

## **Fact Sheet**

### **General Permit for Discharges from Mineral Mines, Quarries, Borrow Pits, and Concrete and Asphalt Plants**

State Discharge Permit No. 22-MM  
NPDES Permit No. MDG49

**TENTATIVE DETERMINATION**

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## 1. BACKGROUND

The Clean Water Act (CWA) was originally enacted as the Water Pollution Control Act of 1948 (P.L. 80-845), and amended in 1972 by the Federal Water Pollution Control Act (P.L. 92-500), which established the National Pollutant Discharge Elimination System (NPDES) in Section 402 of the Act.

The 1972 amendments enumerated a set of national goals “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters,” which among others included attainment of “water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water” (33 U.S.C. § 1251).

The law became known as the “Clean Water Act” (P.L. 95-217) under amendments to the Act in 1977. The 1977 amendments made it unlawful to discharge any pollutant from a point source into navigable waters without a permit; and gave EPA authority to regulate such discharges by setting limits on the amount of pollutants that can be discharged into a body of water from a permitted source.

The Water Quality Act of 1987 (P.L. 1004) further amended § 402 of the CWA directing EPA to develop a phased approach for regulation of stormwater discharges under the NPDES program. EPA published its final regulation on the first phase of the program on November 16, 1990, establishing permit application requirements for “stormwater discharges associated with industrial activity” (55 Fed. Reg. 47990), broadly defining the term to cover a wide variety of facilities (See 40 CFR §122.26(b)(14)).

Under §402(b) of the CWA; 40 CFR Part 123, EPA may grant authority (in whole or in part) to individual states to administer the federal NPDES program in that state. The State of Maryland is so authorized, and the Code of Maryland Regulations (COMAR) Title 26, Subtitle 08, Chapter 04 requires all discharges of waste or wastewater to surface waters to be authorized under a State discharge permit or NPDES permit . Authorized states are prohibited from adopting standards that are less stringent than those established under the Federal NPDES permit program but may adopt standards that are more stringent if allowed under state law. The Federal NPDES program under the CWA does not apply to groundwater discharges, therefore discharges to groundwater are regulated under the State discharge permit pursuant to COMAR 26.08.04.01.B.(1).

Operations covered by this permit are primarily addressed in two sections of the federal regulations, at 40 CFR Part 436 which establishes effluent limitation requirements for discharges from mine dewatering and stormwater associated with mineral mining and processing activities, and at 40 CFR §122.26, which identifies stormwater discharges associated with industrial activity (other than stormwater regulated in 40 CFR §436) as subject to state NPDES permitting requirements. Maryland regulations (COMAR 26.08.03) prohibit the discharge of any wastes or wastewaters, regardless of volume, unless authorized by a discharge permit.

In addition to NPDES regulations, surface mines are subject to COMAR 26.21.01, in accordance with which an operator must obtain a permit from the Maryland Department of the Environment (MDE or Department) Mining Program to conduct surface mining for sand, gravel, clay, limestone, granite, shale, and dimension stone. Additionally, the surface mine operator must reclaim and restore the mined land. Specifically relevant to this permit, requirements for grading and sediment control are outlined by COMAR 26.21.01.10, which states:

*“A. The permittee shall minimize the removal of vegetation, topsoil, and overburden before surface mining. B. The permittee shall construct and maintain erosion and sediment control devices in accordance with the grading and sediment control plan approved by the local soil conservation district. C. The permittee shall confine mining*

*activity to the maximum area of disturbance at any one time as described in the permit.*

*D. The permittee shall maintain a valid sediment and erosion control approval, including the necessary renewal by the approving authority, for the life of the permit.”*

This permit replaces General Permit Number 15-MM that became effective for a five-year term on May 1, 2017, and expired April 30, 2022; however, the 15-MM general permit is administratively continued for facilities covered under that permit at the time it expired. Currently, in 2022 over 310 facilities are holding 15-MM permits in the State.

### 1.1 Who is Covered Under the General Permit

Federal regulations at 40 CFR §122.26 require that certain industrial operations obtain NPDES permits for stormwater. The 22-MM General Permit provides stormwater coverage for a subset of these activities, which the Department has grouped together in this permit due largely to their direct relationship to one another. Many of the characteristics typically associated with discharges from these facilities are similar, such as sediment from material storage and pH variances from activities that treat process water. Such similarities form the basis for grouping these activities together in the General Permit.

The activities covered are broken into two major groups: plants and mines. Portable batch concrete plants are temporary in nature, constructed and operated during a major construction activity. These plants make up approximately 50% of the facilities which are covered under the 15-MM permit. The more permanent asphalt and concrete plants are located next to or within the mining activity. Approximately 10% of mineral mines are directly associated with a concrete or asphalt plant. Most of the mining activity covered by the 15-MM permit were SIC 1442 “Construction Sand and Gravel”, SIC 1422 “Crushed and Broken Limestone” as well as other clay, broken or crushed stone categories. Mining makes up the other 50% of the sites permitted under the 15-MM permit.

