or State or local authorities
 Other (describe): Employee Notification

7. Description of corrective action(s) taken or to be taken to eliminate or further investigate the problem (e.g., describe modifications or repairs to control measures, analyses to be conducted, etc.) or if no modifications are needed, basis for that determination:

Retrain employee on proper transfer procedures.

8. Did/will this corrective action require modification of your SWPPP? YES NO

9. Date corrective action initiated: 07 / 22 / 2022

10. Date correction action completed: ON / GC / ING or expected to be completed: / /

11. If corrective action not yet completed, provide the status of corrective action at the time of the comprehensive site inspection and describe any remaining steps (including timeframes associated with each step) necessary to complete corrective action:

This is a continuous ongoing training for any new employees.

D. CORRECTIVE ACTIONS

Complete this page for each specific condition requiring a corrective action or a review determining that no corrective action is needed. Copy this page for additional corrective actions or reviews.

Include both corrective actions that have been initiated or completed since the last annual report, and future corrective actions needed to address problems identified in this comprehensive stormwater inspection. Include an update on any outstanding corrective actions that had not been completed at the time of your previous annual report.

1. Corrective Action # 04 of 05 for this reporting period.

2. Is this corrective action:

- An update on a corrective action from a previous annual report; or
- A new corrective action?

3. Identify the condition(s) triggering the need for this review:

- Unauthorized release or discharge
- Numeric effluent limitation exceedance
- Control measures inadequate to meet applicable water quality standards
- Control measures inadequate to meet non-numeric effluent limitations
- Control measures not properly operated or maintained
- Change in facility operations necessitated change in control measures
- Average benchmark value exceedance
- Other (describe): _____

4. Briefly describe the nature of the problem identified:

Anti-freeze leak from truck's engine in the X1 parking lot.

5. Date problem identified: 11 / 29 / 2022

6. How problem was identified:

- Comprehensive site inspection
- Quarterly visual assessment
- Routine facility inspection
- Benchmark monitoring
- Notification by EPA or State or local authorities
- Other (describe): Visually saw leak

7. Description of corrective action(s) taken or to be taken to eliminate or further investigate the problem (e.g., describe modifications or repairs to control measures, analyses to be conducted, etc.) or if no modifications are needed, basis for that determination:

Inspect vehicles before long-term parking. Vehicles experiencing mechanical issues, park in a covered, contained area such as the motor pool maintenance shop or the covered generator pad. Additionally, deploy drip pans and absorbent sox to collect potential leak.

8. Did/will this corrective action require modification of your SWPPP? YES NO

9. Date corrective action initiated: 11 / 29 / 2022

10. Date correction action completed: 11 / 29 / 2022 or expected to be completed: / /

11. If corrective action not yet completed, provide the status of corrective action at the time of the comprehensive site inspection and describe any remaining steps (including timeframes associated with each step) necessary to complete corrective action:

D. CORRECTIVE ACTIONS

Complete this page for each specific condition requiring a corrective action or a review determining that no corrective action is needed. Copy this page for additional corrective actions or reviews.

Include both corrective actions that have been initiated or completed since the last annual report, and future corrective actions needed to address problems identified in this comprehensive stormwater inspection. Include an update on any outstanding corrective actions that had not been completed at the time of your previous annual report.

1. Corrective Action # 05 of 05 for this reporting period.

2. Is this corrective action:

- An update on a corrective action from a previous annual report; or
 A new corrective action?

3. Identify the condition(s) triggering the need for this review:

- Unauthorized release or discharge
 Numeric effluent limitation exceedance
 Control measures inadequate to meet applicable water quality standards
 Control measures inadequate to meet non-numeric effluent limitations
 Control measures not properly operated or maintained
 Change in facility operations necessitated change in control measures
 Average benchmark value exceedance
 Other (describe): _____

4. Briefly describe the nature of the problem identified:

During the end of the year comprehensive inspection several oil sheens and slicks were noted within the parking lot adjacent to the stormwater BMPs. These sheens seem to have come from either poor fueling procedures or maintenance on the vehicles outside without appropriate preventative measures (i.e. drip pans and absorbent) in place.

5. Date problem identified: 12 / 07 / 2022

6. How problem was identified:

- Comprehensive site inspection
 Quarterly visual assessment
 Routine facility inspection
 Benchmark monitoring
 Notification by EPA or State or local authorities
 Other (describe): _____

7. Description of corrective action(s) taken or to be taken to eliminate or further investigate the problem (e.g., describe modifications or repairs to control measures, analyses to be conducted, etc.) or if no modifications are needed, basis for that determination:

Retrain employees on proper procedures, cleanup procedures, and conduct maintenance either inside or with the appropriate BMPs. Deploy absorbent or pads to clean up any spilled oil.

8. Did/will this corrective action require modification of your SWPPP? YES NO

9. Date corrective action initiated: 12 / 07 / 2022

10. Date correction action completed: 12 / 12 / 2022 or expected to be completed: / /

11. If corrective action not yet completed, provide the status of corrective action at the time of the comprehensive site inspection and describe any remaining steps (including timeframes associated with each step) necessary to complete corrective action:

Oil slicks/sheens were cleaned up Monday morning and employees are being retrained on proper fueling procedures.

E. ANNUAL REPORT CERTIFICATION

1. Compliance Certification

Do you certify that your annual inspection has met the requirements of Part 4.2 of the permit, and that, based upon the results of this inspection, to the best of your knowledge, you are in compliance with the permit? YES NO

If NO, summarize why you are not in compliance with the permit:

2. Annual Report Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Authorized Representative
Printed Name:

Kaitlyn Peterson

Title: Program Manager

Signature:

Kaitlyn Peterson

Date Signed: 12/12/2022



APPENDIX K
SPILL RECORD

UMD Spill Record

Date	Description	Outfalls	Drainage Area
08/05/2019	An unknown employee overfilled the waste oil AST at the shuttle bus facility. Approx 1.5-2 gallons of oil spilled onto the surrounding concrete and a small patch of soil. None was observed entering the stormwater system. There were already oil sorbent pads deployed prior to the notification of the spill. Loose oil absorbent was used (1 bag) and all cleaning materials in addition to one (1) 55-gallon drum of soil was removed and disposed of through the University's TSDF.	#006SW	DA-3
12/09/2020	A nozzle on the fuel dispenser failed to shut off and resulted in an overflow of diesel fuel during the refueling of one of the buses at the Shuttle Bus facility. All fuel was contained on the containment pad at the fueling site. No fuel entered the environment. OEA deployed absorbent materials to the ground surface. A vacuum truck was used to pump water and fuel from the containment OWS in the middle of the fuel pad.	#005SW	DA-3
03/03/2021	An alert went out about a small spill that occurred at the Shuttle Bus fuel island. The alert mentioned that the spill was from the dispenser nozzle and that all the fuel spilled had been contained to the containment pad and oil/water separator. Upon investigation, it was noted the pump house had fuel pooled in the bottom of the structure and that some had leaked out into the adjacent ground. Absorbent material was used on the ground surface and roughly 4-in of contaminated soil was removed.	#005SW	DA-3
06/14/2021	Greentech was fuel polishing the diesel fuel at the portable generator located in the loading docks near Terp Trader. During the process, the line disconnected and spilled approximately two (2) gallons of diesel fuel. Greentech immediately shut off the fuel and deployed pig absorbent pads to the affected area. A small amount of fuel did enter the zipper drain down the side but did not pool or enter the stormwater system. The pig absorbent mats collected all standing fuel in the affected areas. Two oil socks were deployed into the zipper drain to collect any fuel that would be washed into the stormwater system via a storm event.	#010SW	DA-5
08/06/2021	Approximately 10 gallons of oil overflowed from the used oil tank while transferring oil from a portable oil tank into the used oil tank. Two technicians from the Shuttle Bus facility immediately used loose absorbent to contain and	#006SW	DA-3

UMD Spill Record

Date	Description	Outfalls	Drainage Area
	absorb the spill. UMD Fire Marshall and 3 shuttle bus technicians finished cleaning up the spill using the absorbent dust and pads from the spill kit next to the tank. All the spilled oil was contained within the impervious area around the oil tank.		
11/22/2021	The Fire Marshal's Office was dispatched to the Shuttle Bus Facility for a diesel fuel spill. JRP Fueling was delivering diesel fuel to the Shuttle Bus Facility when a seal between the tank and a discharge valve failed. After containing the initial spill of approximately 8 gallons, the contractor (JRP Fueling) called in another tanker to pump the initial leaking fuel tanker out. After the tanker was fulling emptied to the best of their abilities, the initial tanker started his tanker to leave UMD. However, once the tanker was put into gear, diesel began to spill again from the same discharge valve (approximately an additional 4 gallons).	#005SW	DA-3
12/06/2021	A call was placed to the University of Maryland CRC of a spill being formed under a vehicle at the Severn Building. The CRC contacted the UMD Fire Marshall's who, in turn, sent out a message to those on call. Once on site, it was discovered that a vehicle was leaking its transmission fluid onto the pavement below.	#0019SW	DA-5
08/10/2022	IRU responded to a fuel leak at the Severn fuel island. An employee was fueling at the E85 ethanol tank when the handle got stuck when trying to remove it from the vehicle and a small amount spilled on the fuel pad. By the time IRU arrives, the fuel had dissipated.	#014SW	DA-5
04/19/2023	The UMPD and The Office of the Fire Marshal were dispatched to the Shuttle Bus Facility (424) for a spill of an unknown product and quantity. Upon arrival, Shuttle Bus Facility personnel informed us that approximately three (3) gallons of hydraulic fluid/oil mix had spilled over approximately 50 - 60 yards. The cause of the spill appeared to be from the failure of an oil feed line to the clutch fan of a shuttle bus. The shuttle bus was at the fuel pump when the failure of the line occurred. A good portion of the product spilled in the area of the fuel pump. Some of the product flowed naturally into the oil/water separator located at the pump. The bus then drove to the opposite end of the lot causing a trail of this mixture to cover an estimated area of 50 - 60 yards. There did not	#005SW	DA-3

UMD Spill Record

Date	Description	Outfalls	Drainage Area
	appear to be any contamination to the environment as everything was contained to the parking lot and the oil/water separator. Shuttle Bus Facility personnel recovered as much of the product as possible using 8 bags of Dry Loose Absorbent and brooms.		

MARYLAND DEPARTMENT of the ENVIRONMENT
1800 WASHINGTON BOULEVARD
BALTIMORE, MARYLAND. 21230
(410) 537-3000
1-800-633-6101 (within Maryland)
http://www.mde.state.md.us



State of Maryland
Department of the Environment
Emergency Response Division
1800 Washington Blvd. Suite #105
Baltimore, Maryland. 21230-1721



24 HOUR SPILL REPORTING
(Toll Free) 1-866-633-4686
EMERGENCY RESPONSE OFFICE
(410) 537-3975
RESPONSE OFFICE FACSIMILE
(410) 537-3932

PURSUANT TO THE PROVISIONS OF STATE LAW AND REGULATION: (COMAR 26.10.01.03) "A PERSON DISCHARGING OR PERMITTING THE DISCHARGE OF OIL, OR WHO EITHER ACTIVELY OR PASSIVELY PARTICIPATES IN THE DISCHARGE OR SPILLING OF OIL, EITHER FROM A LAND BASED INSTALLATION, INCLUDING VEHICLES IN TRANSIT, OR FROM ANY VESSEL SHIP OR BOAT OF ANY KIND, SHALL REPORT THE INCIDENT IMMEDIATELY TO THE ADMINISTRATION." " THE REPORT OF AN OIL SPILL OR DISCHARGE SHALL BE MADE TO THE ADMINISTRATION IMMEDIATELY, BUT NOT LATER THAN TWO HOURS AFTER DETECTION OF THE SPILL." *** FIRE DEPARTMENT PERSONNEL, SEE REVERSE ***

ADC Map Coord _____ Date of spill: Mo. 08 / Day 05 / Yr. 2019 Time of spill: 1300 Hours (24 hour clock)
Fire Department Report No.: _____ Police Department Report No.: _____

Location of spill - Street address: 8537 Paint Branch Dr
City / Town College Park
MD County Prince Georges
Zip 20742
Product Name: Waste Oil
(Indicate Gasoline, Diesel, Heating Oil, Chemical Name or UN ID etc.)
Container Type: AST
(Indicate AST, UST, Transformer, Saddle Tank, Drum etc.)
Capacity of Vessel, Vehicle or Tank: 550 Gallons
Amount IN Vessel, Vehicle or Tank: _____ Gallons
Estimated Amount Spilled: 1.5-2 Gallons

Transportation Incident: _____
(Indicate Type of Auto, Truck, Train, Aircraft or Watercraft etc.)
Fixed Facility Incident: Institutional
(Indicate Type of Industrial, Commercial, Residential etc.)
 Contained on Land
 Entered Storm Drain or Ditch
 Entered Sanitary Sewer
 Is Below Ground
 Entered surface waters:
Vehicle Tag Number and State: N/A
DOT or ICC MC Number: N/A
Hull Numbers and Name: N/A

Person(s) Responsible for Spill: (Driver if Vehicle)
Name: Shuttle Bus Facility
Address: 8537 Paint Branch Dr
City/State: College Park, MD Zip: 20742
Phone: (301) 314-7269
Drivers Lic.No. _____ State: _____
Company Responsible for Spill: (N/A if private citizen.)
Name: University of Maryland
Address: 1101 Main Administration Building
7901 Regents Drive
City/State: College Park, MD Zip: 20742
Phone: 301-405-1000
Fed. Employer ID No. 52-06002033

Cause of Spill:
 Motor Vehicle Accident
 Personnel Error/Vandalism
 Tank/Container/Pipe Leak
 Mechanical Failure
 Transfer Accident

Identify All Groups that Participated in Spill Mitigation: Responsible Party
 MDE ERD # _____ # _____
 Federal : _____
 State : University of Maryland
 Local : _____
 Contractor: _____
Materials used by You to contain/clean-up spill:
Sorbent Dust: 1 Bags
Sorbent Pads: _____ each or bales
Sorbent Booms: _____ each or bales
Sorbent Sweeps: _____ each or bales
Overpack Drums : 1 ea. Steel or Poly
Other: _____

Responsible Party : Describe circumstances contributing to the spill. (Additional space on back) [Optional for FD or Gov't Personnel]

An unknown individual overfilled the waste oil tank located outside of the maintenance shop of the Shuttle Bus Facility. The spill was discovered on Monday, August 5, 2019 at approximately 13:00. Most of the spill was covered by sorbent pads prior to the discovery by the reporting individual. A small amount of the spill had entered the grass/ground adjacent to the waste oil tank.

Responsible Party : Describe Containment, Removal and Clean-up operations, including disposal. (Additional space on back) [Optional for FD or Gov't Personnel]

The entirety of the spill was cleaned up by collecting the saturated sorbent pads, placing 1 bag of sheen clean loose absorbent to absorb the remaining oil, and a 55-gallon drum of the contaminated soil was removed. All cleaning materials were cleaned up and properly disposed of through the University's TSDF. The soil adjacent to the waste oil tank is being replaced by concrete later this month.

Responsible Party : Procedures, Methods and Precautions instituted to prevent recurrence of the spill. (Additional space on back) [Optional for FD or Gov't Personnel]

Shuttle Bus personnel will be retrained in proper disposal procedures. In addition to the training, a longer nipple will be installed between the tank and the locking cap to prevent overfills in the future as well as the installation of a combination tank gauge and audible / visual alarm.

THE UNDERSIGNED CERTIFIES THAT THE INFORMATION PROVIDED IS TRUE AND CORRECT TO THE BEST OF HIS OR HER KNOWLEDGE AT THE TIME THE REPORT WAS COMPLETED.
Print Name: Kaitlyn Peterson, Office of Environmental Affairs Company or Fire Department: University of Maryland
Address : 4716 Pontiac Street, 0103 City / State / Zip College Park, MD 20742
Telephone 301-405-8604 Signature Jason Baer

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 (410) 537-3000
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 EMERGENCY RESPONSE OFFICE
 (410) 537-3975
 RESPONSE OFFICE FACSIMILE
 (410) 537-3932

PURSUANT TO THE PROVISIONS OF STATE LAW AND REGULATION; (COMAR 26.10.01.03) "A PERSON DISCHARGING OR PERMITTING THE DISCHARGE OF OIL, OR WHO EITHER ACTIVELY OR PASSIVELY PARTICIPATES IN THE DISCHARGE OR SPILLING OF OIL, EITHER FROM A LAND BASED INSTALLATION, INCLUDING VEHICLES IN TRANSIT, OR FROM ANY VESSEL SHIP OR BOAT OF ANY KIND, SHALL REPORT THE INCIDENT IMMEDIATELY TO THE ADMINISTRATION." " THE REPORT OF AN OIL SPILL OR DISCHARGE SHALL BE MADE TO THE ADMINISTRATION IMMEDIATELY, BUT NOT LATER THAN TWO HOURS AFTER DETECTION OF THE SPILL." *** FIRE DEPARTMENT PERSONNEL, SEE REVERSE ***

ADC Map Coord _____ Date of spill: Mo. 1 2 / Day 0 9 / Yr. 20 2 0 Time of spill: 1 5 4 5 Hours (24 hour clock)
 Fire Department Report No.: _____ Police Department Report No.: _____

Location of spill - Street address: <u>8537 Paint Branch Drive, Bldg. 424</u>	Product Name: <u>Ultra Low Sulfur Diesel Fuel</u> <small>(Indicate Gasoline, Diesel, Heating Oil, Chemical Name or UN ID etc.)</small>	Capacity of Vessel, Vehicle or Tank: <u>20,000</u> Gallons
City / Town <u>College Park</u>	Container Type: <u>AST / Fuel Dispenser</u> <small>(Indicate AST, UST, Transformer, Saddle Tank, Drum etc.)</small>	Amount <u>IN</u> Vessel, Vehicle or Tank: _____ Gallons
MD County <u>Prince George's</u>		Estimated <u>Amount Spilled</u> : <u>200</u> Gallons
Zip <u>20742</u>		

Transportation Incident: <small>(Indicate Type of Auto, Truck, Train, Aircraft or Watercraft etc.)</small>	<input checked="" type="checkbox"/> Contained on Land <input type="checkbox"/> Entered Storm Drain or Ditch <input type="checkbox"/> Entered Sanitary Sewer <input type="checkbox"/> Is Below Ground <input type="checkbox"/> Entered surface waters:	Vehicle Tag Number and State: <u>N/A</u>
Fixed Facility Incident: <small>(Indicate Type of Industrial, Commercial, Residential etc.)</small>		DOT or ICC MC Number: <u>N/A</u>
		Hull Numbers and Name: <u>N/A</u>

Person(s) Responsible for Spill: (Driver if Vehicle) Name: <u>Edwin Brown (facility maintenance manager - evening shift)</u> Address: <u>8537 Paint Branch Drive, Bldg. 424</u> City/State: <u>College Park, MD</u> Zip: <u>20742</u> Phone: <u>(301) 314-8631</u> Drivers Lic.No. <u>N/A</u> State: _____	Be Sure to Complete Both Sections Don't Forget to Sign Below	Company Responsible for Spill: (N/A if private citizen.) Name: <u>University of Maryland</u> Address: <u>1101 Main Administration Building</u> <u>7901 Regents Drive</u> City/State: <u>College Park, MD</u> Zip: <u>20742</u> Phone: <u>301-405-3960</u> Fed. Employer ID No. <u>52-06002033</u>
--	---	--

Cause of Spill: <input type="checkbox"/> Motor Vehicle Accident <input type="checkbox"/> Personnel Error/Vandalism <input type="checkbox"/> Tank/Container/Pipe Leak <input checked="" type="checkbox"/> Mechanical Failure <input checked="" type="checkbox"/> Transfer Accident <input type="checkbox"/> _____	Identify All Groups that Participated in Spill Mitigation : <input checked="" type="checkbox"/> Responsible Party <input type="checkbox"/> MDE ERD # _____ # _____ <input type="checkbox"/> Federal : _____ <input type="checkbox"/> State : _____ <input type="checkbox"/> Local : _____ <input checked="" type="checkbox"/> Contractor: <u>Triumvirate Environmental</u>	Materials used by You to contain/clean-up spill: Sorbent Dust: <u>5</u> Bags Sorbent Pads: <u>10</u> each or bales Sorbent Booms: <u>3</u> each or bales Sorbent Sweeps: _____ each or bales Overpack Drums : <u>1</u> ea. Steel or Poly Other: _____
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Responsible Party : Describe circumstances contributing to the spill. (Additional space on back) [Optional for FD or Gov't Personnel]

A nozzle on the fuel dispenser failed to shut off and resulted in an overflow of diesel fuel during the refueling of one of the buses at the facility.
 All fuel was contained on the containment pad at the fueling facility.

MDE was notified of the spill by phone at approximately 5:30 pm, once the situation had been assessed and cleanup operations had been initiated.
 Responsible Party : Describe Containment, Removal and Clean-up operations, including disposal. (Additional space on back) [Optional for FD or Gov't Personnel]

The Office of Environmental Affairs responded for the University. Absorbent materials were used to remove the fuel on the ground surface. All liquid was contained to the containment pad at the fueling facility. A vacuum truck was used to pump water and fuel from the containment sump in the middle of the fueling facility. No fuel entered the environment. All fuel spilled was contained and cleaned up.
 Responsible Party : Procedures, Methods and Precautions instituted to prevent recurrence of the spill. (Additional space on back) [Optional for FD or Gov't Personnel]

We will contact a contractor to service the fuel dispenser and ensure that it is operating properly.

THE UNDERSIGNED CERTIFIES THAT THE INFORMATION PROVIDED IS TRUE AND CORRECT TO THE BEST OF HIS OR HER KNOWLEDGE AT THE TIME THE REPORT WAS COMPLETED.
Print Name: Jason Baer **Company or Fire Department:** University of Maryland
Address : 4716 Pontiac Street, #0103 (Seneca Building) **City / State / Zip** College Park, MD 20742
Telephone 202-441-6391 (cell) **Signature** Jason Baer

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ADC Map Coord _____ Date of spill: Mo. 06 / Day 14 / Yr. 2021 Time of spill: 1125 Hours (24 hour clock)
 Fire Department Report No.: _____ Police Department Report No.: _____

Location of spill - Street address: Severn Building 5245 Greenbelt Road City / Town <u>College Park</u> MD County <u>Prince George's</u> Zip <u>20740</u>	Product Name: <u>Diesel Fuel</u> (Indicate Gasoline, Diesel, Heating Oil, Chemical Name or UN ID etc.) Container Type: <u>Portable AST Generator</u> (Indicate AST, UST, Transformer, Saddle Tank, Drum etc.)	Capacity of Vessel, Vehicle or Tank: <u>210</u> Gallons Amount <u>IN</u> Vessel, Vehicle or Tank: <u>210</u> Gallons Estimated Amount Spilled: <u>2</u> Gallons
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Transportation Incident: (Indicate Type of Auto, Truck, Train, Aircraft or Watercraft etc.) Fixed Facility Incident: <u>Institutional</u> (Indicate Type of Industrial, Commercial, Residential etc.)	<input checked="" type="checkbox"/> Contained on Land <input type="checkbox"/> Entered Storm Drain or Ditch <input type="checkbox"/> Entered Sanitary Sewer <input type="checkbox"/> Is Below Ground <input type="checkbox"/> Entered surface waters:	Vehicle Tag Number and State: _____ DOT or ICC MC Number: _____ Hull Numbers and Name: _____
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Person(s) Responsible for Spill: (Driver if Vehicle) Name: _____ Address: _____ City/State: _____ Zip: _____ Phone: _____ Drivers Lic.No. _____ State: _____	Be Sure to Complete Both Sections Don't Forget to Sign Below	Company Responsible for Spill: (N/A if private citizen.) Name: <u>Greentech Fuel Management</u> Address: <u>1675 Hosfeld Drive</u> City/State: <u>Westminster/MD</u> Zip: <u>21157</u> Phone: <u>(877)587-7183</u> Fed. Employer ID No. _____
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Cause of Spill: <input type="checkbox"/> Motor Vehicle Accident <input type="checkbox"/> Personnel Error/Vandalism <input checked="" type="checkbox"/> Tank/Container/Pipe Leak <input type="checkbox"/> Mechanical Failure <input type="checkbox"/> Transfer Accident <input type="checkbox"/> _____	Identify All Groups that Participated in Spill Mitigation : <input checked="" type="checkbox"/> Responsible Party <input type="checkbox"/> MDE ERD # _____ # _____ <input type="checkbox"/> Federal : _____ <input checked="" type="checkbox"/> State : <u>University of Maryland</u> <input type="checkbox"/> Local : _____ <input checked="" type="checkbox"/> Contractor: <u>Greentech Fuel Management</u>	Materials used by You to contain/clean-up spill: Sorbent Dust: _____ Bags Sorbent Pads: <u>30+</u> each or bales Sorbent Booms: <u>2</u> each or bales Sorbent Sweeps: _____ each or bales Overpack Drums : _____ ea. Steel or Poly Other: _____
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Responsible Party : Describe circumstances contributing to the spill. (Additional space on back) [Optional for FD or Gov't Personnel]

Greentech was fuel polishing the diesel fuel at the portable generator located in the loading docks near Terp Trader.
 During the process, the line disconnected and spilled approximately 2 gallons of diesel fuel.