The 15-MM clarified that facilities involved in re-use of concrete and asphalt are eligible, and these are covered under Subsector L4 within Sector L: Landfills and Land Application Sites under SIC 4953 (Refuse Systems). This SIC designation is consistent with Northeast Recycling Council documentation. The 15-MM General Permit provided coverage for hydrodemolition, where the activity is being performed for bridgework or where there is a risk for discharge to surface waters. Wastewater from hydrodemolition shares common pollutants (high pH and sediment) and requires similar controls to the other activities regulated by the permit. Although the state does get requests for discharges from these projects, they also have options to send this to sanitary sewer. This option through the MM hasn’t been widely used but is available for operators in the future.

To facilitate grouping and clarify which facilities are covered, Maryland regulations (COMAR 26.08.04.09 and 26.08.01.01) specify those operators and types of discharges that may be provided for coverage for discharges under the “MM” General Permit. Below is an excerpt from Part J of COMAR 26.08.04.09:

- J. General Discharge Permit for Mineral Mines, Quarries, Borrow Pits, and Concrete and Asphalt Plants.
- (2) Eligible Discharges. This permit covers all new and existing dischargers of:
- (a) Infiltrated ground water pumped from mines to surface waters;
  - (b) Wastewater from material processing to surface or ground waters;
  - (c) Stormwater runoff to surface waters from mine sites (facilities classified within Standard Industrial Classifications 10 and 14), concrete plants (facilities classified within Standard Industrial



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Classification 32), and asphalt plants (facilities classified within Standard Industrial Classification 29);

- (d) Stormwater runoff to surface waters from industrial activities co-located or appurtenant to a permitted activity specified in §J(2)(c) of this regulation;
- (e) Wastewater from washing mixer trucks and concrete mixing equipment to surface or ground waters;
- (f) Miscellaneous wastewater from spillage at ready-mix plants to surface or ground waters; and
- (g) Wastewater from hydrodemolition to ground waters.

In the regulation, the Department identifies facilities for coverage under the General Permit based on the Standard Industrial Classification codes (SIC codes), similar to those referenced in 40 CFR §122.26(b)(14)(iii). The SIC codes correlate to specific industrial sectors listed below and in Appendix A of the permit, modeled on EPA’s Multi-Sector General Permit (MSGP) and the State’s “SW” permit, for which the 22-MM permit specifies certain discharge requirements. The 22-MM does modify the table 1, to include Sectors F, L, and P, which in the 15-MM were found in the “**Additional Covered**” table 2. This was done to reduce any confusion whether sites separate from a mine or plant could also get stormwater coverage under this permit. For consistence, the Department prefers that all related work with mines or plants be covered under the MM permit rather than a mixture of SW and MM, if at all possible.

**Table 1 – Covered Primary or Co-Located Industrial Activities**

SIC Code or Activity Code	Primary or Co-Located Industrial Activity Represented in the General Permit
	<b>SECTOR D: ASPHALT PAVING AND ROOFING MATERIALS AND LUBRICANTS</b>
2951, 2952	Subsector D1: Asphalt Paving and Roofing Materials
2992, 2999	Miscellaneous Products of Petroleum and Coal
	<b>SECTOR E: GLASS, CLAY, CEMENT, CONCRETE, AND GYPSUM PRODUCTS</b>
3241	Hydraulic Cement
3251-3259	Structural Clay Products
3261-3269	Pottery and Related Products
3271-3275	Concrete, Gypsum & Plaster Products ( including portable concrete plants)
3281	Cut Stone and Stone Products
3291-3299	Abrasive, Asbestos, and Miscellaneous Nonmetallic Mineral Products
	<b>SECTOR F: PRIMARY METALS</b>
3398, 3399	Miscellaneous Primary Metal Products
	<b>SECTOR G: METAL MINING (ORE MINING AND DRESSING)</b>
	[Reserved]
	<b>SECTOR J: MINERAL MINING AND DRESSING</b>
1411	Dimension Stone
1422-1429	Crushed and Broken Stone, Including Rip Rap
1442	Construction Sand and Gravel
1446	Industrial Sand
1455, 1459	Clay, Ceramic, and Refractory Materials
1474-1479	Chemical and Fertilizer Mineral Mining
1481	Nonmetallic Minerals Services, Except Fuels
1499	Miscellaneous Nonmetallic Minerals, Except Fuels
	<b>SECTOR L: LANDFILLS AND LAND APPLICATION SITES</b>
4953	Subsector L4: "Concrete or Asphalt Recycling" facilities that primarily receive and stockpile a mix of dirt, concrete or asphalt, and crush concrete or asphalt for re-use.
	<b>SECTOR P: LAND TRANSPORTATION AND WAREHOUSING</b>