Responsible Party : Describe Containment, Removal and Clean-up operations, including disposal. (Additional space on back) [Optional for FD or Gov't Personnel]

Greentech immediately shut off the fuel and deployed pig absorbent pads to the affected area. In addition to this, Greentech also created a dam-like structure from pig absorbent pads in front of the adjacent zipper drain to prevent fuel from entering. A small amount of fuel did enter the zipper drain down the side but did not pool or entering the stormwater system. The pig (see back)

Responsible Party : Procedures, Methods and Precautions instituted to prevent recurrence of the spill. (Additional space on back) [Optional for FD or Gov't Personnel]

The facility will deploy drain covers prior to future maintenance conducted in exposed areas. Contractors will be asked to deploy preventative maintenance items such as drip pans or oil booms in the event of a spill.

THE UNDERSIGNED CERTIFIES THAT THE INFORMATION PROVIDED IS TRUE AND CORRECT TO THE BEST OF HIS OR HER KNOWLEDGE AT THE TIME THE REPORT WAS COMPLETED.

Print Name: Kaitlyn Peterson Company or Fire Department: University of Maryland
 Address : 4716 Pontiac Street City / State / Zip College Park / MD / 20742
 Telephone (202)308-8273 Signature _____

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(410) 537-3975
RESPONSE OFFICE FACSIMILE
(410) 537-3932

PURSUANT TO THE PROVISIONS OF STATE LAW AND REGULATION; (Environmental Article 4-401 (i) ; the "Person Responsible for the discharge includes , The owner of the discharged oil , The owner , operator and / or the person in charge of the oil storage facility, vessel , barge , or vehicle involved at the time of or immediately before the discharge ; and Any person who through act or omission , causes the discharge."

***** Fire Department *** and Local or State Government Agencies : Unless you are the responsible party as defined above , Please indicate " Unknown " in any box requesting information that is unknown or unavailable to you at the time of report.**

This Space for continuation and additional information.

Describe Containment , Removal and Clean-up operations , including disposal

absorbent mats collected all standing fuel in the affected areas. Two oil socks were deployed into the zipper drain to collect any fuel that would be washed into the stormwater system via a storm event and will be replaced on Tuesday, June 15th, 2021.

THE UNDERSIGNED CERTIFIES THAT THE INFORMATION PROVIDED IS TRUE AND CORRECT TO THE BEST OF HIS OR HER KNOWLEDGE AT THE TIME THE REPORT WAS COMPLETED.

Print Name: _____ Company or Fire Department: _____
Address : _____ City / State / Zip _____
Telephone _____ Signature _____

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ADC Map Coord _____ Date of spill: Mo. 0 8 / Day 0 6 / Yr. 20 2 1 Time of spill: 1 6 3 0 Hours (24 hour clock)
Fire Department Report No.: _____ Police Department Report No.: _____

Location of spill - Street address: 8537 Paint Branch Dr Shuttle Bus Facility City / Town <u>College Park</u> MD County <u>Prince George's</u> Zip <u>20742</u>	Product Name: <u>Used Oil</u> (Indicate Gasoline, Diesel, Heating Oil, Chemical Name or UN ID etc.) Container Type: <u>AST</u> (Indicate AST, UST, Transformer, Saddle Tank, Drum etc.)	Capacity of Vessel, Vehicle or Tank: <u>550</u> Gallons Amount <u>IN</u> Vessel, Vehicle or Tank: <u>500</u> Gallons Estimated <u>Amount Spilled</u> : <u>10</u> Gallons
--	--	---

Transportation Incident: (Indicate Type of Auto, Truck, Train, Aircraft or Watercraft etc.) Fixed Facility Incident: (Indicate Type of Industrial, Commercial, Residential etc.)	<input checked="" type="checkbox"/> Contained on Land <input type="checkbox"/> Entered Storm Drain or Ditch <input type="checkbox"/> Entered Sanitary Sewer <input type="checkbox"/> Is Below Ground <input type="checkbox"/> Entered surface waters: 	Vehicle Tag Number and State: _____ DOT or ICC MC Number: _____ Hull Numbers and Name: _____
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Person(s) Responsible for Spill: (Driver if Vehicle) Name: <u>Shuttle Bus Technician</u> Address: <u>8537 Paint Branch Dr</u> City/State: <u>College Park, Maryland</u> Zip: <u>20742</u> Phone: <u>(301) 314-7267</u> Drivers Lic.No. _____ State: _____	Company Responsible for Spill: (N/A if private citizen.) Name: <u>University of Maryland-Shuttle Bus Facility</u> Address: <u>8537 Paint Branch Dr</u> City/State: <u>College Park, Maryland</u> Zip: <u>20742</u> Phone: <u>(301) 314-7267</u> Fed. Employer ID No. <u>52-6002033</u>	Be Sure to Complete Both Sections  Don't Forget to Sign Below
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Cause of Spill: <input type="checkbox"/> Motor Vehicle Accident <input type="checkbox"/> Personnel Error/Vandalism <input type="checkbox"/> Tank/Container/Pipe Leak <input type="checkbox"/> Mechanical Failure <input checked="" type="checkbox"/> Transfer Accident <input type="checkbox"/> _____	Identify All Groups that Participated in Spill Mitigation : <input checked="" type="checkbox"/> Responsible Party <input type="checkbox"/> MDE ERD # _____ # _____ <input type="checkbox"/> Federal : _____ <input checked="" type="checkbox"/> State : <u>University Of Maryland</u> <input type="checkbox"/> Local : _____ <input type="checkbox"/> Contractor: _____	Materials used by You to contain/clean-up spill: Sorbent Dust: <u>3</u> Bags Sorbent Pads: <u>10</u> each or bales Sorbent Booms: _____ each or bales Sorbent Sweeps: _____ each or bales Overpack Drums : _____ ea. Steel or Poly Other: _____
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Responsible Party : Describe circumstances contributing to the spill. (Additional space on back) [Optional for FD or Gov't Personnel]

Around 1630 on 8/6/21, approximately 10 gallons of oil overflowed from the used oil tank while transferring oil from a portable oil tank into the used oil tank.

Responsible Party : Describe Containment, Removal and Clean-up operations, including disposal. (Additional space on back) [Optional for FD or Gov't Personnel]

Two technicians from the Shuttle Bus facility immediately used loose absorbent to contain and absorb the spill. UMD Fire Marshall and 3 shuttle bus technicians finished cleaned up the spill using the absorbent dust and pads from the spill kit next to the tank. All of the spilled oil was contained within the impervious area around the oil tank.

Responsible Party : Procedures, Methods and Precautions instituted to prevent recurrence of the spill. (Additional space on back) [Optional for FD or Gov't Personnel]

The facility inspected their fuel level alarm to determine the reason it did not sound at the manually adjusted level of 3/4 to 7/8 full. It was noted that the 9V battery in the alarm was low and once it was replaced, the alarm was tested and determined to be in working order. The used oil tank was also pumped out on 8/07/2021 and will be pumped out regularly.

THE UNDERSIGNED CERTIFIES THAT THE INFORMATION PROVIDED IS TRUE AND CORRECT TO THE BEST OF HIS OR HER KNOWLEDGE AT THE TIME THE REPORT WAS COMPLETED.

Print Name: <u>Kaitlyn Peterson</u>	Company or Fire Department: <u>University of Maryland</u>
Address : <u>4716 Pontiac Street</u>	City / State / Zip <u>College Park, MD 20742</u>
Telephone <u>202-308-8273</u>	Signature _____

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ADC Map Coord _____ Date of spill: Mo. 1 1 / Day 2 2 / Yr. 20 2 1 Time of spill: 1 4 2 8 Hours (24 hour clock)
Fire Department Report No.: _____ Police Department Report No.: _____

Location of spill - Street address:
Shuttle Bus Facility-University of Maryland
8537 Paint Branch Dr
City / Town College Park, MD
MD County Prince George's
Zip 20742

Product Name: Diesel
(Indicate Gasoline, Diesel, Heating Oil, Chemical Name or UN ID etc.)
Container Type: Tanker (Low Pressure Bulk Liquid)
(Indicate AST, UST, Transformer, Saddle Tank, Drum etc.)


Capacity of Vessel, Vehicle or Tank: 5000 Gallons
Amount IN Vessel, Vehicle or Tank: 4700 Gallons
Estimated Amount Spilled: 12 Gallons

Transportation Incident: Fuel delivery tanker
(Indicate Type of Auto, Truck, Train, Aircraft or Watercraft etc.)
Fixed Facility Incident: Institutional
(Indicate Type of Industrial, Commercial, Residential etc.)

Contained on Land
 Entered Storm Drain or Ditch
 Entered Sanitary Sewer
 Is Below Ground
 Entered surface waters:


Vehicle Tag Number and State: 421E95 MD
DOT or ICC MC Number: 536632
Hull Numbers and Name: _____

Person(s) Responsible for Spill: (Driver if Vehicle)
Name: Dennis
Address: Refused to provide information
City/State: _____ Zip: _____
Phone: _____
Drivers Lic.No. _____ State: _____

Be Sure to Complete Both Sections

Don't Forget to Sign Below

Company Responsible for Spill: (N/A if private citizen.)
Name: JRP Fueling/James River Petroleum
Address: 10487 Lakeridge Pkwy
#8115
City/State: Ashland, VA Zip: 23005
Phone: 804.358.9000
Fed. Employer ID No. 54-1331068

Cause of Spill:
 Motor Vehicle Accident
 Personnel Error/Vandalism
 Tank/Container/Pipe Leak
 Mechanical Failure
 Transfer Accident

Identify All Groups that Participated in Spill Mitigation : Responsible Party
 MDE ERD # _____ # _____
 Federal : _____
 State : _____
 Local : UMD
 Contractor: On-Call First Response, Triumvirate

Materials used by You to contain/clean-up spill:
Sorbent Dust: 5 Bags
Sorbent Pads: _____ each or bales
Sorbent Booms: 4 each or bales
Sorbent Sweeps: _____ each or bales
Overpack Drums : 2 ea. Steel or Poly
Other: _____

Responsible Party : Describe circumstances contributing to the spill. (Additional space on back) [Optional for FD or Gov't Personnel]

At approximately 4:28 PM the Fire Marshal's Office was dispatched to the Shuttle Bus Facility for a diesel fuel spill. The leaking diesel fuel was determined to be a contractor spill on University of Maryland property. JRP Fueling was delivering diesel fuel to the Shuttle Bus Facility when a seal between the tank and a discharge valve failed. After containing the initial spill of approximately

Responsible Party : Describe Containment, Removal and Clean-up operations, including disposal. (Additional space on back) [Optional for FD or Gov't Personnel]

Shuttle Bus employees deployed oil booms and loose absorbent to contain the spill. The contractor (JRP) deployed oil absorbent pads underneath the tanker and discharge valve as well as a 5 gallon bucket to collect the trickle of diesel still leaking from the valve. Once it was determined the fuel had penetrated the soil adjacent to the parking lot, Shuttle

Responsible Party : Procedures, Methods and Precautions instituted to prevent recurrence of the spill. (Additional space on back) [Optional for FD or Gov't Personnel]

Install signage at fuel pad instructing all loading and unloading to be done with vehicle on the fuel pad where the OWS is located.

THE UNDERSIGNED CERTIFIES THAT THE INFORMATION PROVIDED IS TRUE AND CORRECT TO THE BEST OF HIS OR HER KNOWLEDGE AT THE TIME THE REPORT WAS COMPLETED.
Print Name: Kaitlyn Peterson Company or Fire Department: UMD-ESSR
Address : 4716 Pontiac St City / State / Zip College Park, MD, 20742
Telephone (301) 405-8604 Signature _____

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PURSUANT TO THE PROVISIONS OF STATE LAW AND REGULATION; (Environmental Article 4-401 (i) ; the "Person Responsible for the discharge includes , The owner of the discharged oil , The owner , operator and / or the person in charge of the oil storage facility, vessel , barge , or vehicle involved at the time of or immediately before the discharge ; and Any person who through act or omission , causes the discharge."

***** Fire Department *** and Local or State Government Agencies : Unless you are the responsible party as defined above , Please indicate " Unknown " in any box requesting information that is unknown or unavailable to you at the time of report.**

This Space for continuation and additional information.

8 gallons, the contractor (JRP Fueling) called in another tanker to pump the initial leaking fuel tanker out. After the tanker was fulling emptied to the best of their abilities, the initial tanker started his tanker in an effort to leave UMD. However, once the tanker was put into gear, diesel began to spill again from the same discharge valve (approximately an additional 4 gallons).

Bus employees began to removed the contaminated soil and rocks. It was determined that the extent of the contaminated area was too expansive for the employees to handle and a contractor was contacted take over the clean-up operations. The impervious areas impacted where cleaned using loose absorbent and sweeping the material up into a 55-gallon drum. Once all the loose fuel was removed, the contaminated area was packed with loose absorbent for the night and to be re-evaluated in the morning. The following afternoon, Tuesday November 23rd, at 1:30pm, First Call Environmental was hired by the contractor (JRP) to remediate the contaminated area. First Call arrived with three (3) employees equipped with a hand shovel. It was determined this would not suffice and First Call initiated arrangements for earth-moving equipment and a roll-off to be delivered at the site. Monday, November 29th, Darnell Jackson of First Call contacted UMD stating First Call will be at Shuttle Bus circa 1:00pm on Nov 29 to begin the remediation project. UMD plans to continue to evaluate the remediation project and determine is additional work is needed due to the fact the area impacted is a sand filter BMP. On Monday, November 29th, First Call removed approximately 1 cubic yard of contaminated soil with an excavator. The soil was placed into a lined roll-off dumpster and transported to Clean Harbors Environmental in Baltimore for disposal. First Call finished and left UMD around 5 pm.

THE UNDERSIGNED CERTIFIES THAT THE INFORMATION PROVIDED IS TRUE AND CORRECT TO THE BEST OF HIS OR HER KNOWLEDGE AT THE TIME THE REPORT WAS COMPLETED.

Print Name: Kaitlyn Peterson Company or Fire Department: UMD-ESSR
Address : 4716 Pontiac Street City / State / Zip College Park, MD 20742
Telephone (301) 405-8604 Signature Kaitlyn Peterson

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(410) 537-3000
1-800-633-6101 (within Maryland)
<http://www.mde.state.md.us>



State of Maryland
Department of the Environment
Emergency Response Division
1800 Washington Blvd. Suite #105
Baltimore, Maryland. 21230-1721



24 HOUR SPILL REPORTING
(Toll Free) 1-866-633-4686
EMERGENCY RESPONSE OFFICE
(410) 537-3975
RESPONSE OFFICE FACSIMILE
(410) 537-3932

PURSUANT TO THE PROVISIONS OF STATE LAW AND REGULATION: (COMAR 26.10.01.03) "A PERSON DISCHARGING OR PERMITTING THE DISCHARGE OF OIL, OR WHO EITHER ACTIVELY OR PASSIVELY PARTICIPATES IN THE DISCHARGE OR SPILLING OF OIL, EITHER FROM A LAND BASED INSTALLATION, INCLUDING VEHICLES IN TRANSIT, OR FROM ANY VESSEL SHIP OR BOAT OF ANY KIND, SHALL REPORT THE INCIDENT IMMEDIATELY TO THE ADMINISTRATION." " THE REPORT OF AN OIL SPILL OR DISCHARGE SHALL BE MADE TO THE ADMINISTRATION IMMEDIATELY, BUT NOT LATER THAN TWO HOURS AFTER DETECTION OF THE SPILL." *** FIRE DEPARTMENT PERSONNEL . SEE REVERSE ***

ADC Map Coord _____ Date of spill: Mo. 1 2 / Day 0 6 / Yr. 20 2 1 Time of spill: 1 6 0 0 Hours (24 hour clock)
Fire Department Report No.: _____ Police Department Report No.: _____

Location of spill - Street address: <u>5245 Greenbelt Rd.</u>	Product Name: <u>petroleum product</u> <small>(Indicate Gasoline, Diesel, Heating Oil, Chemical Name or UN ID etc.)</small>	Capacity of Vessel, Vehicle or Tank: <u>2</u> Gallons
City / Town <u>College Park</u>	Container Type: <u>Vehicle</u> <small>(Indicate AST, UST, Transformer, Saddle Tank, Drum etc.)</small>	Amount <u>IN</u> Vessel, Vehicle or Tank: <u>2</u> Gallons
MD County <u>Prince George's</u>		Estimated <u>Amount Spilled</u> : <u>2</u> Gallons
Zip <u>20740</u>		

Transportation Incident: <u>Auto</u> <small>(Indicate Type of Auto, Truck, Train, Aircraft or Watercraft etc.)</small>	<input checked="" type="checkbox"/> Contained on Land <input type="checkbox"/> Entered Storm Drain or Ditch <input type="checkbox"/> Entered Sanitary Sewer <input type="checkbox"/> Is Below Ground <input type="checkbox"/> Entered surface waters:	Vehicle Tag Number and State: <u>22427SG</u> <u>MD</u>
Fixed Facility Incident: <u>Institutional</u> <small>(Indicate Type of Industrial, Commercial, Residential etc.)</small>		DOT or ICC MC Number: _____ Hull Numbers and Name: _____

Person(s) Responsible for Spill: (Driver if Vehicle) Name: _____ Address: <u>5245 Greenbelt Rd.</u> City/State: <u>College Park, MD</u> Zip: <u>20740</u> Phone: _____ Drivers Lic.No. _____ State: <u>MD</u>	Be Sure to Complete Both Sections ↕ Don't Forget to Sign Below	Company Responsible for Spill: (N/A if private citizen.) Name: <u>University of Maryland-Motor Pool</u> Address: <u>5245 Greenbelt Rd.</u> City/State: <u>College Park, MD</u> Zip: <u>20740</u> Phone: <u>(301) 405-5482</u> Fed. Employer ID No. <u>52-6002033</u>
---	--	--

Cause of Spill: <input type="checkbox"/> Motor Vehicle Accident <input type="checkbox"/> Personnel Error/Vandalism <input type="checkbox"/> Tank/Container/Pipe Leak <input checked="" type="checkbox"/> Mechanical Failure <input type="checkbox"/> Transfer Accident <input type="checkbox"/> _____	Identify All Groups that Participated in Spill Mitigation : <input checked="" type="checkbox"/> Responsible Party <input type="checkbox"/> MDE ERD # _____ # _____ <input type="checkbox"/> Federal : _____ <input checked="" type="checkbox"/> State : <u>University of Maryland</u> <input type="checkbox"/> Local : _____ <input type="checkbox"/> Contractor: _____	Materials used by You to contain/clean-up spill: Sorbent Dust: <u>1</u> Bags Sorbent Pads: <u>12 pads</u> each or bales Sorbent Booms: _____ each or bales Sorbent Sweeps: _____ each or bales Overpack Drums : _____ ea. Steel or Poly Other: _____
--	---	---

Responsible Party : Describe circumstances contributing to the spill. (Additional space on back) [Optional for FD or Gov't Personnel]

At approximately 1600, a call was placed to the University of Maryland CRC of a spill being formed under a vehicle at the Severn Building. The CRC contacted the UMD Fire Marshall's who, in turn, sent out a message to those on call.

Once on site, it was discovered that a vehicle was leaking it's transmission fluid onto the pavement below.
Responsible Party : Describe Containment, Removal and Clean-up operations, including disposal. (Additional space on back) [Optional for FD or Gov't Personnel]

The initial UMD personnel on site obtained spill containment materials and placed oil absorbent pads under the vehicle and onto the loose standing oil on the surrounding pavement. The vehicle was not able to be moved due to the loss of all it's transmission fluid, so in the mean time, absorbent pads were placed atop of all the loose standing oil and under
Responsible Party : Procedures, Methods and Precautions instituted to prevent recurrence of the spill. (Additional space on back) [Optional for FD or Gov't Personnel]

Ensure that proper maintenance of vehicles are being preformed and pre-start up inspections are being preformed.
Check vehicles after parking for long periods of time that there are no spills or leaks before leaving vehicle unattended.

THE UNDERSIGNED CERTIFIES THAT THE INFORMATION PROVIDED IS TRUE AND CORRECT TO THE BEST OF HIS OR HER KNOWLEDGE AT THE TIME THE REPORT WAS COMPLETED.

Print Name: <u>Kaitlyn Peterson</u>	Company or Fire Department: <u>University of Maryland</u>
Address : <u>4716 Pontiac Street, Suite 0103</u>	City / State / Zip <u>College Park, MD 20742</u>
Telephone <u>202-308-8273</u>	Signature _____



APPENDIX L
SWPPP
TRAINING MATERIALS



Environmental Safety, Sustainability & Risk

General Stormwater Permit 20-SW for UMD 20-SW-3281 (MDR003281)



UNIVERSITY OF
MARYLAND

Overview-The Regulatory Background

In 1972, Congress amended the Federal Water Pollution Control Act (i.e., the Clean Water Act) to prohibit the discharge of ***any pollutant*** to waters of the U.S from point sources.

- The exception to this discharge prohibition is if the pollutant is authorized by a NPDES (National Pollutant Discharge Elimination System) permit.

The intent of the NPDES program, prior to storm water requirements, was to target reductions in pollutants from industrial process waste water and municipal sewage.

- However, as control measures for these operations improved, the focus became disperse, non-point sources. ***Of prime importance with such widespread and scattered sources was stormwater runoff.***

Overview-The Regulatory Background

- Stormwater Pollution Prevent Plans (SWPPPs)
 - Mandated by the Water Quality Act of 1987
 - Includes classes of industries and operations to be covered by general and/or individual NPDES permits to develop SWPPPs
- Phase I Coverage (11/16/1990)
 - Permits required for Municipal Separate Storm Sewer Systems (MS4s) located in areas with more than 100,000 people.
 - Also covers 11 categories of Industrial Activity- including recycling facilities, treatment works, electric plants, and manufacturing facilities.
 - Construction activities disturbing 5 or more acres are also subject.
- Phase II Coverage (12/08/1999)
 - Permits required for certain regulated Municipal Separate Storm Sewer Systems (MS4s) located in areas with less than 100,000 people.
 - Construction activities disturbing between 1 and 5 acres are also subject.
 - Also allows for a NO EXPOSURE EXCLUSION, when a lack of water quality impact can be demonstrated.

12-SW vs. 20-SW

12-SW

- Includes the creation and implementation of a SWPPP
- Has benchmark and visual sampling
 - UMD only had visual
- Quarterly and Annual Inspections
- Corrective Actions
- Chesapeake Bay Restoration (UMD not required)

20-SW (February 2023)

- More sectors with benchmark monitoring requirements
 - UMD has 1 Sector with benchmark monitoring
- Impaired water monitoring
- AIMS & corrective actions
- Climate adaption
- Identify sources of PCBs and PFAS

Enforcement of the 20-SW

MDE is the enforcing agent of the 20-SW

- EPA allows MDE to enforce their more stringent permit regulations

MDE Audits SWPPP binder(s) for updates, inspections, visual monitoring, corrective actions, spill reports, etc.

- Failure to have items can result in monetary fines

Chesapeake Bay Restoration

- A 20% reduction of the untreated impervious surface area at your facility
 - Not a 20% reduction of surface, but of treatment!
 - Stormwater ponds, stream restoration, etc.
- Due to our MS4 permit, the CBR will be completed under that instead of the 20-SW



What IS a SWPPP and What is in it?

A SWPPP is a site-specific plan tailored to specific site conditions. It is also a self implementing plan.

- A SWPPP must contain:
 1. Pollution Prevention Team
 2. Accurate Site Description including a detailed map
 3. Description of “exposed” industrial activities and previous spills/leaks over last three years
 4. Identification of non-storm water discharges, illicit connections. Create procedures for eliminating non-authorized discharges.
 5. Description of Structural and Non-Structural stormwater management controls (BMPs)
 6. Record Keeping of all corrective actions, spills, and inspections

1. Pollution Prevention Team (P2 Team)

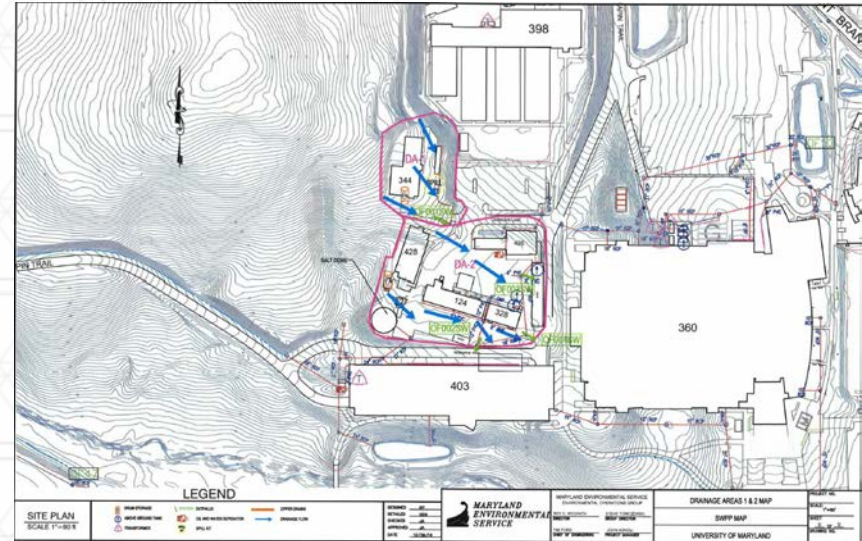
Staff Names	Individual Responsibilities	Contact Info
Jason Baer, Assistant Director of Environmental Affairs, UMD	Verify that the SWPPP is up to date; Signatory for NeDMR submissions	301-405-3163; jbaer123@umd.edu
Kaitlyn Peterson, Environmental Regulatory Compliance Manager, UMD	Verify that the SWPPP is up to date; modify the SWPPP to reflect any facility changes; Data management for benchmark sampling	301-405-8604; Kpeter13@umd.edu
Charles Curtis, Program Manager, UMD	Ensure that all permit requirements and BMPs are being correctly implemented at the Environmental Services Building and all of DA-1.	301-405-3162; ccurtis@umd.edu
Karen Petroff, Assistant Director of B&LM, Arboretum, and Landscaping Services	Ensure that all permit requirements and BMPs are being correctly implemented within DA-2 and DA-7	301-405-8952 kpetroff@umd.edu
Michael Carmichael, Stormwater Management & Maintenance Inspector, UMD	Ensure that all permit requirements and BMPs are being correctly implemented at the UMD Landscaping Vehicle and Equipment Storage, Salt Dome, Vehicle and Equipment Maintenance in DA-2.	301-314-1824; mncarmic@umd.edu
Peter Agustin, Manager, UMD	Ensure that all permit requirements and BMPs are being correctly implemented at the University Bus Facility Parking, Fueling, and Maintenance area in DA-3.	301-314-7267; pedawg@umd.edu
Jay Carter Smith, Solid Waste Manager, UMD	Ensure that all permit requirements and BMPs are being correctly implemented at the source separated recycling area in DA-4.	301-405-5253; jsmith76@umd.edu
William Monan, Associate Director - Landscape Services, UMD	Ensure that all permit requirements and BMPs are being correctly implemented at the landscape material storage area in DA-4.	301-405-2290; wmonan@umd.edu
Larry Brookman, Facilities Manager, UMD	Ensure that all permit requirements and BMPs are being correctly implemented at the Severn Building in DA-5 apart from vehicle fueling & maintenance.	301-226-8613; lbrookma@umd.edu
Leigh Remz, Manager, UMD	Ensure that all permit requirements and BMPs are being correctly implemented in regard to vehicle fueling & maintenance in DA-5.	301-405-5483; lremz@umd.edu
Mark Alexander, Operations Manager, College Park Energy LLC	Ensure that all permit requirements and BMPs are being correctly implemented at the Steam Electric Plant and Oil Storage in DA-6.	301-405-8025; mark.alexander@engie.com
Kristofer Bird, Environmental Specialist, UMD	Verify that the SWPPP is up to date; Quarterly visual and benchmark monitoring, Site inspections; SWPPP updates; and Annual pollution prevention (P2) team training.	301-405-7016; kbird@umd.edu

The staff is responsible for developing, implementing, maintaining, and revising the facility SWPPP.

UMD P2 team can be located within the SWPPP.

2. Accurate Site Description

- Description of the industrial activities performed
- Site map includes property size, potential pollutant sources, liquid storage tanks, impervious surfaces, historical spills and Stormwater outfalls
- Identify both activities and materials which may potentially be a “significant” pollution source into storm water discharges.



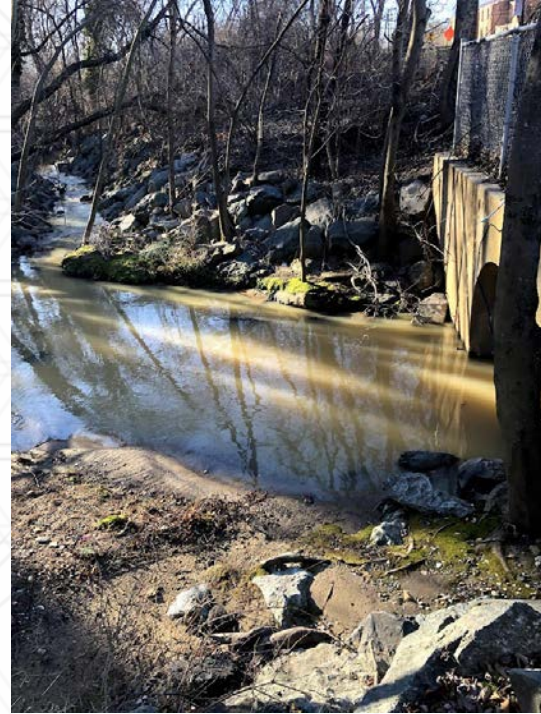
3. Description of “exposed” industrial activities and previous spills

- Standard Industrial Classification (SIC) is a system for classifying industries by a four-digit code and is used by government agencies to classify industry areas.
 - UMD’s SIC is School Bus Maintenance Facilities.
 - Sector AD.b in the 20-SW Permit
 - There are an additional 5 sectors covered around campus
 - Sector K: Hazardous Waste Treatment, Storage, or Disposal Facilities; Sector N: : Scrap Recycling and Waste Recycling Facilities; Sector O: Steam Electric Generating Facilities; Sector P: Land Transportation and Warehousing; and Sector AD.a: Department of Public Works and Highway Maintenance Facilities.

4. Identification of non-storm water discharges, illicit connections.

The 20-SW only permits stormwater discharges.

- Any discharge that is not stormwater and is not permitted by an additional permit is unauthorized and must be documented and eliminated



5. Best Management Practices (BMPs)

Structural

- Protective covers over curb inlets, trench drains.
- Vegetative swales/Slope diversions.
- Secondary containment devices.
- Protective booms.

Non- Structural

- Good Housekeeping
- Proper Material Storage
- Proper Spill Response—refer to SPCC plan
- Proper Equipment Fueling and Repair
- Proper Disposal of Waste
- Preventive Maintenance
- Regular Schedule of Inspections

Examples of Structural vs. Non-Structural BMPs

Structural



Non-Structural



6. Record Keeping

The SWPPP is a “living document” which is constantly being updated and/or modified as changes occur on campus.

- Spill documents must be maintained for at least 3 years
- Annual training documentation
- All inspections and sampling forms
- Analytical lab results
- AIMS and Corrective actions



Benchmark Sampling and Visual Monitoring

Benchmark Sampling

- Quarterly samples must be taken for four consecutive quarters by a member of the P2 team;
- Can stop monitoring if ALL four quarters are below benchmark;
- Each industry has different sector specific benchmarks;
- Samples are sent to the lab;
- Results are sent to MDE on a quarterly basis

Visual Monitoring

- Done Quarterly by a member of the P2 team;
- Sample must be taken from each outfall;
- Forms are stored within the SWPPP binder;
- Should be completed within 30 minutes of a measurable storm event.

Visual Monitoring Form

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

Sample Location	Outfall 001 SW		
Quarter / Year:	Q3 - 2017	Date / Time Collected:	8/15/2017 12:00 PM
Qualifying Storm Event?	(Yes) No	Runoff Source:	(Rainfall) Snowmelt
Collector's Name & Title	Alex Galbreath, Environmental Specialist		
Examiner's Name & Title	"		
Parameter	Parameter Description	Parameter Characteristics	
1. Color	Does the stormwater appear to have any color? Yes <input type="radio"/> No <input checked="" type="radio"/> (Clear)	If Yes, describe: Yellow Brown Red Gray Other:	
2. Clarity	Is the stormwater clear? Yes <input checked="" type="radio"/> No <input type="radio"/>	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 <input type="radio"/> No <input checked="" type="radio"/>	Which best describes the sheen? Rainbow sheen Flaking oil globules Other:	
4. Odor	Does the sample have an odor? Yes <input type="radio"/> No <input checked="" type="radio"/>	If Yes, describe: Chemical Musty Rotten Egg Sewage Sour Milk OVP/Petroleum Other:	
5. Floating Solids	Is there anything on the surface of the sample? Yes <input type="radio"/> No <input checked="" type="radio"/>	If Yes, describe: Suds Oil Film Garbage Sewage Water Fowl Excrement Other:	
6. Suspended Solids	Is there anything suspended in the sample? Yes <input type="radio"/> No <input checked="" type="radio"/>	Describe:	
Leave sample undisturbed for 30 minutes.			
7. Settled Solids	Is there anything settled on the bottom of the sample? Yes <input type="radio"/> No <input checked="" type="radio"/>	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 <input type="radio"/> No <input checked="" type="radio"/>	Describe:	
9. If there are any visible indicators of pollution identify (1) where the pollution may come from and (2) any corrective actions taken.	N/A		
Stormwater Collector's Signature and Date:	Alex Galbreath 8/15/2017		
Stormwater Examiner's Signature and Date:	Alex Galbreath 8/15/2017		
<small>Note - Sample should be collected and analyzed in a colorless glass or plastic bottle.</small>			

Visual Monitoring consists of 8 parameters:

1. Color
2. Clarity
3. Oil Sheen
4. Odor
5. Floating Solids
6. Suspended Solids
7. Settled Solids
8. Foam

Identification of where the possible contaminants should be noted within section

Corrective Actions may be triggered.

Quarterly and Annual Inspections

Inspections are completed by the ESSR team at least 1x per quarter.

- Structural and non-structural BMPs
- Spills and spill reports
- Outfall conditions
- Any visual signs of contamination

Any non-compliance marks results in a Corrective Action

University of Maryland
Quarterly Stormwater Compliance Inspection Report

The Quarterly Compliance Inspection shall be sufficiently detailed to verify that the Storm Water Pollution Prevention Plan (SWPPP) accurately reflects current site conditions, all potential pollution sources at the facility are identified, the facility site map and drainage map remain accurate, and Best Management Practices listed in the facility's SWPPP are properly operated and maintained. A visual inspection of the stormwater outfall(s) should be made to check for any sheens, turbidity, or other visual signs of contamination.

Name of Person(s) Conducting Inspection: SAMANTHA BRANSKY

Inspection Date: 9/18/18

Facility Name: ENVIRONMENTAL SERVICE FACILITY (BLDG. 344)

Drainage Area: DA-1 (STR. 3)

Is a copy of the SWPPP maintained on campus? Yes No

Does the SWPPP include a Site map indicating Drainage Areas and Outfalls? Yes No

Does the SWPPP contain a topographic map? Yes No

Are the site map, drainage conditions, and all other portion of the facility unchanged? Yes No

If no, explain any construction or changes that have occurred and make revisions to the SWPPP:

Are the facility personnel, pollution prevention team members, and emergency contacts unchanged? Yes No

If no, then update on an attached sheet and in SWPPP plan. Alex Galbreath no longer on P-7 team

Does the description of the drainage areas in the SWPPP accurately reflect Site Conditions? Yes No

If no, please explain and make revisions.

Does the list of potential pollutant sources in the SWPPP reflect Site conditions and sources? Yes No

If no, please explain and make revisions to the SWPPP.

Corrective Action Report

A corrective action can be triggered by:

- An unauthorized release or discharge (e.g., spill, leak, or discharge of non-stormwater not authorized by this or another NPDES permit) occurs at your facility;
- A discharge violates a numeric effluent limit (Benchmark);
- You become aware, or MDE determines, that your control measures are not stringent enough for the discharge to meet applicable water quality standards;
- An inspection or evaluation of your facility by an MDE official, determines that modifications to the control measures are necessary to meet the non-numeric effluent limits in this permit; or
- You find in your routine facility inspection (Part V.A.1), quarterly visual assessment (Part V.A.3), or comprehensive site inspection (Part V.A.2) that your control measures are not being properly operated and maintained.

Corrective Action Report

Strict Timeline

Within 24 hrs

- Identification of the condition triggering the need for a corrective action review on the form;
- Description of the problem identified; and
- Date the problem was identified

Within 14 days

- Summary of the corrective action taken or to be taken
- Notice of whether SWPPP modifications are required as a result
- Date of corrective action initiated
- Date of corrective action completed

Section A – Initial Report (12-SW Part IV.D) (Complete this section within 24 hours of discovering the condition that triggered corrective action)			
Name of Site:	University of Maryland	12-SW Tracking No. (on NOI)	12SW3281
Date Problem First Discovered	8/15/2017	Today's Date	8/16/2017
Name and Contact Information of Individual Completing this Form	Alexander Galbreath, Environmental Specialist 301-405-7016; agalbra@umd.edu		
What site conditions triggered the requirement to conduct corrective action (check the box that applies): <input type="checkbox"/> Unauthorized release or discharge (Part I.E) <input type="checkbox"/> A discharge violates a numeric effluent limit (Part III.B) <input type="checkbox"/> Stormwater control measures not stringent enough for discharge to meet applicable water quality standards (Part III.B) <input type="checkbox"/> MDE requires corrective action as a result of permit violations found during an MDE inspection (Part IV.A) <input checked="" type="checkbox"/> During Routine Facility Inspection, Comprehensive Site Evaluation, or Quarterly Visual Assessment you find that your stormwater control measures are not being properly operated or maintained (Part V.A) <input type="checkbox"/> Construction or a change in design, operation or maintenance at your facility significantly changes the nature of pollutants discharged in stormwater from your facility, or significantly increases quantity of pollutants discharged. (Part IV.B) <input type="checkbox"/> The average of 4 quarterly sampling results exceeds an applicable benchmark. (Part V.B). Provide a description of the problem (Elaborate on back in space provided if necessary): During the quarterly visual monitoring, EA observed an oil sheen on the stormwater discharge from the Shuttle Bus Facility.			
Section B – Corrective Action Progress (12-SW Part IV.D) (Complete this section no later than 14 calendar days after discovering the condition that triggered corrective action)			
Section B.1 – Why the Problem Occurred			
Cause(s) of Problem (Elaborate on next page if necessary)		How This Was Determined and the Date You Determined the Cause	
1. Oil leaks/spills from vehicles that were not cleaned up properly; leaking nozzle at the 20,000-gal. diesel tank; oil-water separator not functioning		1. Quarterly visual monitoring on 8/15 and routine site inspection on 8/21	
Section B.2 – Stormwater Control Modifications to be Implemented to Correct the Problem			
List of Stormwater Control Modification(s) Needed to Correct Problem (Elaborate on next page if needed)	Date of Completion	SWPPP Update Necessary?	Notes
1. Notify employees to implement better leak/spill cleanup procedures 2. Install oil booms at Outfall 006SW to contain any oil runoff 3. Fix the leaking diesel fuel nozzle 4. Maintain oil-water separator	9/15/2017	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, provide date SWPPP modified: 8/24/2017	

Corrective Action Report

Effect of Corrective Action

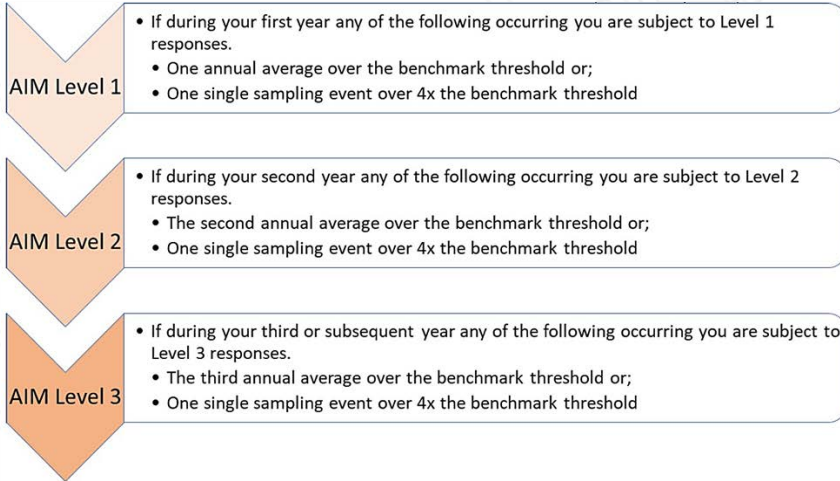
- Correcting a permit violating action does **NOT** remove the original violation
- Failing to report or take corrective action is an **ADDITIONAL** violation
- MDE will determine the enforcement response to a permit violation.



Additional Implementation Measures (AIM)

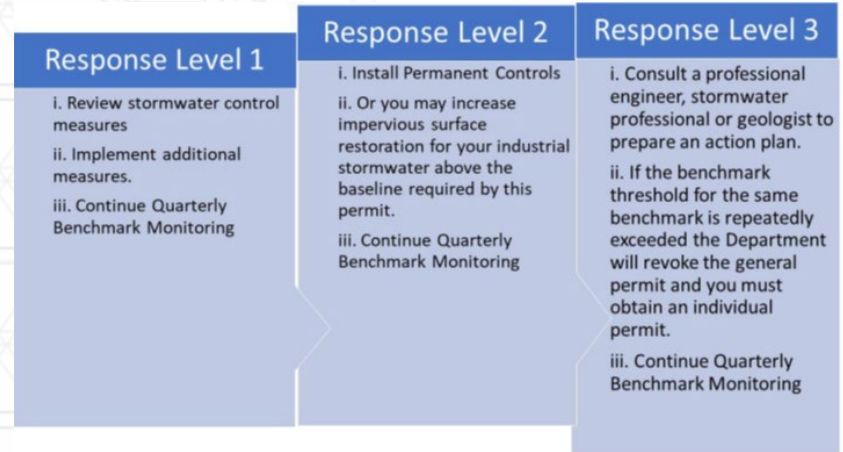
Implemented with the
20-SW

AIM are mandatory
increasingly robust
responses to a
benchmark
exceedance



Additional Implementation Measures (AIM)

As each AIM level is triggered, an increased response level is required



Impaired Water Monitoring

Additional pollutant monitoring required due to discharging into impaired waters

- Must monitor pollutants of concern once per year
- UMD's pollutant of concern is **chloride**
- Can discontinue monitoring if pollutant is within the acceptable range for **three** consecutive years



Climate Adaption

- Consider contours and elevations when siting new structures, placing them strategically based on anticipated climate change effects.
- Provide prompt written notice to the Department's Water Permits Program for planned physical alterations or additions to the permitted facility.
- Notification is required for alterations or additions that meet criteria for determining new sources, significantly change discharged pollutants, affect sludge practices, or may result in noncompliance with permit requirements.
- Advance notice must be given to the Department for planned facility or activity changes that may lead to noncompliance with permit requirements.



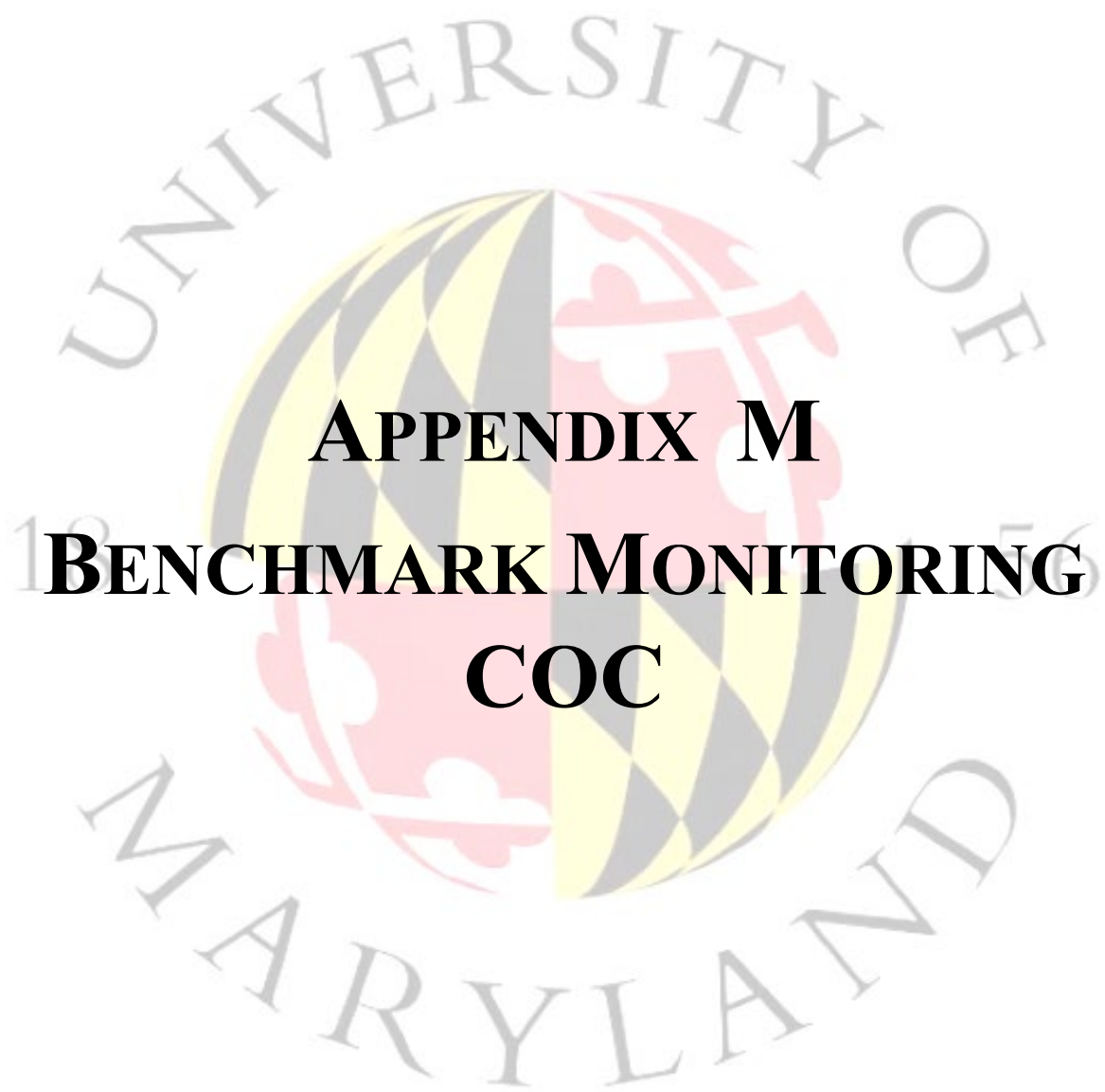
UNIVERSITY OF
MARYLAND

Website: www.essr.umd.edu

Phone: 301-405-3960

After Hours: 301-405-3555

Email: essr@umd.edu



APPENDIX M

BENCHMARK MONITORING COC

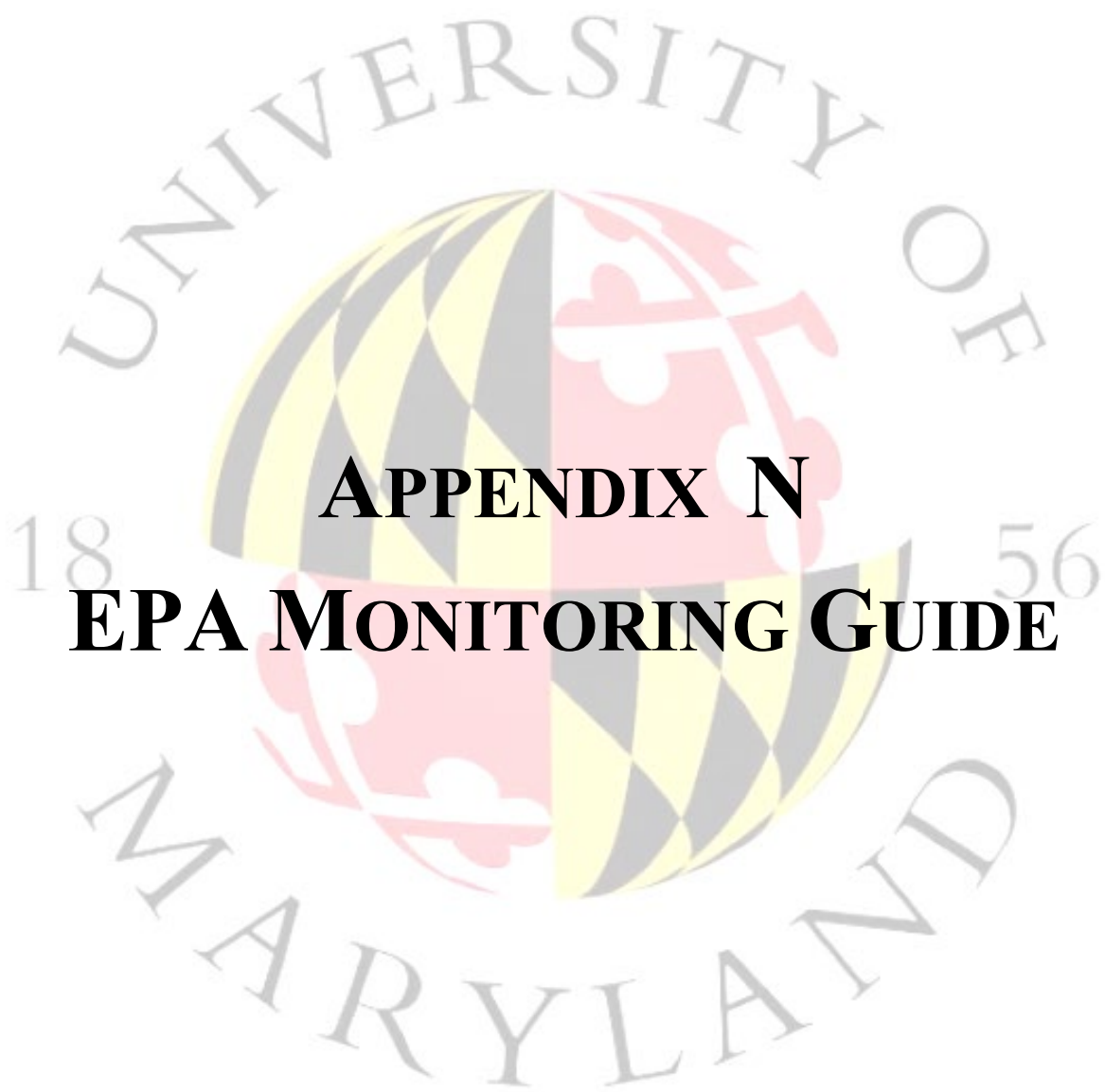
CHAIN OF CUSTODY / SAMPLE INFORMATION FORM

Maryland Environmental Service • 529 Najoles Rd. • Millersville, MD 21108 • (410) 729-8200 • FAX (410) 729-8340

Lab : ALS	Client Code : MES	Sampler Name/Sampler DW ID#:
Client Name/Phone/FAX	Maryland Environmental Service	Project Name: U of MD College Park NPDES 20-SWSWPP
Client Address	259 Najoles Rd, Millersville, MD, 21108	Cost Center: 4048-0000
Invoice Address	Same	Sample Turnaround Time Routine

Station No./ Sample ID	Station Location	Grab or Composite	Container Description/Preservation Status	Matrix	# of Containers	Date	Time	Analyses Required/Comments
1	Outfall 001	Grab	250 mL Plastic H2SO4	WW	1			Ammonia, COD
	↓	↓	125 mL Plastic HNO3	WW	1			Total Silver, Total Recoverable Cadmium, Total Recoverable Arsenic □
	↓	↓	125 mL Plastic HNO3	WW	1			Total Recoverable Mercury, Total Recoverable Selenium, Total Lead
	↓	↓	60 mL Plastic NaOH	WW	1	↓	↓	Total Recoverable Cyanide

Transferred by:	Received by:	Date	Time	Cooler Receipt Information (LAB USE ONLY) Sufficient ice? - Yes/No If No, temp.= _____ Sample containers pres'd? - Yes/No If No, explain _____ Custody Seal present/intact? - Yes/No Initials: _____ Date: _____
Transferred by:	Received by:	Date	Time	
Transferred by:	Received by:	Date	Time	



APPENDIX N
EPA MONITORING GUIDE



EPA 832-B-09-003



Industrial Stormwater Monitoring and Sampling Guide

April 2021



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Section 1: Introduction

This guide is a how-to primer for industrial facility operators on how to conduct visual assessments and analytical monitoring of stormwater discharges. The target audience is operators of facilities subject to the U.S. Environmental Protection Agency's (EPA) 2021 Multi-Sector General Permit (2021 MSGP) or a similar state- or territory-issued industrial stormwater permit. The information presented will also be useful to anyone interested in industrial stormwater monitoring.

What Does the 2021 MSGP Cover?

The 2021 MSGP covers specific industrial activities (see Appendix D of the 2021 MSGP, available at <https://www.epa.gov/npdes/stormwater-discharges-industrial-activities-epas-2021-msgp>) in states, territories, and Indian Country lands where EPA is the National Pollutant Discharge Elimination System (NPDES) permitting authority (i.e., in those states or territories not authorized to issue NPDES permits themselves – see Appendix C of the 2021 MSGP).

The procedures presented in this guide, specifically related to monitoring methodology and quality assurance, will help ensure that stormwater samples yield usable information.

This guide does not impose any new legally binding requirements on EPA, states, tribes, territories, or the regulated community, and does not confer legal rights or impose legal obligations upon any member of the public. In the event of a conflict between the discussion in this document and any statute, regulation, or permit, this document would not be controlling.

Interested parties are free to raise questions and objections about the substance of this guide and the appropriateness of the application of this guide to a particular situation. EPA and other decision makers retain the discretion to adopt approaches on a case-by-case basis that differ from those described in this guide where appropriate.

1.A Introduction to Stormwater Monitoring and Sampling

Most industrial stormwater permits require installation and implementation of control measures to minimize or eliminate pollutants in stormwater discharged from your facility. The control measures you choose for your facility must be documented in your facility-specific Stormwater Pollution Prevention Plan (SWPPP). For more information on how to develop a SWPPP, refer to EPA's guide *Developing Your Stormwater Pollution Prevention Plan: A Guide for Industrial Operators*, available on EPA's website at <https://www.epa.gov/npdes/industrial-stormwater-guidance>. The results of your stormwater monitoring will help you determine the effectiveness of your control measures, and overall stormwater management program. Evaluation of your stormwater management program will include routine facility inspections, visual assessments, and monitoring (i.e., sampling) of specified stormwater discharges. Regular stormwater inspections and visual assessments provide

Monitoring vs. Sampling

In this guide, "sampling" refers to the actual, physical collection and analysis of stormwater samples. The term "monitoring" refers to both sampling and visual observations of stormwater discharges, including the related preparation and documentation tasks.

qualitative information on whether there are unaddressed potential pollutant sources at your site, and whether existing stormwater control measures (SCMs) are effective or need to be reevaluated. Stormwater sampling provides quantitative (i.e., numeric) data to determine pollutant concentrations in stormwater discharge and, in turn, the degree to which your SCMs are effectively minimizing contact between stormwater and pollutant sources, and the success of your stormwater control approach in meeting applicable discharge requirements or effluent limits.

The following are the types of industrial stormwater monitoring requirements typically included in industrial stormwater general permits:

- **Visual Assessments of Stormwater Discharges.** Operators are required to regularly and frequently (e.g., quarterly under the 2021 MSGP) take a grab sample during a storm event (or in the case of snowmelt, during a period with a measurable discharge), and assess key visual indicators of stormwater pollution – color, odor, clarity (diminished), floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of stormwater pollution. The findings of these assessments are used to trigger corrective actions to modify deficiencies found at the site.
- **Indicator Monitoring.** Stormwater samples are collected, either as a composite or with a grab sampling method, from a site’s discharge point(s) for analysis and results are used to provide a baseline and comparable understanding of industrial stormwater discharge quality and potential water quality problems. For instance, the 2021 MSGP requires indicator monitoring of stormwater discharges for pH, total suspended solids (TSS), and chemical oxygen demand (COD) for certain sectors/subsectors and for polycyclic aromatic hydrocarbons (PAHs) for certain sectors/activities. This type of monitoring differs from “benchmark monitoring” (see below) in that the monitoring is “report only” and does not include thresholds or baseline values for comparison, therefore no follow-up action is triggered or required. Operators may find it useful to evaluate and compare indicator monitoring data over time to identify any fluctuating values and why they may be occurring, and to further inform any revisions to their SWPPP or SCMs if necessary.
- **Benchmark Monitoring.** Stormwater samples are collected, either as a composite or with a grab sampling method, from a site’s discharge point(s) for laboratory analysis and the results are compared with benchmark thresholds as an indicator of the overall effectiveness of SCMs. A benchmark threshold is a level above which a stormwater discharge could adversely affect receiving water quality and, below which the facility is not expected to have an impact on receiving water quality. This type of monitoring differs from “effluent limitations monitoring” (see below) in that exceedances of the benchmark thresholds are not considered violations, but rather “red flags” that could point to a problem at the site with exposed pollutant sources or SCMs that are not working correctly. For instance, the 2021 MSGP includes “benchmarks” that are based, to a large degree, on EPA’s aquatic life criteria. If an annual average exceeds an applicable benchmark threshold, additional implementation measures (AIM) are triggered for that benchmark parameter. AIM responses include

Required Monitoring

For an explanation of these monitoring requirements in the 2021 MSGP see Part 4.2. Part 8 of the 2021 MSGP includes the indicator, benchmark, and ELG monitoring requirements for each of the industrial sectors affected by such requirements.

evaluating the SWPPP and SCMs to determine if modifications to existing measures or implementation of additional measures is necessary, and conducting additional benchmark monitoring to ensure the modified or additional SCMs bring exceedances below the benchmark threshold.

- **Effluent Limitations Monitoring.** Where a facility is subject to one of the Federal effluent limitations guidelines (ELGs) addressing limits on stormwater discharges, sampling is required to determine compliance with those limits. Table 1 provides a list of the current applicable ELGs.

Table 1. Applicable Effluent Limitations Guidelines

Regulated Activity	40 CFR Part/Subpart
Discharges resulting from spray down or intentional wetting of logs at wet deck storage areas	Part 429, Subpart I
Runoff from phosphate fertilizer manufacturing facilities that comes into contact with any raw materials, finished product, by-products or waste products (SIC 2874)	Part 418, Subpart A
Runoff from asphalt emulsion facilities	Part 443, Subpart A
Runoff from material storage piles at cement manufacturing facilities	Part 411, Subpart C
Mine dewatering discharges at crushed stone, construction sand and gravel, or industrial sand mining facilities	Part 436, Subparts B, C, or D
Runoff from hazardous waste landfills	Part 445, Subpart A
Runoff from non-hazardous waste landfills	Part 445, Subpart B
Runoff from coal storage piles at steam electric generating facilities	Part 423
Runoff containing urea from airfield pavement deicing at existing and new primary airports with 1,000 or more annual non-propeller aircraft departures	Part 449

These limits are required to be included in all general industrial stormwater permits. Typically, permits require corrective action and further sampling when an effluent limitation is exceeded. An exceedance of an applicable ELG constitutes a violation of the permit.

- **State, Territorial, or Tribal Required Monitoring.** General industrial stormwater permits may include state-, territorial-, or tribal-specific monitoring requirements. For instance, Part 9 of the 2021 MSGP includes monitoring requirements applicable to states, Indian Country, or territories.
- **Impaired Waters Monitoring.** General industrial stormwater permits may have special monitoring requirements for facilities that discharge pollutants of concern into impaired waters.

Discharge to an Impaired Water

Appendix A of the 2021 MSGP defines discharge to an impaired water as follows: A discharge to an impaired water occurs if the first water of the U.S. to which you discharge is identified by a state, tribe, or EPA as not meeting an applicable water quality standard, and requires development of a total maximum daily load (TMDL) (pursuant to Section 303(d) of the Clean Water Act), or is addressed by an EPA-approved or established TMDL, or is not in either of the above categories but the waterbody is covered by pollution control requirements that meet the requirements of 40 CFR 130.7(b)(1).

Section 2: Preparation for Monitoring

This section describes the information you will need before conducting stormwater monitoring. While this guide is meant to be a general primer for anyone interested in industrial stormwater monitoring, Section 2 follows the organization of the 2021 MSGP. If you are subject to a state industrial stormwater general permit, you may compare your permit's monitoring requirements to the requirements reflected in this guide to ensure that you are following all applicable state-specific requirements.

In general, preparation is critical to make sure that industrial stormwater monitoring is conducted properly and in a timely manner. Most of this information should have been collected previously for the purposes of submitting your Notice of Intent (NOI), and in developing the monitoring procedures section of your SWPPP. However, this guide reviews some of the steps necessary to develop this information, such as the site map component of the SWPPP, in case facilities have not already done so. If you have already completed any of these steps in this section, you can skip to the next applicable section or subsection in this guide. For more information on how to develop a SWPPP, refer to EPA's guide *Developing Your Stormwater Pollution Prevention Plan: A Guide for Industrial Operators*, available on EPA's website at <https://www.epa.gov/npdes/industrial-stormwater-guidance>.

If you have already submitted your NOI, the following documents will serve as good resources for information that you will need prior to monitoring:

- A copy of the NOI submitted to EPA or your state, along with any correspondence exchanged between you and the permitting authority specific to permit coverage.
- A copy of the authorization correspondence you received from the EPA or your state assigning your NPDES ID.
- A copy of your applicable permit, including the accompanying fact sheet.
- A complete copy of your SWPPP, which must include a detailed site map of your facility with locations of all stormwater monitoring points, and a description of the procedures you or your stormwater pollution prevention team will follow when conducting monitoring and visual assessments.

2.A Determine Where Stormwater Is Discharged From Your Property

If you have not already done so, walk the grounds and perimeter of your facility during a storm event to identify where stormwater discharges from the site (known as "discharge points"). Discharge points are locations where stormwater exits the facility property, including pipes, ditches, swales, and other structures that transport stormwater. If possible, walk outside the boundary of your facility to identify discharge points that may not be apparent from within your site.



Figure 1. Stormwater discharges to the slot drain and is conveyed offsite through a valved pipe.

You should note where:

- Concentrated stormwater exits your facility (e.g., through a pipe, ditch, swale, or similar conveyance). These outlets are usually good sampling points.
- Dispersed stormwater (i.e., sheet flow) flows offsite (e.g., through a grassy area or across a parking lot). Note whether concentrated flows commingle with the sheet flow.
- Storm drain inlets or catch basins are located. Try to determine where the storm drains send your stormwater (e.g., to your municipal separate storm sewer system [MS4], to a combined sewer system, to the separated sanitary sewer, or directly to a nearby waterbody).
- Authorized non-stormwater discharges commingle with stormwater prior to discharge (such commingled discharges may be covered under your permit).
- Run-on might enter your facility from neighboring facilities and commingle with your stormwater discharges.

Mark these locations on your facility site map, which will be included as part of your SWPPP, and label each discharge point with a unique identification code (e.g., 001, 002) to differentiate them. Using unique identifiers will help you to coordinate monitoring requirements.

In addition to marking the discharge points on the map, you will need to determine the drainage area for each discharge point. If your facility is large and has significant changes in elevation, a topographic map may be necessary. However, if your facility is small and relatively flat, the best way to define the drainage area for each discharge point is an on-the-ground visual assessment, preferably during a rain event. Sketch the basic drainage areas on the map for each discharge point. Knowing the drainage area for each discharge point is helpful when your sampling indicates problems at that discharge point. You can focus your efforts on the industrial materials and activities in that drainage area, instead of the entire site, to identify what may be causing the problem.

Terms to Know:

Combined Sewer System: Combined sewer systems are sewers that are designed to collect rainwater runoff, domestic sewage, and industrial wastewater in the same pipe. Most of the time, combined sewer systems transport all of their wastewater to a sewage treatment plant, where it is treated and then discharged to a water body. During periods of heavy rainfall or snowmelt, however, the wastewater volume in a combined sewer system can exceed the capacity of the sewer system or treatment plant. For this reason, combined sewer systems are designed to overflow occasionally and discharge excess wastewater directly to nearby streams, rivers, or other water bodies.

MS4: A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) which are owned and operated by a ... public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes ... that discharges to waters of the United States; designed or used for collecting or conveying stormwater; which is not a combined sewer; and which is not part of a publicly owned treatment works (POTW). [40 CFR 122.26(b)(8)].

2.B Determine Where You Will Collect Samples

Now that you have determined the different points of discharge from your site, you will need to select the exact locations from which you will be collecting your stormwater samples. Note that Part 6.2.5.3.b of the 2021 MSGP requires industrial operators to document in their SWPPPs the location where samples will be collected. Generally, industrial stormwater permits require that you sample stormwater discharges prior to the stormwater leaving your facility, and at a location downstream from all of your industrial materials and activities. The reason behind requiring such a location is so that the sample is representative of your facility's discharge, taking into account the types of pollutants that may be contained in stormwater discharged from the property.

Appropriate sample locations include:

Underground pipes that collect stormwater from drop inlets and convey stormwater to an offsite location (e.g., street, curb, or MS4). Be sure you collect only the stormwater discharging from your facility and not the baseflow in the pipes that is being discharged from facilities upstream. Do not enter underground locations to collect samples. Use a pole with a sampling container attached at the end to collect the sample.



Figure 2. Sewer drain.



Figure 3. Open ditch/gutter.

Open ditches, gutters, or swales that carry stormwater from your facility to an offsite location. If these conveyances contain run-on from another facility, it is important to note that in your SWPPP.

Facility driveways and other street access points.



Figure 4. Facility street access point.



Figure 5. Outlet discharging from detention pond.

Outlets discharging offsite from onsite stormwater detention ponds or other types of structural control measures. It is important to sample at the OUTLET of your structural control measures, as opposed to the INLET of such structures, in order to determine the quality of the water after treatment.

Where to Sample When There Are Multiple Discharge Points

You are required to monitor all discharge points that receive stormwater discharges from your industrial activity. See Part 4.1.1 of the 2021 MSGP. If you have multiple stormwater discharge points at your facility, you need to identify which discharge points are associated with industrial materials and activities and monitor those discharge points. Understanding the hydrologic connection between your discharge points and the parts of your facility that drain to those points, and the pollutants associated with the industrial activities in these areas, will assist you in designing a monitoring program that is representative of the pollutants being discharged from your site. Developing such an understanding will also help later on when you begin to assess your sampling results and determine where improvements could be made to your SCMs. The site map you prepare (see Part 6.2.2.3 of the 2021 MSGP) will help you understand the correlation between your areas of potential pollutant sources, the direction of stormwater flow from those areas, and the discharge points.

Note that you are not required to monitor at discharge points that receive stormwater flow only from unregulated areas of your site (i.e., there are no industrial materials or activities in the drainage area). For instance, a hypothetical facility may have two discharge points, one that receives discharges from an area where industrial materials are handled and stored, and a second discharge point that receives discharges from an unregulated parking lot used by employees. In this scenario, the industrial operator would only collect samples from the first discharge point because it discharges stormwater associated with industrial activity.

Alternatively, if the site's second discharge point (e.g., the discharge point receiving stormwater from the parking lot) also drains areas of the facility with regulated industrial activities, then this discharge point would also need to be sampled. In this situation, sampling for this discharge point should be done at a location prior to where the two flows commingle so that you are capturing the industrial portion of the flow. See Part 4.1.2 of the 2021 MSGP.

Where to Sample if Discharge Points Are Substantially Identical

If your facility has two or more discharge points whose discharges are “substantially identical,” some industrial stormwater permits, including the 2021 MSGP, allow you to monitor the discharge at just one representative discharge point and apply the results to the other substantially identical discharge points (SIDPs). EPA defines “substantially identical” in Part 4.1.1 of the 2021 MSGP as:

“...two or more discharge points that you believe discharge substantially identical effluents, based on the similarities of the general industrial activities and control measures, exposed materials that may significantly contribute pollutants to stormwater, and runoff coefficients of their drainage areas....”

The flexibility provided to operators to sample at just one location, which is considered representative of all SIDPs, is an exception to the rule stated above that samples must be taken from all discharge points at a facility. Note that this exception does not apply to effluent limitations monitoring, which must be conducted at each discharge point to which the ELG applies.

In choosing which of the SIDPs from which to sample, you should select the discharge point that has been observed to have the most consistent flow. To use the SIDP exception, you must document in your SWPPP how the two or more discharge points are substantially identical, based on the above definition. You will need to document the following information:

- The locations of each of the SIDPs;
- Description of the general industrial activities conducted in the drainage area of each discharge point;
- Description of the control measures implemented in the drainage area of each discharge point;
- Description of the exposed materials located in the drainage area of each discharge point that are likely to be significant contributors of pollutants to stormwater discharges;
- An estimate of the runoff coefficient of the drainage areas (low = under 40%; medium = 40 to 65%; high = above 65%); and
- Why the discharge points are expected to discharge substantially identical effluents.

The runoff coefficient is the fraction of total rainfall that will appear at the conveyance as runoff. See 40 CFR 122.26(b)(11).

Here is an example where a facility could take advantage of the SIDP exception: a metal recycling facility with a large scrap metal pile has three separate discharge points that are each connected by their own drainage ditch to different portions of the same pile, and the stormwater that is discharged is managed using the same type of control measure in each drainage area. In this scenario, the facility's operator can use the SIDP exception because the industrial activities at the site are all the same, the stormwater discharge flows through exposed areas that presumably contribute the same type of pollutants, and the drainage area has the same or similar runoff coefficients. Note that the SIDP exception could not be used if there were in fact differences in any of the required components defined above.

If your permit does allow you to use a SIDP exception, make sure you carefully review the type of monitoring for which this exception applies. For instance, while the 2021 MSGP allows operators to use the SIDP exception for benchmark and visual assessment samples, the permit prohibits use of this exception for effluent limit monitoring (e.g., for use in showing compliance with numeric ELGs). Therefore, if a facility permitted under the 2021 MSGP is subject to a numeric limit based on an EPA ELG, it would have to monitor all discharge points at the site receiving flows from the applicable industrial activities. See Part 4.2.3.2 of the 2021 MSGP.

Where to collect a sample

Sampling Sheet Flow

In some areas of your facility it may be difficult to obtain a sample because the stormwater drains as sheet flow before it becomes concentrated enough for sampling. If the flow is too shallow to directly fill a collection bottle, you can overcome this by:

Option A. Concentrating the sheet flow by excavating a small basin in an existing ditch or other location where stormwater runoff flows.

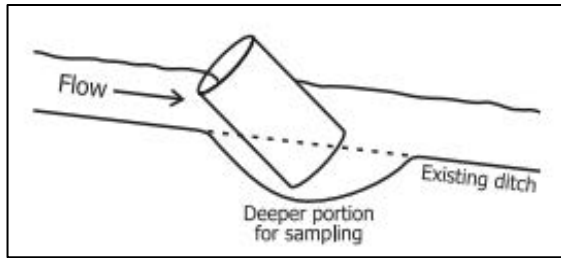


Figure 6. Deepening an existing ditch can allow samples to be collected directly into bottles in some cases. Be careful not to stir up solids from the sides or bottom of the ditch.

Option B. Installing a barrier device or trough, gutter, or ditch to intercept and concentrate stormwater flow.

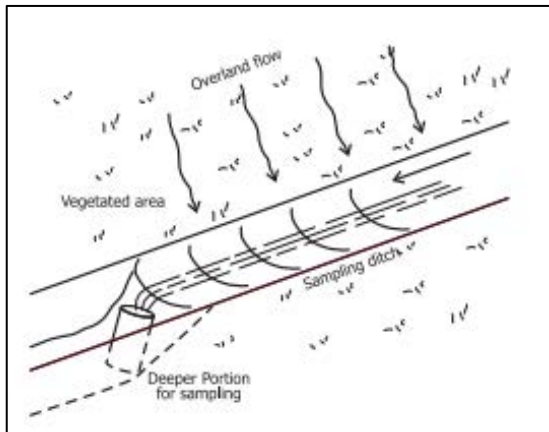


Figure 7. Overland flow from vegetated areas can be sampled by constructing a shallow ditch to intercept the runoff and a deepened area to place bottles to catch the runoff.

Option C. Constructing “speed bumps” to convey and concentrate a large area of sheet flow.

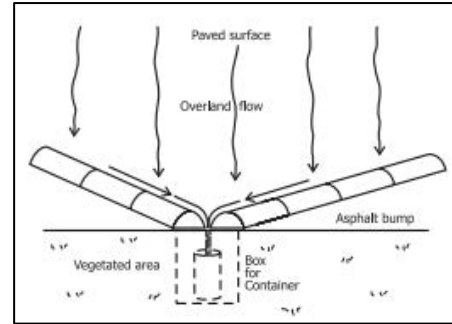


Figure 8. Overland flow on paved areas can be sampled by constructing asphalt or concrete bumps to collect and concentrate the flow. A box positioned below ground surface in the paved area or the edge of an unpaved area can provide a place to collect samples directly into bottles.



Figure 9. Collecting a sheet flow stormwater sample.

You should make these modifications during a period when rain is not forecast so any pollutants generated from the modification to consolidate sheet flow can be cleaned up before a storm hits. Also, if you dig a ditch or disturb the earth in some way, line the disturbance with concrete or plastic so that you do not contaminate your stormwater samples with sediment or other pollutants.

Sampling from a Pipe

For stormwater discharge flowing through a pipe into a ditch or receiving water, you should sample the outflow directly

When collecting any type of stormwater sample it is imperative that the sample is collected before the stormwater reaches the receiving water.

from the pipe. For hard-to-reach pipes, it may be necessary to fasten a collection bottle to a pole (see Figure 10 below).

Sampling from a Drainage Ditch or Swale

If your stormwater is discharged via a drainage ditch or vegetated swale, take a grab sample from a consistently flowing part of the ditch/swale. If the ditch/swale is too small or shallow, install a barrier device in the channel or deepen a small area so you are able to sample directly into the bottles. Allow sufficient time to pass after disturbing the bottom so that any solids stirred up do not contaminate your sample.

Sampling from a Stormwater Detention/Retention Basin or Other Treatment Device

If it is necessary for you to sample from a detention or retention basin, do so at the discharge point of the structure. Collecting samples from stagnant or slowly moving water inside a pond will not yield a representative sample as the pollutants might not be adequately mixed. Stormwater basins may hold stormwater for long periods of time. Collect your sample within 30 minutes from when the pond begins to discharge.

Potential Sampling Issues

Depending on your monitoring locations, you may encounter additional challenges beyond deciding which sampling technique to employ at each site. Table 2 identifies some stormwater sampling problems common to industrial facilities and guidance for how EPA suggests you address them if they occur at your site.

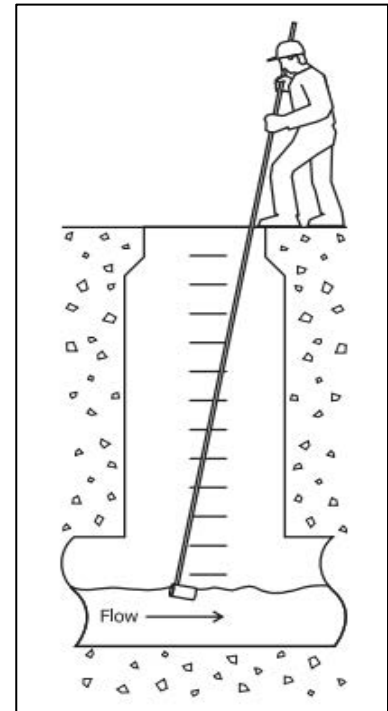


Figure 10. When sampling from a manhole, use a pole to safely sample from above ground.

Avoid touching the sides of the manhole or pipes with the bottle to prevent contamination. Place the opening of the bottle upstream so that the flow enters the bottle directly.

Table 2. Solutions to Typical Stormwater Sampling Problems

Problem	Solution
Run-on from Neighboring Properties	Ideally, your stormwater samples will contain only stormwater discharge from your site. However, stormwater from a neighboring facility can “run on” and commingle with your own regulated discharge, possibly adding contaminants not found at your facility. You are responsible for any and all pollutants discharged from your site irrespective of the pollutants’ origin and whether the other facility has permit coverage. This responsibility includes run-on discharges from neighboring properties if this discharge commingles with your own regulated discharge. To accommodate stormwater run-on, EPA requires as part of the SWPPP site description that you document the locations and sources of run-on. As part of this documentation, if you collect and analyze samples of the run-on, you will need to report all such findings in your SWPPP.

Problem	Solution
Stormwater from industrial areas commingles with stormwater discharges from non-industrial areas or areas not regulated under the 2021 MSGP before it reaches the surface water body or MS4.	Attempt to sample the industrial stormwater discharge before it mixes with stormwater from non-industrial areas.
Adverse Weather Conditions	High tides and high flow or flood conditions can cause stormwater conveyances to reach maximum capacity, pipes to become clogged or submerged, and other unrepresentative flow situations. High flows could also be dangerous, so you should use your best professional judgment when selecting sampling locations. In some cases you may need to sample at a point before the intended discharge point.
There are numerous stormwater discharge points in one area.	Construct an impound channel or join together flows by building a weir or digging a ditch to collect discharge at a low point for sampling purposes. This artificial collection point should be lined with plastic to prevent infiltration and the introduction of sediment. Or, alternatively, sample at several locations to represent total stormwater discharged from the site.
The discharge point is inaccessible (examples include underwater discharges or unreachable discharges such as a pipe discharging out of a cliff).	Go upstream of the discharge until a sample can be taken (i.e., to the nearest manhole or inspection point). You may need to sample at several locations to best represent stormwater discharge from this discharge point if you cannot access an upstream location.
A facility has many sampling locations making it difficult to collect all of the samples during the first 30 minutes of discharge, as required by the 2021 MSGP.	Have a sampling crew ready when storms are forecast so that all discharge points can be sampled during the first 30 minutes. Also, automatic samplers may be used to collect samples within the first 30 minutes, triggered by the amount of rainfall, the depth of flow, flow volume or time.
A stormwater sample location is beneath a manhole.	For accessibility and safety, use a sampling pole to collect samples from a manhole. Before a person can enter a manhole to collect a sample, they must be trained in confined space entry.
Stormwater from more than one industry type is commingled.	You must comply with monitoring requirements for all applicable sectors and standard industrial classification (SIC) codes.

2.C Determine Which Types of Monitoring Requirements Apply at Each Discharge Point

The next step in preparing for monitoring at your site is to determine the type of monitoring requirements that correspond to each discharge point. The type of monitoring requirements to which you are subject will differ according to your permit. Different monitoring requirements may also apply to individual discharge points on your property based on the type of industrial activity discharging to that point, and even the receiving water to which you are discharging. Using your permit, determine the type of monitoring requirements to which your specific facility is subject, and document in your SWPPP the specific monitoring requirements that apply to each discharge point, including the frequency of monitoring and the specific parameters that must be monitored.

Recall that it is not necessary to monitor a discharge point if it does not have any industrial activity associated with it (e.g., discharge from an employee parking lot that does not commingle with stormwater discharge from an area of industrial activity).

The following applies to the types of monitoring required under the 2021 MSGP. If you are not subject to the 2021 MSGP, consult your state or territory permit to determine your monitoring requirements.

Visual Assessments (Part 3.2 of the 2021 MSGP) – All 2021 MSGP operators are required to collect samples of their stormwater discharge for visual inspection. The following water quality characteristics must be assessed:

- color;
- odor;
- clarity (diminished);
- floating solids;
- settled solids;
- suspended solids;
- foam;
- oil sheen; and
- other obvious indicators of stormwater pollution.

Visual assessments must be conducted at all discharge points, although if several discharge points are “substantially identical” then only one visual assessment must be conducted on the set of discharge points. The sampling frequency for visual assessments under the 2021 MSGP is quarterly. The monitoring quarters are: January 1 – March 31, April 1 – June 30, July 1 – September 30, and October 1 – December 31. For facilities located in an area where limited rainfall occurs during many parts of the year or in an area where freezing conditions exist that prevent discharges from occurring for extended periods, samples for the quarterly visual assessments may be distributed during seasons when precipitation occurs more regularly.

Exceptions to the quarterly visual assessment requirements can be made in the following circumstances:

1. Adverse Weather Conditions (See Part 3.2.4.1)
2. Climates with Irregular Stormwater Discharges (See Part 3.2.4.2)
3. Areas that Receive Snow (See Part 3.2.4.3)
4. Inactive and Unstaffed Facilities (See Part 3.2.4.4)

Indicator Monitoring (Part 4.2.1 of the 2021 MSGP) – The 2021 MSGP includes indicator monitoring for pH, TSS, and COD for certain subsectors (See 2021 MSGP for applicability). The 2021 MSGP also includes indicator monitoring, for certain sectors, for the 16 individual PAHs identified at Appendix A to 40 CFR Part 423: naphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene, anthracene, fluoranthene, pyrene, benzo[a]anthracene, chrysene, benzo[b]fluoranthene, benzo[k]fluoranthene, benzo[a]pyrene, benzo[g,h,i]perylene,

indeno[1,2,3-c,d]pyrene, and dibenz[a,h]anthracene (see 2021 MSGP for applicability). Evaluation of these parameters will inform future considerations of any benchmark monitoring.

As applicable, the required indicator monitoring frequency for pH, TSS, and COD under the 2021 MSGP is quarterly and the required indicator monitoring frequency for PAHs is bi-annually (i.e., twice per year) in the first and fourth years of permit coverage. For both types of indicator monitoring, monitoring begins in the first full quarter of permit coverage.

Benchmark Monitoring (Part 4.2.2 of the 2021 MSGP) – This type of analytic monitoring applies to certain industrial sectors regulated under the 2021 MSGP. Operators subject to these requirements must take periodic samples of their stormwater discharge to compare the concentrations to their corresponding benchmark thresholds. The benchmark thresholds are based in large part on EPA’s aquatic life water quality criteria and are meant to serve as indicators of the overall effectiveness of a facility’s stormwater control efforts. If a particular benchmark threshold is exceeded, this indicates to an operator that there may be a problem at the site, such as a spill, exposed pollutant source, or a faulty control measure, and triggers Additional Implementation Measures (AIM) which involve review of the SWPPP and SCMs to determine if modifications are necessary, and implementation of additional measures that would reasonably be expected to bring the exceedances below the benchmark threshold. For example, a total suspended solids (TSS) concentration found in a benchmark sample of greater than 100 mg/L, which is the applicable benchmark threshold for TSS, would require a facility to re-evaluate and potentially revise control measures implemented to control dust, soil erosion, or other sources of suspended solids. Note that the exceedance of the benchmark is not a violation (because benchmarks are typically not enforceable limits), but the failure to conduct the follow-up investigation and applicable AIM responses would be a violation of the permit.

Determine whether you are subject to any benchmark monitoring requirements based on your particular industrial sector or subsector. The benchmark monitoring requirements differ based on the sector or subsector under which a particular facility falls. Note that not all sectors are subject to this type of monitoring. Appendix D in the 2021 MSGP provides the Standard Industrial Classification (SIC) code and activity codes categorized by sectors and subsectors. Use Appendix D to link your industrial activities with their associated SIC code sectors/subsectors. Your facility will have a primary industrial activity and associated SIC or activity code (which is the major determinant of your permit requirements), and, possibly, additional secondary sectors/subsectors with additional requirements for which you must comply. Next, using Part 8 of the 2021 MSGP, under your particular sector or subsector, determine whether you are subject to any benchmark monitoring requirements, and the corresponding benchmark that applies. Consider the following example: if you operate a gold mine (subsector G2) you are subject in Part 8.G.8.3 to the following benchmark monitoring requirements:

Be sure to update your SWPPP and site map whenever you change or add new control measures. Control measure maintenance activities must be documented (preferably in a log), and such records must be kept with your SWPPP and stormwater file.

Table 3. Example Benchmark Monitoring Requirements for Subsector G2

Subsector (Discharges may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Subsector G2. Iron Ores; Copper Ores; Lead and Zinc Ores; Gold and Silver Ores; Ferroalloy Ores, Except Vanadium; and Miscellaneous Metal Ores (SIC Codes 1011, 1021, 1031, 1041, 1044, 1061, 1081, 1094, 1099)	Total Suspended Solids (TSS)	100 mg/L
	Turbidity	50 NTU
	pH	6.0-9.0 s.u.
	Hardness (as CaCO ₃ ; calc. from Ca, Mg) ²	no benchmark value
	Total Recoverable Antimony	640 µg/L
	Total Recoverable Arsenic (freshwater)	150 µg/L
	Total Recoverable Arsenic (saltwater) ¹	69 µg/L
	Total Recoverable Beryllium	130 µg/L
	Total Recoverable Cadmium (freshwater) ²	Hardness Dependent
	Total Recoverable Cadmium (saltwater) ¹	33 µg/L
	Total Recoverable Copper (freshwater)	5.19 µg/L
	Total Recoverable Copper (saltwater) ¹	4.8 µg/L
	Total Recoverable Lead (freshwater) ²	Hardness Dependent
	Total Recoverable Lead (saltwater) ¹	210 µg/L
	Total Recoverable Mercury (freshwater)	1.4 µg/L
	Total Recoverable Mercury (saltwater) ¹	1.8 µg/L
	Total Recoverable Nickel (freshwater) ²	Hardness Dependent
	Total Recoverable Nickel (saltwater) ¹	74 µg/L
	Total Recoverable Selenium (freshwater)	1.5 µg/L for still/standing (lentic) waters; 3.1 µg/L for flowing (lotic) waters
	Total Recoverable Selenium (saltwater) ¹	290 µg/L
Total Recoverable Silver (freshwater) ²	Hardness Dependent	
Total Recoverable Silver (saltwater) ¹	1.9 µg/L	
Total Recoverable Zinc (freshwater) ²	Hardness Dependent	
Total Recoverable Zinc (saltwater) ¹	90 µg/L	

¹ Saltwater benchmark values apply to stormwater discharges into saline waters where indicated.

² The freshwater benchmark values of some metals are dependent on water hardness (see Appendix J of the 2021 MSGP).

Based on this table, you then know the pollutant parameter for which you must conduct benchmark monitoring, and the corresponding benchmark threshold against which you will compare each individual sample. Each sector or subsector subject to benchmark monitoring requirements includes a similar table in Part 8 of the 2021 MSGP.

After you have determined which (if any) benchmark sampling requirements apply, document in your SWPPP which discharge points are subject to such requirements, the frequency of monitoring, and the parameters that must be analyzed. If your facility has multiple discharge points, be aware that there may be different requirements for different discharge points depending on the type of industrial activity conducted in the drainage area of each discharge

point. You are only required to conduct benchmark monitoring for those discharge points with discharges from the specific sectors/subsectors that are affected by such requirements. Where a discharge point includes no discharges from those sectors or subsectors for which benchmark monitoring requirements apply, then no benchmark samples need to be taken at that discharge point.

The required benchmark monitoring frequency under the 2021 MSGP is quarterly in the first and fourth years of the permit. The monitoring quarters, beginning with the first full quarter following either May 30, 2021 or a facility's discharge authorization date are: January 1 – March 31, April 1 – June 30, July 1 – September 30, and October 1 – December 31.

Exceptions for Facilities in Climates with Irregular Stormwater Discharges (Parts 4.2.1.2 and 4.2.2.4 of the 2021 MSGP) – The monitoring schedule for indicator or benchmark monitoring may be modified for facilities in climates with irregular stormwater discharges, provided facilities report the revised schedule to EPA by the due date of the first indicator/benchmark sample. For benchmark monitoring, when conditions prevent a facility from obtaining four samples in four consecutive quarters, monitoring must be continued until the four samples required for calculating the benchmark monitoring average have been collected.

Exceptions for Inactive and Unstaffed Facilities (Parts 4.2.1.3 and 4.2.2.5 of the 2021 MSGP) – The requirement for indicator or benchmark monitoring does not apply to inactive and unstaffed facilities, providing there are no industrial materials or activities exposed to stormwater. This exception only applies to indicator and benchmark monitoring requirements and not to the other types of monitoring described above.

To invoke this special exemption, you must do the following:

- Maintain a statement with your SWPPP stating that the site is inactive and unstaffed, and that there are no industrial materials or activities exposed to stormwater in accordance with the substantive requirements in 40 CFR 122.26(g) and sign and certify the statement in accordance with Appendix B, Subsection 11 [of the 2021 MSGP].
- If circumstances change and industrial materials or activities become exposed to stormwater or your facility becomes active and/or staffed, this exception no longer applies and you must immediately begin complying with the applicable indicator/benchmark monitoring requirements under Part 4.2.2 [of the 2021 MSGP] as if you were in your first year of permit coverage. You must indicate in your NOI that your facility has materials or activities exposed to stormwater or has become active and/or staffed.
- If you are not qualified for this exception at the time you are authorized under this permit, but during the permit term you become qualified because your facility is inactive and unstaffed, and there are no industrial materials or activities that are exposed to stormwater, then you must notify EPA of this change on your NOI form. You may discontinue indicator/benchmark monitoring once you have notified EPA and prepared and signed the certification statement described above concerning your facility's qualification for this special exception.

Note: This exception has different requirements for Sectors G, H, and J (see Part 8.G.8.5, Part 8.H.9.1, and Part 8.J.9.1 of the 2021 MSGP, respectively).

Hardness-Dependent Benchmarks (Appendix J of the 2021 MSGP) – The benchmark thresholds for some metals are dependent on the level of hardness in your receiving water(s) (see 2021 MSGP, Appendix J). Hardness is a characteristic of water that results from the presence of dissolved salts, especially calcium sulfate or bicarbonate, and is usually reported as carbonate, noncarbonate or calcium + magnesium (Ca + Mg). If you are required to monitor for a hardness-dependent pollutant, you must first determine the hardness of your receiving water before you can establish the corresponding benchmark threshold.

Effluent Limitations Monitoring (Part 4.2.3 of the 2021 MSGP) – Nine of the 2021 MSGP’s 30 industrial sectors are required to monitor to determine if they comply with EPA-defined effluent limitation guidelines. These monitoring requirements are included in Part 8 of the 2021 MSGP. Effluent limitation guidelines are legally enforceable limitations that must not be exceeded in stormwater discharges.

Similar to the benchmark monitoring requirements, samples only need to be taken at those discharge points with discharges from the specific activities that are subject to effluent limitation guidelines; otherwise these requirements do not apply. As stated previously, operators subject to these monitoring requirements must take samples at all applicable discharge points, and no exceptions are given for substantially identical discharge points (SIDPs). However, if you are required to monitor a pollutant both for benchmark and effluent limitation guideline purposes, you only need to take one sample for both requirements.

When monitoring requirements overlap, e.g., TSS once per year for an effluent limit and once per quarter for benchmark monitoring, you may use a single sample to satisfy both monitoring requirements (i.e., one of your four quarterly benchmark samples would be used for your yearly effluent limit sample).

Table 4 identifies the industrial activities that are subject to effluent limitation guideline monitoring requirements and the associated sampling parameters. Effluent limitation guideline samples must be taken once per year (see Part 8 of the 2021 MSGP for the numerical values of each effluent limit).

Table 4. Required Monitoring for Effluent Limitations Guidelines

Regulated Activity	Where in 2021 MSGP	Sector	Effluent Limit Parameters
Discharges resulting from spray down or intentional wetting of logs at wet deck storage areas	Part 8.A.8	A	pH, debris
Runoff from phosphate fertilizer manufacturing facilities that comes into contact with any raw materials, finished product, by-products or waste products (SIC 2874)	Part 8.C.5	C	total phosphorus (as P), fluoride
Runoff from asphalt emulsion facilities	Part 8.D.5	D	total suspended solids (TSS), pH, oil and grease
Runoff from material storage piles at cement manufacturing facilities	Part 8.E.6	E	TSS, pH
Mine dewatering discharges at crushed stone, construction sand and gravel, or industrial sand mining facilities	Part 8.J.10	J	TSS, pH

Regulated Activity	Where in 2021 MSGP	Sector	Effluent Limit Parameters
Runoff from hazardous waste landfills	Part 8.K.7	K	biochemical oxygen demand (BOD ₅), TSS, ammonia, alpha terpineol, aniline, benzoic acid, naphthalene, p- cresol, phenol, pyridine, total arsenic, total chromium, total zinc, pH
Runoff from non-hazardous waste landfills	Part 8.L.11	L	BOD ₅ , TSS, ammonia, alpha terpineol, benzoic acid, p-cresol, phenol, total zinc, pH
Runoff from coal storage piles at steam electric generating facilities	Part 8.O.8	O	TSS, pH
Runoff containing urea from airfield pavement deicing at existing and new primary airports with 1,000 or more annual non- propeller aircraft departures.	Part 8.S.9	S	ammonia as nitrogen

Determine whether you are subject to any effluent limitation guideline monitoring requirements. Document in your SWPPP which discharge points are subject to such requirements, the frequency of monitoring, and the parameters that must be analyzed.

State, or Tribal Required Monitoring (Part 4.2.4 of the 2021 MSGP) – The 2021 MSGP includes a number of additional monitoring requirements that are unique to individual states, Indian Country lands, and territories. These requirements are set out in Part 9 of the permit. These requirements may include additional or more frequent benchmark monitoring requirements, alternative benchmark thresholds, or additional parameters that must be monitored to establish compliance with applicable water quality standards.

Based on the state, Indian Country land, or territory in which they are located, each 2021 MSGP operator must consult the applicable Part 9 section to determine what, if any, additional monitoring requirements apply. If you are subject to such requirements, you must document in your SWPPP which discharge points are subject to these provisions, the frequency of applicable sampling, and the parameters that must be monitored. If a monitoring frequency is not specified for an applicable requirement in Part 9, you must monitor once per year for the duration of permit coverage.

Impaired Waters Monitoring (Part 4.2.5 of the 2021 MSGP) – The 2021 MSGP requires facilities to monitor annually in the first year of permit coverage), for the presence of any pollutant causing an impairment to their receiving water. If a pollutant causing an impairment is detected, annual monitoring must continue, otherwise, required annual monitoring ceases and resumes in the fourth year of permit coverage for one year for those pollutants that are both causing impairments and are associated with the industrial activity and/or are a required benchmark parameter for the operator’s subsector(s). In advance of conducting impaired waters monitoring, you should already have a good idea of whether the pollutant will be found in your discharge. When you developed your SWPPP, you conducted a complete inventory of your site to determine what pollutants or pollutant constituents could be discharged in stormwater. See Section 3.A of EPA’s guide, *Developing Your Stormwater Pollution Prevention Plan: A Guide for Industrial Operators*, particularly the discussion about conducting an “Inventory of Materials and

Pollutants” available on EPA’s website at <https://www.epa.gov/npdes/industrial-stormwater-guidance>. Using this inventory from your SWPPP, you will be able to determine if any materials stored or used at your facility could contribute to impairment of your receiving water.

The next section of this guide includes specific steps to help you determine if you are subject to impaired waters monitoring requirements. After following those steps, document in your SWPPP which discharge points are subject to impaired waters monitoring requirements, the frequency of sampling, and the parameters that must be monitored.

Additional Monitoring Required by EPA (Part 4.2.6 of the 2021 MSGP) – It is possible EPA may require additional monitoring. EPA will notify you if they determine additional monitoring is necessary to meet the permit’s effluent limitations.

2.D Determine if Your Facility is Subject to Impaired Waters Monitoring Requirements

If you are required by your industrial stormwater permit to monitor for pollutants that cause impairment to your receiving water, you must first identify the receiving waters (e.g., ditch, creek, intermittent stream, lake, arroyo, etc.) into which your facility discharges stormwater and mark them on your site map. Note that you will have already identified your receiving waters if you filed an NOI to be covered by the 2021 MSGP.

Identify Your Receiving Water(s)

Do these monitoring requirements apply to me if I discharge into a dry ditch?

Yes, if the ditch eventually conveys the stormwater to a water of the United States.

There are several ways to identify your receiving waters. Your receiving water may be a lake, stream, river, ocean, wetland or other waterbody, and may or may not be located adjacent to your facility. Your facility might discharge directly into its receiving water, or indirectly to the receiving water by discharging first through an MS4, ditch, or other conveyance.

If the discharge from your facility does not discharge into an underground storm sewer system, you can use your site map and local topographic maps to pinpoint the closest waterways. Using the contours on the topographic map and your facility’s outfall locations, determine the direction stormwater discharge flows from your facility. Once you know the direction of flow, you should be able to identify the receiving waters into which you discharge and the name of the receiving water of the United States that receives stormwater from the discharge point. If, for instance, you discharge stormwater into a unnamed tributary that enters a water of the United States, you



Figure 11. Sample section of a U.S. Geological Survey (USGS) quadrangle map, with arrows showing direction of flow.

could identify “unnamed tributary of the Brown River” with Brown River being the water of the United States.

After identifying where your stormwater enters a waterbody, identify any additional interconnected waters for at least one linear mile downstream from the entrance point of your discharge (in case there are concerns about impacts to these downstream waters).

Resources to help you identify receiving waters:

- How’s My Waterway? (available at <https://mywaterway.epa.gov>) provides information about the condition of local waters based on data that states, federal, tribal, local agencies, and others have provided to EPA. Water quality information is displayed at a community, state, and national level.
- EPA’s Stormwater Discharge Mapping Tools (available at <https://www.epa.gov/npdes/epas-stormwater-discharge-mapping-tools>) allows you to determine the receiving waters to which your facility discharges and whether they are considered “impaired” under section 303(d) of the Clean Water Act.
- EPA’s EnviroMapper (available at <https://enviro.epa.gov/enviro/em4ef.home>) enables you to find nearby waterbodies by entering your facility’s zip code, city, county state, tribe, address, facility name or identification number, EPA Region, watershed, or latitude/longitude data. Additional information on the location of impaired waterbodies can also be obtained by selecting the ‘more info’ link in the impaired streams or the impaired waterbodies attribute.
- Topographic maps, which can be obtained from the U.S. Geological Survey (USGS) National Map website at <http://nationalmap.gov/>, or through a retailer.
If your stormwater drains into an MS4, you will likely need to contact the operator of the system (e.g., the local public works department, the highway department, etc.) to identify the first receiving water your stormwater is released to after entering the MS4. Some MS4s have their storm sewer infrastructure maps available online.

Remember, the MS4 into which your facility’s stormwater discharges is NOT your receiving water for purposes of your industrial stormwater permit. Identify the first waterbody that the MS4 discharges to after receiving your stormwater and name the receiving water of the United States that it flows. For instance, the Oak City MS4 to the Brown River where the Brown River is the water of the United States.

Determine if Your Receiving Water is Impaired and Whether a TMDL Has Been Completed

Once you have identified your receiving water(s), you will need to find out if the waterbody is impaired, and, if so, whether a total maximum daily load (TMDL) has been approved or established.

“Impaired waters” are waters identified by a state, tribe, or EPA as not meeting an applicable water quality standard, and require development of a total maximum daily load (TMDL) (pursuant to Section 303(d) of the Clean Water Act), or are addressed by an EPA-approved or established TMDL, or are covered by pollution control requirements that meet the requirements of 40 CFR 130.7(b)(1).

States, territories, and authorized tribes are required under the Clean Water Act to compile lists of known impaired waters, called 303(d) lists. Stormwater discharges to impaired waters may trigger additional control measures and monitoring requirements. For facilities subject to EPA’s 2021 MSGP, see Part 2.2.2 for a more detailed discussion of water quality-based effluent limitations and conditions for discharging to impaired waters.

- **Water quality impairment status.** You need to determine whether your facility’s receiving water is listed by your state, tribe, or EPA as impaired and/or has an approved or established Total Maximum Daily Load (TMDL). EPA’s How’s My Waterway? tool (available at <https://mywaterway.epa.gov>) will help identify impaired receiving waters in the vicinity of your facility. Another place to check is EPA’s website on Impaired Waters and TMDLs (<https://www.epa.gov/tmdl/resources-tools-and-databases-about-impaired-waters-and-tmdls>) or you can also contact your State water agency (<https://www.epa.gov/npdes/contact-us-general-information-about-npdes>).

If your receiving water is impaired, use EPA’s How’s My Waterway tool or Impaired Waters and TMDLs website, or a State agency to help you determine:

- For what pollutant(s) is the water impaired? Make a separate list of all pollutants that have caused your waterbody to be impaired.
- Has an approved TMDL been completed for each of the pollutants? Some TMDL documents include information suggesting the type of monitoring that should be conducted to improve the understanding of the impairment or to demonstrate achievement of applicable wasteload allocations (WLAs).

Determine What Monitoring Requirements Apply

Having determined the pollutants that cause the impairment, you should now consult your permit to determine the type of monitoring that must be conducted, the frequency of monitoring, and whether any exceptions apply to certain pollutants. As discussed in Section 2.C above, this must all be documented in your SWPPP so that it is clear which requirements apply to which discharge point.

The 2021 MSGP lists several exceptions to and clarifications of the requirement to monitor for each impairment pollutant. In Part 4.2.5.1 of the 2021 MSGP, the permit clarifies that no monitoring is required when a waterbody’s biological communities are impaired but no pollutant, including indicator or surrogate pollutants, is specified as causing the impairment, or when a waterbody’s impairment is related to hydrologic modifications, impaired hydrology, or other non-pollutant. The permit also clarifies that monitoring is only required for pollutants or surrogates for which a standard analytical method exists as defined in 40 CFR Part 136. In addition, certain exceptions exist that enable the operator to be excused from impaired waters monitoring after the first and fourth years.

- If the pollutant for which the waterbody is impaired is not associated with your industrial activity or listed as a benchmark parameter for your subsector(s) you do not need to monitor for that pollutant in the fourth year of the permit term.
- If sampling results in the first or fourth year indicated the monitored pollutant is detected in your discharge, but you have determined that its presence is caused solely by natural background sources, you may discontinue monitoring for that pollutant for the duration of permit coverage.

Both the parameters that must be sampled and the frequency of monitoring for impairment pollutants may be subject to state-, Indian Country land-, or territory-specific requirements. Therefore, each 2021 MSGP operator must also consult Part 9 of the permit when determining which impaired waters sampling requirements apply.

2.E What Type of Storm Events Qualify for Monitoring

In addition to understanding which monitoring requirements apply and where, it is also critical to develop an understanding of what type of discharge event you will be sampling. Under the 2021 MSGP, two preconditions must be met before a storm or snowmelt event is considered adequate to be monitored (see Part 4.1.3 of the 2021 MSGP).

- The storm/snowmelt event must create an actual discharge from your site (“measurable storm event”). This storm event will vary based on numerous factors at your site, the most obvious being the actual size and duration of the storm event. However, the amount of impervious surface at your facility will impact this as well. If your facility is covered mostly by grass or another type of vegetation with only a small amount of paved surfaces or roofs, it will take a larger storm to create a discharge from your site than it would at a facility that is entirely paved. Another factor affecting whether and how frequently you have a measurable storm event will be how frequently rain occurs at your facility and the size of the most recent storms. Saturated soil will generate a stormwater discharge more quickly than dry soil; however, VERY dry soil can also become compacted and become nearly impervious to rain, thereby converting precipitation to runoff quickly as well. You will need to pay attention to your facility’s particular characteristics to develop an understanding of what type of rain events or snowmelt results in a discharge.
- At least 72 hours (three days) must have elapsed since the previous measurable storm event (unless you are able to document that less than a 72-hour (3-day) interval is representative for local storm events during the sampling period, or if you are monitoring snowmelt consistent with Part 3.2 [Quarterly Visual Assessments] of the 2021 MSGP).

In order to properly characterize rain events at your facility, it is a good idea to begin by documenting each event as part of your facility’s routine maintenance activities. You can purchase a simple rain gauge and keep a notebook handy in order to document the dates on which rain occurred and the amount of rain that fell. You should also consider documenting whether or not an actual discharge from your facility occurred for each rain event. Tracking rainfall amounts and discharge information will help you to better predict which storm events will be measurable and result in a discharge.

In order to be prepared to take advantage of storms that will result in a “measurable storm event”:

- Be familiar with local precipitation trends, storm patterns, and seasonal variations.
- Check weather forecasts so you can prepare to sample upcoming precipitation events.
- In addition to your local television news and the Weather Channel, you can get weather information online from <http://www.wrh.noaa.gov> (National Weather Service) and <http://www.weather.com>.

Note: You should try to collect both benchmark samples and visual monitoring samples concurrently so you can compare visual observations with the laboratory results and reduce your field activities burden.

- *What To Do If You Are Unable To Sample* – EPA acknowledges there may be times you are unable to complete required monitoring. The following are guidelines on how you should deal with such times.
- *Areas with Intermittent Stormwater Discharge* – If your facility experiences limited rainfall for extended periods of the year (i.e., in arid or semi-arid climates), or freezing conditions that often prevent stormwater discharge from occurring, then the quarterly monitoring events may be distributed during seasons when discharging does occur. If you are unable to collect four samples in one year because of insufficient discharge, document this fact in your SWPPP and continue quarterly monitoring until you have collected four samples.
- *Snowmelt Sampling* – If you are located where appreciable snow is common, one of your samples must include the capture of snowmelt discharge. If, however, you experience prolonged subfreezing temperatures, you may only be able to acquire a sample once over two quarters. You will then have to complete the monitoring requirements as above.
- *Adverse Weather Conditions* – When adverse weather prevents sampling per your monitoring schedule, you must sample during the next qualifying storm event. Adverse conditions are those that are dangerous or create inaccessibility for personnel, caused by such things as flooding, high winds, electrical storms or situations that otherwise make sampling impractical (e.g., drought or extended frozen conditions).

2.F Select the Monitoring Team

Identify the members of your facility's pollution prevention team (which you identified in your SWPPP) who will collect samples and conduct visual assessments of discharges. To be considered as a member of the monitoring team, applicable staff must be familiar with the SWPPP, especially the site plan, the layout of the facility, potential pollutant sources, and the monitoring and reporting program. They also need to possess the knowledge and skills to assess conditions and activities that could impact stormwater quality at your facility, and to be able to evaluate the effectiveness of control measures.

Ideally, the pollution prevention team consists of at least one individual from each shift so that a team member is always present during normal operating hours.

Typically, monitoring staff are based near the site to enable them to be available on short notice to sample storm events.

It is also important that monitoring staff understand and follow all quality assurance/quality control (QA/QC) techniques and procedures to ensure that the data is good. You should discuss

these techniques with your laboratory prior to taking samples and properly train all sampling staff.

2.G Select a Laboratory to Analyze the Samples

Your stormwater samples will need to be analyzed for the parameters you identified in section 2.C by a qualified laboratory. Laboratories must use the approved methodologies found at 40 CFR Part 136 and return a report with chemical concentrations including data quality assurance information.

Things to discuss with the laboratory

- What type and size of bottle will be provided for each test?
- How full do I fill the bottle?
- Are there any safety concerns with materials provided by the laboratory?
- What is the best way to preserve the samples?
- What kind of labels will be supplied and how should I fill them out?
- Will the lab deliver the supplies or do I need to pick them up?
- What are the maximum holding times for each water quality parameter to be sampled?
- Will the laboratory provide pH paper? Samples need to be tested for pH within 15 minutes of collection to be valid, typically in the field.
- Will the laboratory pick up the samples from my facility or do I need to deliver them?
- Can you walk me through filling out the chain-of-custody forms?
- Is the quantitation limit for each parameter less than the benchmark threshold or effluent limitation concentration?*
- *The quantitation limit is the minimum concentration of a parameter that the lab can accurately report using a particular method.

EPA recommends that you select a laboratory that is a participant in the EPA's Discharge Monitoring Report - Quality Assurance (DMR-QA) Program, and, if possible, be approved by the National Environmental Laboratory Accreditation Program (NELAP). NOTE: for ELG compliance monitoring, participation in DMR-QA is a minimum requirement.

- A comprehensive list of NELAP-approved laboratories can be found at: <https://lams.nelac-institute.org>.
- To ensure your chosen laboratory is eligible and reliable, you may want to request documentation showing they are certified to analyze environmental samples, and evidence they participate in DMR-QA or other performance evaluation testing results.

You should ask the laboratory about any additional services and products they offer, such as:

- pre-labeled bottles and pre-printed chain-of-custody forms;
- training on sample collection, documentation and data interpretation;
- sampling and courier services; and
- complete sampling kits which include bottles, packing materials, bottle labels, coolers and chain- of-custody forms; many laboratories provide free sampling kits.

2.H Document Inspection, Assessment, and Monitoring Procedures in Your SWPPP

Ensure your inspection, assessment, and monitoring procedures are correctly documented in your SWPPP (see 2021 MSGP Parts 6.2.5.2 and 6.2.5.3). The required information includes:

- Procedures for performing routine facility inspections and quarterly visual inspections.
- Procedures for conducting the six types of analytical stormwater discharge monitoring (indicator monitoring, benchmark monitoring, effluent limitations guidelines monitoring, state- or tribal-specific monitoring, impaired waters monitoring, and other monitoring as required by EPA), where applicable to your facility.
- Information to support exception for inactive and unstaffed facilities for indicator, benchmark, or impaired waters monitoring, if applicable.
- Information to support exception for quarterly visual assessment requirements or indicator, benchmark, or impaired waters monitoring requirements for SIDPs, if applicable.

Figure 12 is an example of a completed MSGP Industrial Stormwater/Snowmelt Monitoring Summary Form. You should fill out this form (Appendix A) with the sampling locations and monitoring requirements that apply to your facility and include a copy in your SWPPP.

Benchmark Levels and ELGs									
Industry Sector	Pollutant	Benchmark Level	ELG						
			Daily Max	Monthly Average	Instant Min/Max				
D	TSS	100	23	15		Total Suspended Solids (SM 2540D)	pH	Oil and Grease (EPA Method 1664A)	Iron (EPA Method 200.9)
D	Oil and Grease		15	10					
D	pH				6-9				
E2	Iron	1							
E2	TSS	100	50						
E2	pH				6-9				
Sample Summary									
Outfall Identifier	Industry Sector (SIC)	Basis	Frequency	Timing					
e.g. 001-A	Sector D (SIC 2951)	Benchmark	1/Quarter	1st wk of month	✓	✓	✓		
e.g. 001-A	Sector D (SIC 2951)	ELG	1/year	January	✓				
e.g. 001-B	Subsector E2 (SIC 3271)	Benchmark	1/Quarter	1st wk of month	✓			✓	
e.g. 001-B	Subsector E2 (SIC 3271)	ELG	1/Year	January	✓	✓			

Figure 12. Example MSGP Industrial Stormwater/Snowmelt Monitoring Summary Form with monitoring requirements, sampling locations and industry sectors.

Section 3: Conduct Monitoring

This section describes sampling preparation, choosing the right storm event to monitor, how to collect stormwater samples, how to conduct visual assessments, quality control considerations, and how to report the results.

The information contained in this section is not specific to monitoring for the 2021 MSGP or any particular general industrial stormwater permit.

3.A What to Have in Place Prior to Collecting Stormwater Samples

Preparation is essential, especially if you are in a climate where measurable storm events are infrequent.

- ***In-Office Preparations*** – Your in-office preparations should include the following:
 - Contacting the lab well ahead of time so that you have the sample bottles before a measurable storm event.
 - Paying attention to weather forecasts so that you are tracking patterns that are likely to result in a measurable storm event.
 - Knowing who your monitoring personnel are and how to contact them when a measurable storm event is expected.
 - Having sampling gear assembled and checked for readiness.
 - Preparing sample bottle labels using waterproof ink with the following information (if not already done by the lab):
 - Facility name and address
 - Sample location identifier (e.g., Outfall 001)
 - Name or initials of sampling personnel
 - Parameter and associated analytical method (e.g., TSS, Method # 0160.2; consult with your contract laboratory for analytical method numbers)
 - Sample type (generally will be “grab” samples)
 - Sample preservation notes
 - Date and time after completing sampling event
 - Having chain-of-custody forms ready for use.

The chain of custody form is a document that travels with the sample from collection through analysis. Each individual that handles the sample will place their name, date, and time on the chain-of-custody form. The form is used to maintain the integrity of the sample by providing documentation of the control, transfer, and analysis of samples (see Section 3.4 below for a more detailed discussion of chain-of-custody).

- **Sampling Supplies** – Collect the following supplies and keep them ready for quick use:
 - Clean, sterilized sample bottles, sized appropriately for the parameter to be analyzed (many labs provide the appropriate bottles or will tell you what size to get). Glass must be used for oil and grease samples; plastic containers can be used for other parameters. Use Teflon or aluminum-lined caps.
 - If bottles are new but not pre-cleaned, they must be pre-conditioned before use by filling with water for several days (the duration can be reduced by using a dilute solution of hydrochloric acid).
 - Additional glass or clear plastic bottles suitable for visual assessments.
 - Visual monitoring forms (see example in Appendix B).
 - Clipboard and site-specific monitoring checklist.
 - If needed, a pole (sold at field supply stores) on which to attach sample bottles and attachment clips or strapping tape to secure the bottle to the pole.
 - Safety equipment, including first aid kit.
 - Hand sanitizer solution.
 - Carrying case for sampling equipment or backpack for carrying equipment to remote locations.
 - Powder-free disposable nitrile or latex gloves (sold by medical and laboratory suppliers or may be provided by your contract laboratory). Do not use powdered gloves as they may contaminate your samples.
 - Indelible pens/markers that can write on wet surfaces.
 - Foul-weather gear including footwear appropriate for the conditions at your sampling locations (e.g., non-slip boots).
 - Sturdy cooler and ice or ice packs for stowing and preserving your samples en route to the lab (the lab may provide an appropriate container).
 - Field notebook or field forms for your sampling records (waterproof notebooks are available at office supply stores).
 - pH paper and appropriate chemical preservatives for adding to sample bottles (obtain from your laboratory).

For rinsing sample bottles, use only distilled water



Figure 13. Preparing sampling supplies.

- **Optional or As-Needed Supplies:**
 - Sodium bicarbonate (for safety reasons if using acid preservative additives)
 - A graduated stick to measure water depth for determining safe/wade-able sampling access locations (if a sampling pole will be used, you can modify it with depth markings)
 - Mosquito repellent
 - Flashlight in case of sudden loss of light or darkness under storm conditions
 - Flagging tape for marking access to remote or overgrown locations
 - Camera, used for:
 - Recording evidence of potential pollutants or sampling conditions.
 - Especially useful if different people will do the sampling throughout the permit term.
 - Pictures of sample appearance along with the visual inspection records can help “normalize” visual assessments.
 - Pictures of the sampling location can help you find the same spot for subsequent sampling events.

Develop a stormwater sampling checklist to ensure consistency and continuity across sampling events. Since stormwater sampling is not a regular part of a facility’s workload, a checklist of things to have prepared before sampling, sampling activities, and sampling locations will help you remember from quarter to quarter. You can make the checklist by noting the things you did for the first sampling event to remember for future sampling events. Keep the checklist updated as you gain experience with sampling.

3.B Collect Stormwater Samples



Figure 14. A stormwater grab sample is collected directly into the sample container.

Contact the lab prior to collecting stormwater samples so they know to expect the samples and have adequate staff available to conduct the analyses within the applicable holding times (the lab may offer courier service). Inform them of the pollutant parameters for which your samples will be analyzed.

Follow the protocol below to obtain an accurate grab or manual sample. A grab sample is a single sample “grabbed” by filling up a container, either by hand or attached to a pole. Obtaining accurate data is vital to your ability to assess how your SCMs are performing.

- Wear disposable powder-free gloves for sampling; never touch the inside of the lid or bottle.
- For oil and grease: fill the glass sample bottle directly from the discharge; never collect in a container first and then transfer to the sample bottle because oily residue will collect along the inside of the first collection bottle and make the sample inaccurate.
- If you have problems accessing the stormwater discharge point (e.g., access is too far or dangerous), use a pole or other appropriate sampling apparatus.
- Sample only stormwater discharging from your facility (i.e., do not sample from puddles, ponds, or retention basins).

Remember, oil and grease must be collected directly into the glass sample bottle.

- Sample from a turbulent section in the central part of the flow; avoid touching the bottom or sides of the stormwater conveyance.
- Fill the sample bottle nearly to the top (meniscus almost at the rim) by holding the opening into the flow of water; do not rinse or overfill the bottles.



Figure 15. Sample bottles labeled with location, date, time, sample collector, analysis, and preservative type.

While stormwater samples are typically grab samples, in some situations the use of an automatic sampler may be appropriate. Automatic samplers are mechanical devices that monitor site conditions and collect a sample when needed. The automatic sampler can be set up well in advance of a storm, or set up as a permanent installation, and the technician can retrieve the sample after the storm when conditions are favorable. Advantages of automatic samplers include low labor costs, convenience, and safety – personnel are not out in the storm trying to collect one or more samples. The major disadvantage is cost; automatic samplers are expensive. Secondly, the automatic sampler cannot collect visual observations, and they cannot be used for collection of certain measurements.

After the samples have been collected:

- Place the samples in a sturdy cooler partially filled with ice. As a general rule, samples should be kept at approximately 39°F (4°C) until the cooler is delivered to the lab.
- Put a completed chain-of-custody form enclosed in a resealable plastic bag inside the cooler. If you have several coolers complete a separate chain of custody form for each cooler.
- Deliver the samples to the lab (e.g., drive, arrange same-day pick-up by the lab, or use an express/overnight service) as soon as possible, bearing in mind the holding times for each parameter sampled.

pH has a 15-minute holding time; therefore, the sample must be analyzed within 15 minutes of collection.



Figure 16. Stormwater samples packed for delivery to the lab, note the chain of custody forms attached to the lid.

3.C Record Information for Each Monitoring Event

For each individual sample collected, you should note the following information:

- The sample/discharge point identifier.
- The duration between the storm event you sampled and the end of the previous storm event that resulted in a discharge of stormwater from your site (i.e., a “measurable storm event”).
- The date and duration of the storm event sampled.
- Rainfall measurement or estimate (in inches).
- Estimate of the total volume of the discharge sampled from the discharge point.
- Sample type

You should record this information on a Stormwater Collection Form (see Appendix C for an example).

3.D Quality Assurance Considerations

The following actions must be followed explicitly. Quality assurance (QA) helps maintain the accuracy and integrity/legal defensibility of your monitoring results by documenting the stewardship of your samples, by minimizing biases in sampling and lab procedures, and by helping to assess the accuracy and precision of the lab’s analyses.

Holding Times and Sample Preservation

Samples that cannot be delivered to the lab on the same day may need to be preserved, often by cooling to ≤ 6 °C (i.e., in an ice bath) and/or with added chemical preservatives (laboratory-supplied bottles may already include preservatives). If your samples need to be analyzed for more than one parameter, you may need to bottle more than one sample at a discharge point using different preservatives. In addition, you should be aware of the maximum holding time allowed for a particular parameter before which the sample must be analyzed. Following is a table with typical preservation and holding requirements for benchmark parameters and additional potential pollutants of concern (the latter will not have a numeric value in parentheses). Work with your laboratory service providers to develop a list of containers to optimize “sharing” of containers across different parameters. Not all laboratories provide the same container types for the different parameters. Laboratories frequently provide pre-completed custody records and seals and will provide pre-labeled sample bottles for ease of use in the field as part of their routine “value-added” services. Pre-completed custody records and labels require only time, date, and samplers’ initials in order to complete this critical documentation. Your laboratory may also have additional sampling, sample handling, or shipping instructions helpful to your sample collection personnel. NOTE: Whenever possible, minimize the amount of lead time sample containers/kits are outside of the laboratory. Extended storage of pre-preserved containers for some analytes may present opportunity for contamination of field blank samples, even under ideal storage conditions. Additional information of the use of field blanks in sampling is discussed in the Field Blanks section below.

Table 5. Sample Preservation and Hold Times

Parameter (Benchmark Threshold)	Preservation		Maximum Holding Time	Sample Container
	Cool to ≤ 6 °C?	Additional		
Aluminum, Total Recoverable (1,100 µg/L)	N	HNO ₃ (nitric acid) to pH <2	6 months	500 mL HDPE
Ammonia (2.14 mg/L)	Y	H ₂ SO ₄ (sulfuric acid) to pH <2	28 days	500 mL HDPE
Antimony, Total Recoverable (640 µg/L)	N	HNO ₃ to pH <2	6 months	500 mL HDPE
Arsenic, Total Recoverable (150 µg/L freshwater, 69 µg/L)	N	HNO ₃ to pH <2	6 months	500 mL HDPE
Beryllium, Total Recoverable (130 µg/L)	N	HNO ₃ to pH <2, or at least 24 hours prior to analysis	6 months	500 mL HDPE
Biological Oxygen Demand, BOD ₅ (30 mg/L)	Y	None	48 hours	1L HDPE or glass
Cadmium, Total Recoverable (1.8 µg/L freshwater*, 33 µg/L saltwater)	N	HNO ₃ to pH <2, or at least 24 hours prior to analysis	6 months	500 mL HDPE
Chemical Oxygen Demand, COD (120 mg/L)	Y	H ₂ SO ₄ to pH <2	28 days	100 mL HDPE or glass

Parameter (Benchmark Threshold)	Preservation		Maximum Holding Time	Sample Container
	Cool to ≤ 6 °C?	Additional		
Copper, Total Recoverable (5.19 $\mu\text{g/L}$ freshwater, 4.8 $\mu\text{g/L}$ saltwater)	N	HNO_3 to pH <2, or at least 24 hours prior to analysis	6 months	500 mL HDPE
Cyanide, Total (22 $\mu\text{g/L}$ freshwater, 1 $\mu\text{g/L}$ saltwater)	Y	NaOH (sodium hydroxide) to pH >10, reducing agent if oxidizer present	14 days	1 L HDPE
Fluoride	N	None	28 days	100 mL HDPE
Hardness (as CaCO_3)	N	HNO_3 or H_2SO_4 to pH <2 (method dependent)	6 months	100 mL HDPE
Lead, Total Recoverable (82 $\mu\text{g/L}$ freshwater*, 210 $\mu\text{g/L}$ saltwater)	N	HNO_3 to pH <2, or at least 24 hours prior to analysis	6 months	500 mL HDPE
Mercury, Total Recoverable (1.4 $\mu\text{g/L}$ freshwater, 1.8 $\mu\text{g/L}$ saltwater)	N	HNO_3 to pH <2	28 days	500 mL HDPE
Nickel, Total Recoverable (470 $\mu\text{g/L}$ freshwater*, 74 $\mu\text{g/L}$ saltwater)	N	HNO_3 to pH <2, or at least 24 hours prior to analysis	6 months	500 mL HDPE
Nitrate + Nitrite Nitrogen (0.68 mg/L)	Y	H_2SO_4 to pH <2	28 days	200 mL HDPE
pH (6.0 – 9.0 s.u.)	N	None	15 min (Field test)	50 mL
Phenol	Y	H_2SO_4 to pH <2	28 days	500 mL HDPE
Phosphorous, Total (2.0 mg/L)	Y	H_2SO_4 to pH <2	28 days	500 mL HDPE
Polycyclic Aromatic Hydrocarbons (PAHs)	Y	Store in dark, 0.008% $\text{Na}_2\text{S}_2\text{O}_3$	7 days until extraction, 40 days after extraction	1L Amber glass
Radium, Total Recoverable		HNO_3 to pH <2	6 months	1L HDPE
Radium, dissolved		Field-filtered HNO_3 to pH <2; if not field filtered - none	Field filtered, preserved 6 months; if not field filtered, filter on receipt, preserve to pH <2 6 months	1L HDPE
Selenium, Total Recoverable (lentic waters 1.5 $\mu\text{g/L}$, lotic waters 3.1 $\mu\text{g/L}$; 290 $\mu\text{g/L}$ saltwater)	N	HNO_3 to pH <2, or at least 24 hours prior to analysis	6 months	500 mL HDPE
Silver, Total Recoverable (3.2 $\mu\text{g/L}$ freshwater*, 1.9 $\mu\text{g/L}$ saltwater)	N	HNO_3 to pH <2, or at least 24 hours prior to analysis	6 months	500 mL HDPE
Total Suspended Solids, TSS (100 mg/L)	Y	None	7 days	200 mL HDPE
Turbidity (50 NTU)	Y	None	48 hours	100 mL HDPE
Uranium		HNO_3 to pH <2	6 months	500mL HDPE
Zinc, Total Recoverable (120 $\mu\text{g/L}$ freshwater*, 90 $\mu\text{g/L}$ saltwater)	N	HNO_3 to pH <2, or at least 24 hours prior to analysis	6 months	500 mL HDPE

Parameter (Benchmark Threshold)	Preservation		Maximum Holding Time	Sample Container
	Cool to ≤6 °C?	Additional		
Landfill Parameters				
Alpha Terpineol	Y	NA	7 days to extraction 40 days to analysis	1L Amber glass
Aniline	Y	NA	7 days to extraction 40 days to analysis	1L Amber glass
Benzoic Acid	Y	NA	7 days to extraction 40 days to analysis	1L Amber glass
Naphthalene	Y	NA	7 days to extraction	1L Amber glass
p-Cresol	Y	NA	7 days to extraction 40 days to analysis	1L Amber glass
Pyridine	Y	NA	7 days to extraction 40 days to analysis	1L Amber glass

*These pollutants are dependent on freshwater hardness. The benchmark value listed is based on a hardness of 100 mg/L. The 2021 MSGP requires industrial facility to analyze receiving freshwater samples for hardness, and use the hardness tables provided in the 2021 MSGP to determine the applicable benchmark value for that facility

Field Blanks

Field blank samples are filled with either distilled or de-ionized water, and are prepared, in the field, after cleaning the sampling equipment but before collection of water quality samples. Field blanks are prepared by pouring distilled de-ionized water into each scoop, dipper, etc. used for sample collection and then emptying the scoop, dipper, etc. into the sample bottles as if they were actual field samples. The field blanks are processed and analyzed in an identical manner as the stormwater samples. If the lab detects any contamination in the blanks, your sampling results could be considered tainted (either from contamination or errors in sampling or analysis). Collection and analysis of field blanks is not required by the 2021 MSGP; however, field blanks are used for quality control to assess whether contamination was introduced during sampling and may prove useful in interpretation of results.

Chain of Custody Forms and Procedures

Samples must be traceable from the point of collection until the sampling results are reported. To do this, document who is in possession of the samples using the chain of custody procedures below. One person should be responsible for the care and custody of the samples, and for generating the chain of custody record until the samples are properly transferred or relinquished to the laboratory. Chain of custody tasks include:

- Ensure that the sample labels are properly filled in.
- Complete the chain of custody form with the date, time, parameter, and sample locations for each sample, and sign the form.
- During the transfer of custody of the samples, both the persons relinquishing and receiving the cooler (including lab personnel) must record the date and time on the chain of custody form and sign it.
- Record the shipping method, courier name(s), and other pertinent information as remarks on the chain of custody form.

- The original chain of custody form remains with the samples and a copy must be provided to the facility for inclusion in project records.

Chain of custody records are critical to ensure that no tampering occurs between sample collection and analysis. Your analytical service provider may provide training or written instructions to assist in your completion of accurate custody records. This is another key area where many laboratories invite the opportunity to work with their clients as part of their value-added services.

3.E Conducting Visual Assessments of Stormwater Discharges

Visually inspecting stormwater samples from a measurable discharge at your discharge points is an inexpensive way of assessing the performance of your SCMs. The sample should be collected and analyzed in a clean, colorless glass or plastic container. It is recommended that you take photographs of the discharges at the time of observation in case more than one person is doing the assessments and because photos can be helpful in determining the effectiveness of your SCMs and any need for changes to your SCMs.

All facilities covered by the 2021 MSGP must perform quarterly visual assessments of stormwater discharges, irrespective of benchmark monitoring.

Visually inspect or observe for the following water quality characteristics, which may be evidence of stormwater pollution:

- **Color** – If the discharge has an unusual color, such as reddish, brown, or yellow hue, this may indicate pollutants or suspended sediment.
- **Odor** – If the discharge has a noticeable odor, for instance if it smells like gasoline fumes, rotten eggs, raw sewage, or solvents odor, or has a sour smell, this could be indicative of pollutants in the discharge.
- **Clarity (*diminished*)** – If the discharge is not clear, but is instead cloudy or opaque, this could indicate elevated levels of pollutants in the discharge.
- **Floating solids** – If you observe materials floating at or near the top of the container, take note of what the materials appear to be.
- **Settled solids** – You should wait about a half hour after collection, then note the type and size of materials that are settled at the bottom of the container.
- **Suspended solids** – Particles suspended in the water will affect its clarity, and color and could be attributable to pollutant sources at your facility.
- **Oil sheen** – You should check the surface of the water for a rainbow color or sheen; this would indicate the presence of oil or other hydrocarbons in the discharge.
- **Foam** – You should gently shake the container and note whether there is any foam.
- Other obvious indicators of stormwater pollution.

To record your visual monitoring results, you can use the optional “Quarterly Visual Monitoring Form” in Appendix B (or a comparable one of your own).

Section 4: Evaluate Monitoring Results

The primary purpose of any industrial stormwater monitoring program, consisting of analytic chemical monitoring and visual assessments, is to provide feedback on the performance of your selection and implementation of SCMs. Visual evidence of pollution in a stormwater sample, a spike in the concentration of a benchmark pollutant, or the exceedance of a numeric effluent limitation provides an indicator that modifications or additions to the site's SCMs need to be considered to improve the effectiveness of your stormwater program.

The following will aid you in interpreting your monitoring results and revising your SCMs, if necessary.

4.A Evaluating Visual Assessment Results

For anything but colorless and odorless stormwater in your discharge, you should investigate what area of your site or what specific pollutant sources are contributing to the contamination of your site's runoff. To search for the source of pollutants, you should move upstream from the discharge point. You should scrutinize your exposed industrial materials and activities (material handling equipment, industrial machinery, raw materials, finished product, wastes, or products that are stored, used, or created onsite, etc.). Examine where material handling activities occur, such as: storage, loading and unloading, and material transporting. Be aware, the source could be from an ongoing activity or the result of a spill or other infrequent occurrence. In looking at your samples, consider the following:

- When there is a distinct color or odor, are the abnormalities associated with any raw materials, chemicals, or other materials used at the site?
- Muddiness or sediment may have been picked up from areas where there is disturbed earth or other unpaved areas lacking adequate SCMs.
- Foam or oil sheen may be the result of a leak or spill of materials.
- Cloudiness indicates suspended solids such as dust, ash, powdered chemicals, and ground up materials. Determine whether you use any of these materials and whether they are exposed to stormwater.



Figure 17. Example of oil sheen.

Clean up all sources of potential contamination, make changes to your SCMs, and update your SWPPP, as necessary.

4.B Evaluating Benchmark Monitoring Results

The analysis of your benchmark monitoring results can yield valuable information about the characteristics of your stormwater discharge and how well your SCMs are working. Once you have received your lab results for your benchmark samples, compare these concentrations to the benchmark thresholds that apply to your facility. The 2021 MSGP requires that you conduct four benchmark samples in your first year and four samples in your fourth year and compare the average value to the applicable benchmarks. If the average concentration of your samples exceeds the benchmark threshold, then you are required under the permit to initiate Additional Implementation Monitoring (AIM) responses which include review of the SWPPP and SCMs to determine if modifications are necessary, and implementation of additional measures that would reasonably be expected to bring the exceedances below the benchmark threshold (See Parts 5.2 and 5.3). However, if fewer than four quarterly samples are collected, but a single sample or the sum of any sample results makes an exceedance of the benchmark mathematically certain (i.e., the sum of the quarterly samples results to date is already more than four times the benchmark threshold) you are required to conduct this evaluation immediately.

Table 6 will help you decide a course of action depending on the results of your benchmark samples.

Table 6. Evaluation of Benchmark Monitoring Results

<p>Does the average of your four quarterly benchmark samples for any pollutant exceed the applicable benchmark concentration? OR <u>If you have not yet completed your four quarterly benchmark samples, does the total value of your samples already make an exceedance of the benchmark mathematically certain (e.g., the sum of the concentration of your samples exceeds four times (4X) the benchmark concentration)?</u></p>	
YES	NO
<p>You must evaluate whether modifications to the SCMs used at your site are necessary. You will need to consider whether there is a problem in the selection, design, installation, and/or operation of applicable control measures. Follow the AIM procedures in Parts 5.2 and 5.3.</p> <p>An exceedance of a benchmark does not necessarily mean that your control measures are insufficient.</p> <p>Continue reading below for additional items to consider as you proceed.</p>	<p>Sample results below benchmark limits provide an indication that your control measures are working as intended to minimize the discharge of pollutants.</p> <p>Although your samples indicate properly functioning control measures, you should continue to note changes to your site that may affect the quality of stormwater discharge, and to link such changes to your future monitoring results.</p> <p>You are still required to meet all requirements in the permit affecting the implementation and maintenance of your control measures, despite the good results of your benchmark monitoring.</p>

If benchmarks were exceeded:

- Did you sample correctly?
 - Did you start with clean sample collection jars and were the samples preserved and submitted to the lab within the allotted time frame?

- Did you properly sample the discharge flowing from the site or did you collect the sample from a low spot or stagnant pool?
- Was anything atypical going on at the site prior to or during the storm? Atypical activities could include:
 - A leak or spill that was not adequately cleaned up.
 - Construction, painting, and paving activities.
 - Having a large amount of material (raw materials, wastes, or products) recently delivered or being prepared for shipment.
- Did you observe anything during visual inspections that may have indicated that stormwater discharge would have been exposed to pollutants? If so, are SCMs in place to address the pollutant sources?



Figure 18. Example of visual observation indicating stormwater discharge exposed to pollutants.

The more the benchmark was exceeded, the greater your facility's problems may be, necessitating a more robust response. For example, if your results for TSS were over the benchmark threshold by a relatively small amount (e.g., TSS values of 110 to 150 mg/L, compared to the 100 mg/L benchmark level assigned to TSS), then simply performing additional housekeeping measures (e.g., frequent sweeping) may reduce the values of TSS below the benchmark to 100 mg/L by the next storm. However, an exceedance of TSS above 150 mg/L may warrant new or supplementary control measures (assuming your control measures are performing as designed) that

more effectively reduce the potential for sediment in discharges (e.g., installing storm inlet filters, seeding/stabilizing disturbed areas, implementing dust and debris controlling procedures). TSS values exceeding benchmark thresholds by orders of magnitude indicate a serious problem, and may require structural control measures (e.g., paving, installing berms around piles of loose material, placing operations under cover, placing grassy swales or basins in the discharge flow path to trap sediment).

Until quarterly benchmark monitoring results indicate that an AIM triggering event has not occurred, you must follow the corresponding AIM-level responses and deadlines described in Parts 5.2.3, 5.2.4, and 5.2.5 unless you qualify for an exception under Part 5.2.6

Part 5.2.6 of the 2021 MSGP includes five exceptions that could allow an operator to be relieved of compliance with AIM requirements and continued benchmark monitoring at any AIM level:

1. Exceedance of a benchmark threshold is solely attributable to natural background pollutant levels. (Part 5.2.6.1)
2. Exceedance of a benchmark threshold is due to run-on from a neighboring source. (Part 5.2.6.2)

3. Exceedance of a benchmark threshold was due to an abnormal event (Part 5.2.6.3)
4. Exceedance of aluminum or copper benchmark threshold can be demonstrated not to result in an exceedance of a facility-specific value using national recommended water quality criteria in lieu of the applicable MSGP benchmark threshold (Part 5.2.6.4)
5. Exceedance of a benchmark threshold can be demonstrated not to result in any exceedance of water quality standards (Part 5.2.6.5)

AIM Exemption Example:

Where benchmark values cannot be reasonably achieved because of local natural background concentrations EPA allows for benchmark exceedances.

For example, high natural background levels of iron in soils or groundwater could cause exceedances of a benchmark threshold. This provision exempts facilities from further AIM response when natural background levels are solely responsible for the exceedance of a benchmark threshold.

To make the determination that the exceedance was caused by natural background pollutant concentrations, background concentrations must be greater than the corresponding benchmark threshold, and there is *no* net facility contribution of the pollutant (i.e., average concentration detected in the discharge from all monitored discharge points over four separate events minus the average natural concentration of the parameter for four separate events does not exceed zero).

For example, if the natural background concentration of TSS from an undisturbed watershed is 200 mg/L, an exemption from AIM response is available if the average of your four benchmark samples is equal to or lower than 200 mg/L. There are additional requisites for claiming a natural background level exemption, including documentation. Details of these are contained in the 2021 MSGP in Part 5.2.6.1 and the Fact Sheet.

4.C Effluent Limitation Guideline Monitoring Results

What happens if your facility is subject to numeric effluent limits (for ELG compliance monitoring) and your stormwater sample exceeds the effluent limits for one or more parameters? Within 24 hours of becoming aware of the violation you must document the discovery of the violation, including:

- A description of the condition or event triggering the need for corrective action review;
- The date the condition/triggering event was identified; and
- A description of immediate actions taken to minimize or prevent the discharge of pollutants.

Within 14 days of becoming aware of the violation, you must document the following information:

- The corrective action(s) taken or to be taken;
- The date(s) corrective action was initiated; and
- The date(s) corrective action was completed or is expected to be completed.

You must submit this documentation with your annual report and retain a copy onsite with your SWPPP.

The 2021 MSGP requires that you indicate any exceedance of a numeric effluent limitation on a Change NOI form in NeT-MSGP, and conduct follow-up monitoring within 30 calendar days of

implementing corrective action(s) (or during the next measurable storm event, should none occur within 30 days)(Part 5 of the 2021 MSGP). Monitoring must be performed for any pollutant(s) that exceeded the effluent limit. If the results from the follow-up monitoring exceed the effluent limit(s), you are required to submit an Exceedance Report to EPA no later than 30 after receipt of your laboratory results. The Exceedance Report must include:

- NPDES ID;
- Facility name, physical address, and location;
- Name of receiving water;
- Monitoring data from this and the preceding monitoring event(s);
- An explanation of the situation, including what you have done and intend to do (should your corrective actions not yet be complete) to correct the violation; and
- An appropriate contact name and phone number.

In addition to preparing the Exceedance Report, you must continue to monitor, at least quarterly, until your stormwater discharge is in compliance with the effluent limits or until EPA waives the requirement for additional monitoring.

4.D Specific Pollutants and Control Measure Options

All facilities need to gear their control measures toward their specific pollutants of concern, as determined by the materials and activities onsite. Below is a brief discussion of some of the most common pollutants and control measure options.

- **Total Suspended Solids (TSS).** Small sediment particles are easily suspended and carried by surface water flows. These particles may be blown onto the site from unpaved areas within or adjacent to your facility as well as being tracked in on the tires of vehicles. Excess particles may be self-generated, particularly in the concrete, asphalt, scrap recycling, automobile salvage, and mining sectors. See the discussion above for control measure options for controlling TSS.
- **Oil and Grease.** Often, oil and grease may be observed as a film, sheen, or discoloration on the top of a discharge or receiving water. But such a surface anomaly may not be obvious, in which case detection by a lab would be the only way. This could be a pollutant of concern for any facility, especially if there are exposed vehicles or equipment. Therefore, it is vital that due diligence regarding “reportable quantity” (RQ) spills or leaks be observed. Basically, an RQ for oil is any quantity of oil that causes a film, sheen, or discoloration on a receiving water surface (and for which there are separate reporting requirements to regulatory agencies). If detected, you must find the source and mitigate it. Start with the vehicle/equipment maintenance and storage areas or where shipping/receiving and the like are done. Above ground storage tanks and waste storage are other likely sources.



Figure 19. Example of vehicle leak.

Available control measures range from regularly monitoring these areas and applying an absorbent material (choose a bio-based absorbent, not a clay-based material) as soon as an oil leak or spill is observed. Consider coverage of and secondary containment for storage areas where oil or grease are stored, transferred or disposed of. An oil water separator downstream of the area(s) most likely to contain oil or grease could provide enough treatment to reduce oil and grease to acceptable levels in the discharge.

- **pH.** pH values below benchmark range indicate that acidic substances are exposed to stormwater. In this case you need to determine whether any of your industrial processes use acids and if so, where. Does your facility do plating, or are lead-acid batteries used or stored on-site? If acids are being used to clean parts, for example, where are the parts stored after being treated with the acid? Where are waste acids stored and how are they disposed? Which operations could expose acids to stormwater? Coal piles are also a source of acidified discharge.

High pH values indicate that a base or alkaline material (such as lye) is exposed to stormwater. Cement and some cleansers can produce high pH values.

Control measures applicable to controlling pH include housekeeping (sweeping and cleaning areas where materials that affect pH could be exposed to stormwater); overhead coverage and disposal of waste materials in covered receptacles. Low or high pH discharge can be collected and neutralized by adding an appropriate agent to neutralize pH values to the 6.0 – 9.0 range.

Alternatively, flow can be directed to come in contact with a neutralizing substance (e.g., acidic coal pile discharge directed to flow through a limestone channel).

- **Chemical Oxygen Demand (COD).** COD is the amount of dissolved oxygen in water consumed by the chemical breakdown of organic and inorganic matter (i.e., COD is not a specific component in the discharge). Therefore, a high COD value indicates elevated quantities of pollutants in stormwater discharge, especially carbon. Examples of facilities that handle materials which could cause high COD levels include the wood and paper product industries. Control measures applicable to controlling COD levels are the basic stormwater ones: good housekeeping and covering materials with the potential to allow carbon or other organic materials to be carried by stormwater.
- **Metals.** Metals originate from many sources and consequently a number of industries must monitor for metals, including facilities such as wood preservative and agricultural chemical makers, mines, and foundries. Depending on a facility's activities, metals can be found in a dissolved form and/or adsorbed to particles or sediment. It is because both the dissolved and particulate forms can occur at the same time is why stormwater discharges are analyzed for "total recoverable metals." After identifying those operations that could expose



Figure 20. Example of pollutant control measures.

stormwater to metals sources, implement control measures capable of reducing metals concentrations, including good housekeeping (sweeping and disposing of metal wastes in covered containers), covering/shielding operations, and directing run-on away from any critical outdoor areas. Ion exchange techniques can also be employed to remove dissolved metals.

- **Polycyclic Aromatic Hydrocarbons (PAH).** PAHs are associated with industrial activities that manufacture, use or store creosote or creosote treated wood in areas that are exposed to precipitation or from industrial activities that operate on-top of paved surfaces that have been sealed or re-sealed with coal-tar sealcoat. PAHs can bind with dust and sediment particles that can be picked up by stormwater and transported to control measures or directly discharged to receiving waters. After the possible sources of PAHs that can be exposed to stormwater are identified, implement control measures to reduce PAHs in the stormwater discharge, including good housekeeping (i.e., sweeping and safely disposing of waste), stormwater control measures (e.g., stormwater ponds, non-clogging catch-basin) and directing runoff and run-on away from possible sources of contamination.

Section 5: Reporting and Recordkeeping

It is important that accurate record-keeping of monitoring activities become a standard operating procedure at your facility. You need to be able to show that monitoring and sampling events not only meet all permit requirements but are defensible and abide by all quality assurance/quality control (QA/QC) procedures. It is always preferable to document too much as opposed to too little when dealing with any sort of permit compliance. Create easy to use logbooks for keeping track of rain events. Be sure that your site map is up to date and easy to understand. Develop simple instruction sheets for recording sampling, visual assessments, or other monitoring activities. The instructions should be kept in logical locations (e.g., in sample kits, in the SWPPP notebook) and updated as needed.

When possible, use standardized forms such as those provided in the appendices of this monitoring guide to record your monitoring activities. This will provide consistency in information reported. Example forms are provided in this guide in Appendix A (2021 MSGP Industrial Stormwater Monitoring Form), Appendix B (2021 MSGP Visual Monitoring Form), and Appendix C (2021 MSGP Industrial Stormwater Collection Form).

If possible, regularly transfer sampling records and sample results into databases or spreadsheets. This will provide back-up records for hard-copy logs or forms as well as providing an easy way to analyze your sampling data.

5.A Reporting Monitoring Data

Each state or territory industrial stormwater permit has different requirements for how monitoring data should be reported. Facilities subject to EPA's 2021 MSGP must submit all stormwater discharge monitoring data collected no later than 30 days after receiving complete laboratory results for all monitored discharge points. For any monitored discharge points that did not have a discharge within the reporting period, facilities must report that no discharges occurred for that discharge point no later than 30 days after the end of the reporting period. You must submit even if your facility is reporting a change in status from "active and staffed" to "inactive and unstaffed."

Facilities covered under the 2021 MSGP must submit all stormwater discharge monitoring data through EPA's electronic Discharge Monitoring Report (DMR) system, Net-DMR (unless the applicable EPA Regional Office grants a waiver from electronic reporting, in which case facilities may submit a paper DMR form). Monitoring requirements (i.e., parameters required to be monitored and sample frequency) will be prepopulated on the DMR form based on the information facilities report on their NOI forms through NeT-MSGP, EPA's NPDES eReporting Tool for the MSGP. Accordingly, facilities must certify changes to their monitoring frequency to EPA by submitting a Change NOI in NeT-MSGP, which will trigger changes to the monitoring requirements in Net-DMR.

Facilities must submit NOIs, Change NOIs, Notices of Termination (NOTs), No Exposure Certifications (NECs), Annual Reports and other reporting information electronically via NeT-

MSGP, unless the applicable EPA Regional Office grants a waiver from electronic reporting. Additional information on electronic reporting can be found at: <https://www.epa.gov/compliance/npdes-ereporting>.

This guide will provide information on what documentation is needed for submitting DMRs and Annual Reports.

You will need the following information to submit DMRs via Net-DMR:

- NPDES ID
- The facility SWPPP
- Monitoring records
- Laboratory reports

NPDES ID – The NPDES ID is a unique identifier assigned to your facility by EPA. EPA tracks report submittals using the NPDES ID rather than facility name or address.

Facility SWPPP – The facility SWPPP includes several pieces of information needed for the DMR, including:

- The number of stormwater discharge points and the discharge point IDs.
- Which, if any, of the discharge points discharge substantially identical effluents and are considered SIDPs.
- Alternative monitoring periods if the facility is located in an area of irregular stormwater discharge.

Monitoring Records – Detailed monitoring records will make completing the DMR easier. As previously discussed, monitoring records must include:

- The date(s) of all monitoring events during the DMR reporting period.
- Any stormwater discharge points that did not have a discharge during the DMR reporting period.
- Whether the discharge resulted from rainfall or snowmelt.
- The duration (in hours) of the rainfall event(s).
- The amount (in inches) of rainfall from the monitored rainfall event(s).
- The time (in days) since the previous measurable storm event, which may or may not be the previous monitored measurable storm event.

Laboratory Reports – The laboratory will provide a detailed report with the results of your stormwater analyses and detailed QA/QC data to verify that the results are accurate. For each parameter the laboratory will typically report one of three results to be reported on the DMR.

- The measured concentration to be compared against the benchmark threshold or effluent limitation guideline.
- BQL or below quantitation limit means that the parameter is present at some amount greater than zero but less than the quantitation limit but the method used is not precise

enough to give an exact concentration. Report No Discharge Indicator (NODI) code Q (Not Quantifiable) on the DMR.

- ND or not detected means that the parameter was not detected in the sample. Report NODI code B (Below Detection Limit/No Detection) on the DMR.

Other laboratory reports you may need include receiving water hardness results if any of your required parameters are hardness dependent, and data on natural background pollutant levels if you are claiming that an exceedance of a benchmark threshold is due to natural background conditions.

In addition to the information above you will need the following information to submit your Annual Report via NeT-MSGP:

- NPDES ID (see above)
- Routine facility inspection documentation
- Visual assessment documentation
- Corrective action and AIM documentation (including descriptions of any incidences of non-compliance)

Routine Facility Inspections – The 2021 MSGP requires you to summarize findings from routine facility inspections in the Annual Report. Required documentation includes, at a minimum, the date and time of inspection(s), who conducted the inspection(s), the weather at the time of the inspection(s), observations made on the implementation of SCMs, any additional SCMs necessary for permit compliance, and whether any incidences of noncompliance occurred.

Visual Assessments – The 2021 MSGP requires you to summarize findings from visual assessments in the Annual Report. Required documentation includes, at a minimum, the sample location(s), date(s) and times(s) of sample collection and assessment, who collected the sample(s) and who assessed the sample(s), whether the discharge was from rainfall or snowmelt, observations, likely sources of stormwater contamination (if applicable), and reason(s) why sampling did not occur within the first 30 minutes of the discharge (if applicable).

Corrective Actions and AIM Documentation – The 2021 MSGP requires you to implement corrective actions if any of the following conditions occur during an inspection, monitoring or other means or EPA or the operator of the MS4 through which you discharge informs you that any of the following conditions have occurred:

- An unauthorized release or discharge (e.g., spill, leak, or discharge of non-stormwater not authorized by this or another NPDES permit to a water of the United States) occurs at your facility
- A discharge violates a numeric effluent limit listed in Table 2-1 and/or in your Part 8 sector-specific requirements [of the 2021 MSGP].
- Your SCMs are not stringent enough for your stormwater discharge to be controlled as necessary such that the receiving water of the United States will meet applicable water quality standards or to meet the non-numeric effluent limits in this permit.

- A required control measure was never installed, was installed incorrectly, or not in accordance with Parts 2 and/or 8 [of the 2021 MSGP] or is not being properly operated or maintained.
- Whenever a visual assessment shows evidence of stormwater pollution (e.g., color, odor, floating solids, settled solids, suspended solids, foam).

The 2021 MSGP also requires you to undertake AIM responses if an annual average exceeds an applicable benchmark threshold based on the following events:

- The four-quarterly annual average for a parameter exceeds the benchmark threshold, or
- Fewer than four quarterly samples are collected, but a single sample or the sum of any sample results within the sampling year exceeds the benchmark threshold by more than four times for a parameter. This result indicates an exceedance is mathematically certain (i.e., the sum of quarterly sample results to date is already more than four times the benchmark threshold).

You must document discovery of any of the conditions or triggering events listed above within 24 hours of becoming aware of such condition or triggering event, including a description of the condition or event triggering the need for corrective action review and/or AIM response; the date the condition or triggering event was identified, and a description of immediate actions taken to minimize or prevent the discharge of pollutants. Within 14-days of becoming aware of a condition or triggering event listed above, you must document the corrective actions and/or AIM responses that were taken or will be taken, including dates when you initiated and completed (or expect to complete) each corrective action and/or AIM response. You must summarize findings related to corrective actions and AIM responses in the Annual Report submitted via NeT-MSGP.

Section 6: Train Personnel

You must train your stormwater pollution prevention team in the proper procedures for sample collection, visual assessments, tracking and reporting. Trainings should be held regularly to update staff on any permit or SWPPP changes. New employees that become members of the stormwater pollution prevention team should be trained in general stormwater awareness as well as the following monitoring-specific topics:

- How to anticipate a measurable storm event.
- Where to monitor.
- How to collect and document the collection of stormwater samples including the assembling of “field blank” samples.
- How to perform and document visual assessments.
- How to handle and send the samples to the laboratory.
- How to interpret the results.
- How to keep accurate and complete records and report appropriate information to the permitting authority.

Section 7: References

APHA (American Public Health Association). 1998. *Standard Methods for the Examination of Water and Wastewater, 20th Edition*. American Public Health Association, 20th Edition.

Ecology. 2002. *How To Do Stormwater Sampling: A Guide for Industrial Facilities*. Publication #02-10-071. State of Washington Department of Ecology, Olympia, Washington.

“EPA Administered Permit Programs: The National Pollutant Discharge Elimination System.” *Code of Federal Regulations* Title 40, Pt. 122.

“Guidelines Establishing Test Procedures for the Analysis of Pollutants.” *Code of Federal Regulations* Title 40, Pt. 136.

USEPA (U.S. Environmental Protection Agency). 1992. *NPDES Storm Water Sampling Guidance Document*. EPA 833-8-92-001. U.S. Environmental Protection Agency, Office of Water, Washington D.C.

USEPA (U.S. Environmental Protection Agency). 2021. *NPDES Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (MSGP)*. U.S. Environmental Protection Agency, Washington D.C.

Appendix A: 2021 MSGP Industrial Stormwater Monitoring Form

MSGP Industrial Stormwater/Snowmelt Monitoring Summary Form

Name of Facility:						Pollutants to sample (Method)								
Address:														
NPDES ID:														
Benchmark Levels and ELGs														
Industry Sector	Pollutants	Benchmark Level	ELG											
			Daily Max	Monthly Average	Instant Min/Max									
Sample Summary														
Outfall Identifier	Industry Sector (SIC)	Basis	Frequency	Timing										

Appendix B: 2021 MSGP Visual Monitoring Form

MSGP Quarterly Visual Assessment Form

(Complete a separate form for each outfall you assess)

MSGP Visual Assessment Form

(Complete a separate form for each discharge point you assess)

Name of Facility: Enter Name of Facility NPDES ID: Insert NPDES ID

Sample Location: Enter Discharge Point ID "Substantially Identical Discharge Point" (SIDP)? Yes (identify SIDPs):
 No

Person(s)/Title(s) Collecting Sample: Enter Name(s)/Title(s)

Signature(s) of Person(s) Collecting Sample: _____

Person(s)/Title(s) Examining Sample: Enter Name(s)/Title(s)

Signature(s) of Person(s) Examining Sample: _____

Date & Time Discharge Began: Enter Date and Time Date & Time Sample Collected: Enter Date and Time. If sample not taken within first 30 minutes, explain why. Date & Time Sample Examined: Enter Date and Time

Substitute Sample? No Yes* (identify quarter/year when sample was originally scheduled to be collected): _____

Is this a substitute sample for quarterly visual assessments distributed during seasons when precipitation more regularly occurs? No Yes* (identify the quarter/year when the sample was originally scheduled to be collected): _____

Nature of Discharge: Rainfall Snowmelt

If Rainfall: Rainfall Amount: Number of inches Previous Storm Ended > 72 hours (three days) Before Start of This Storm? Yes No**
(describe): _____

Pollutants Observed

Color None Other (describe): _____

Odor None Musty Sewage Sulfur Sour Petroleum/Gas
 Solvents Other (describe): _____

Clarity Clear Slightly Cloudy Cloudy Opaque Other

Floating Solids No Yes (describe): _____

Settled Solids*** No Yes (describe): _____

Suspended Solids No Yes (describe): _____

Foam (gently shake sample) No Yes (describe): _____

Oil Sheen None Flecks Globs Sheen Slick
 Other (describe): _____

Other Obvious Indicators of Stormwater Pollution No Yes (describe): _____

* Your facility must be located in an area where limited rainfall occurs during many parts of the year (e.g., arid or semi-arid climate) or in an area where freezing conditions exist that prevent discharges from occurring for extended periods. Identify the quarter/year when the sample was originally scheduled to be collected.

** The 72-hour (three day) interval can be waived when the previous storm did not yield a measurable discharge or if you are able to document (attach applicable documentation) that less than a 72-hour (three day) interval is representative of local storm events during the sampling period.

*** Observe for settled solids after allowing the sample to sit for approximately one-half hour.

Sampling not performed due to adverse conditions: No Yes (explain): _____

Sampling not performed due to no measurable storm event occurring that resulted in a discharge during the monitoring quarter:
 No Yes (explain): _____

Identify probable sources of any observed stormwater contamination. Also, include any additional comments, descriptions of pictures taken, and any corrective actions necessary below (attach additional sheets as necessary). [Insert details](#)

Certification Statement (Refer to MSGP Appendix B, Part B.11 for Signatory Requirements)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information contained therein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. Name: _____ B. Title: _____
 C. Signature: _____ D. Date Signed: _____

* The 72-hour interval can be waived when the previous storm did not yield a measurable discharge or if you are able to document (attach applicable documentation) that less than a 72-hour interval is representative of local storm events during the sampling period.

** Observe for settled solids after allowing the sample to sit for approximately one-half hour.

Sampling not performed due to adverse conditions:
 No Yes (explain): _____

Sampling not performed due to no measurable storm event occurring that resulted in a discharge during the monitoring quarter:
 No Yes (explain): _____

Detail any concerns, additional comments, descriptions of pictures taken, and any corrective actions taken below (attach additional sheets as necessary).

Certification by Facility Responsible Official (Refer to MSGP Appendix B, Part B.11 for Signatory Requirements)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. Name _____ B. Title _____

C. Signature _____ D. Date Signed _____

Appendix C: 2021 MSGP Industrial Stormwater Collection Form

Detail any concerns, additional comments, descriptions of pictures taken, and any corrective actions below (attach additional sheets as necessary).

Certification by Facility Responsible Official (Refer to MSGP Appendix B, Part B.11 for Signatory Requirements)

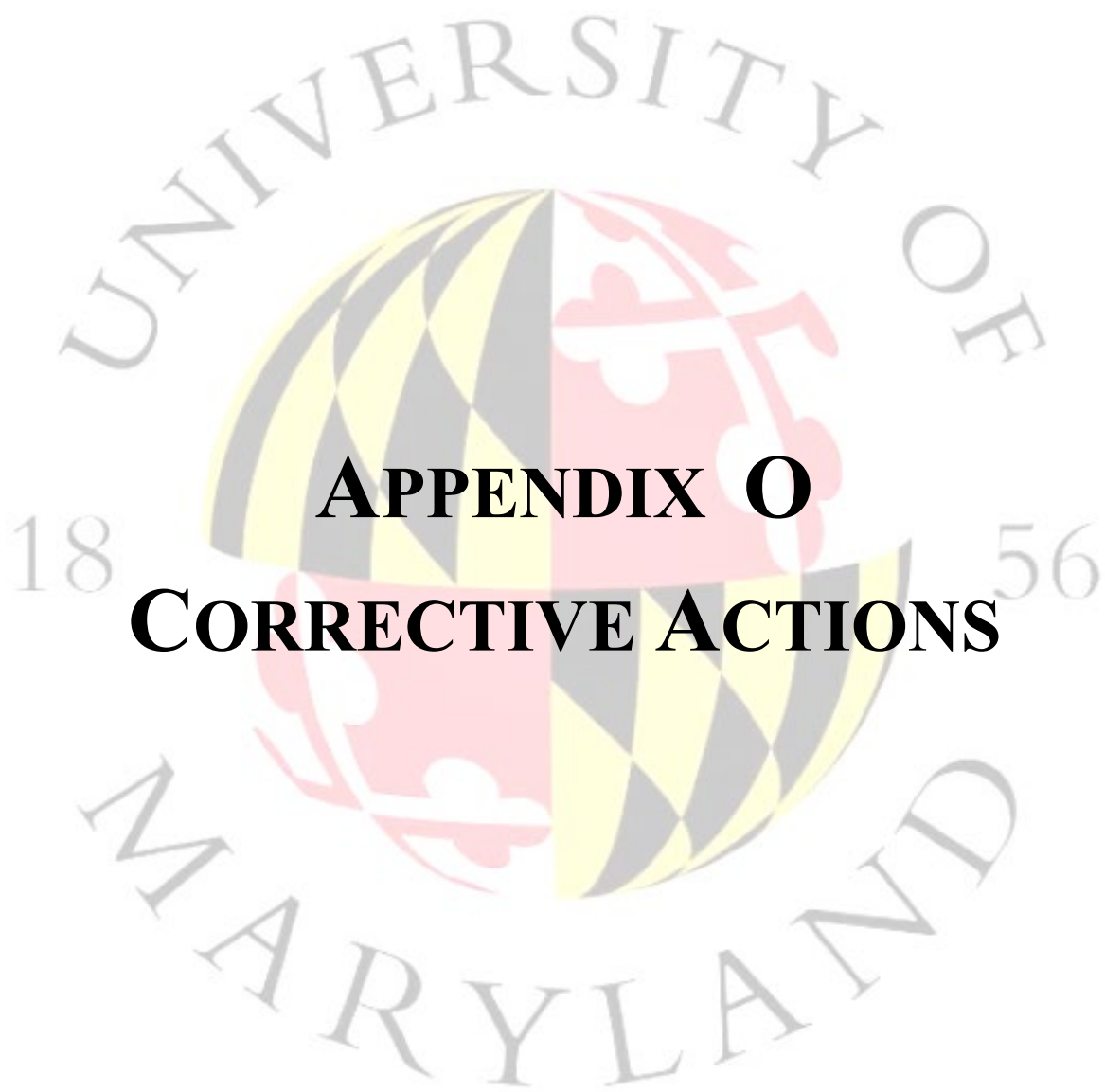
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. Name _____

B. Title _____

C. Signature _____

D. Date Signed _____



APPENDIX O
CORRECTIVE ACTIONS

Section A – Initial Report (20-SW Part IV.C.1a)(Complete this section within 24 hours of discovering the condition that triggered corrective action)

Name of Site:		20-SW Tracking No. (on NOI)		Today's Date	
Date Problem First Discovered		Time Problem First Discovered			
Name and Contact Information of Individual Completing this Form					

What site conditions triggered the requirement to conduct corrective action (*check the box that applies*):

- Unauthorized release or discharge (Part I.E)
- A discharge violates a numeric effluent limit (Part III.B)
- Stormwater control measures not stringent enough for discharge to meet applicable water quality standards (Part III.B)
- MDE requires corrective action as a result of permit violations found during an MDE inspection (Part IV.A)
- During Routine Facility Inspection, Comprehensive Site Evaluation, or Quarterly Visual Assessment you find that your stormwater control measures are not being properly operated or maintained (Part V.A)
- Construction or a change in design, operation or maintenance at your facility significantly changes the nature of pollutants discharged in stormwater from your facility, or significantly increases quantity of pollutants discharged.(Part IV.B)
- The average of 4 quarterly sampling results exceeds an applicable benchmark. (Part V.B).

Provide a description of the problem (Elaborate on back in space provided if necessary):**Section B – Corrective Action Progress (20-SW Part IV.C.2)**(Complete this section no later than 14 calendar days after discovering the condition that triggered corrective action)**Section B.1 – Why the Problem Occurred**

Cause(s) of Problem (Elaborate on next page if necessary)	How This Was Determined and the Date You Determined the Cause
1.	1.

Section B.2 – Stormwater Control Modifications to be Implemented to Correct the Problem

List of Stormwater Control Modification(s) Needed to Correct Problem (Elaborate on next page if needed)	Date of Completion	SWPPP Update Necessary?	Notes
1.		<input type="checkbox"/> Yes <input type="checkbox"/> No If yes, provide date SWPPP modified:	

Section C – Certification and Signature (20-SW Part II.C.1)

Section C.1 – Certification and Signature by Report Preparer

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

Signature of Report Preparer _____

Date: ---_____

Printed Name, Title, and Affiliation: _____

Section C.2 – Certification and Signature by Permittee

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

Signature of Permittee : _____

Date: _____

Printed Name, Title and Affiliation: _____