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<b>SIC Code or Activity Code</b>	<b>Primary or Co-Located Industrial Activity Represented in the General Permit</b>
4212-4231 (except 4221-4226)	Motor Freight Transportation and Warehousing (supporting Sector D, E, J or L activities) 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 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, and transportation or conveyance of any raw material, intermediate produce, finished product, by-product; or waste product.
<b>SECTOR AD.c: HYDRODEMOLITION</b>	
HD	Operations involved in using water to remove old concrete, rock or cement referred to as hydrodemolition.
<b>SECTOR AD: NON-CLASSIFIED FACILITIES</b>	
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)and (D));or any facility discharging stormwater associated with industrial activity not described by Sectors D through AD.c above. <i>NOTE: Facilities may not elect to be covered under Sector AD. Only the Department may assign a facility to this Sector.</i>

In addition to the grouping of these primary sectors, the permit also includes co-located activities. A mining site may serve other uses such a location for a natural wood waste or composting facility. The goal of adding co-located activities is to ensure that all measures required for the protection of water quality are included in the permit (and to reduce the need for obtaining additional permits). The co-located activities which have been identified for inclusion in coverage under the 22-MM are found in the table below, which is included in Appendix A of the permit.

**Table 2 - Additional Covered Co-Located Industrial Activities**

<b>SIC Code or Activity Code</b>	<b>Additional Co-located Industrial Activities Represented in the General Permit</b>
<b>SECTOR A: TIMBER PRODUCTS</b>	
2411	Subsector A3: Log Storage Areas
2499	Subsector A4: Wood Products Not Elsewhere Classified (Natural Wood Waste)
<b>SECTOR C: CHEMICALS AND ALLIED PRODUCTS</b>	
2874 - 2875	Agricultural Chemicals (Fertilizer, Composting)

**1.2 Coverage Requirements**

Operators choosing coverage under the new 22-MM General Permit must submit a complete and accurate Notice of Intent (NOI) to be covered and certify in the NOI they meet the requisite eligibility requirements described in Part I of the permit, including the requirements to select, design, and install control measures to comply with technology and water quality-based effluent limits in Part III.B of the permit; and to develop a Stormwater Pollution Prevention Plan (SWPPP) as described in Section 2.2.4 of this document pursuant to Part III.C.

The provisions of this permit are severable and if any provision, or the application of any provision to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of the permit shall not be affected thereby, unless as a result of a remand the permit would not meet the minimum legal requirements for NPDES permits under the CWA or its implementing regulations.

## **2. PERMIT DEVELOPMENT**

During development the draft permit was reviewed by MDE's Land and Materials Administration, Mining Program, Water and Science Administration (WSA) Compliance Program, and WSA Groundwater Discharge Permits Division. The development process includes consultations with the EPA, meetings with stakeholders, and opportunity for public comment in accordance with the public participation provisions of the Clean Water Act and Administrative Procedures Act. In 2021, the Department held an informal listening session with permittees concerning the revised permit. Following publication of the tentative determination draft permit, MDE will provide an opportunity for a public hearing to answer stakeholder questions and take comments.

### **2.1. Permit Organization**

The 22-MM General Permit is divided into six parts and five appendices. The six parts of the base permit are: Applicability (Part I), Authorization (Part II), Stormwater Management Requirements including control measures, effluent limits and stormwater pollution prevention (Part III), Corrective Action (Part IV), Inspections, Monitoring, Reporting and Demonstration of Compliance (Part V), and Standard Permit Conditions (Part VI). Appendices include descriptions and sector codes for covered industrial sectors (Appendix A), a quarterly visual monitoring form (Appendix B), directions for calculating hardness in receiving water for hardness-dependent metals (Appendix C), sector-specific permit conditions (Appendix D); and definitions and acronyms (Appendix E). This method of organization is consistent and unchanged from the existing permit (15-MM), and clarifies permittee responsibilities by separating requirements into distinct parts based on applicability to ongoing activities.

### **2.2 General Terminology**

Throughout this fact sheet, the Department uses consistent terms when referring to different responsible entities. For instance, the permit holder is referred to either as the "permittee" or "operator" in this fact sheet. Typically, the term "operator" will be used when discussing those actions required prior to permit authorization, while "permittee" will be used where the fact sheet is referring to provisions that affect a covered discharger. "You" and "Your" – as used in the 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.

### **2.3. Conformance of this Permit with Applicable Court Decisions**

After EPA issued the 2015 MSGP in June 2015, several parties, collectively referred to as "petitioners," filed petitions for review of the permit which were consolidated in the United States Court of Appeals for the Second Circuit. Petitioners included Waterkeeper Alliance, Apalachicola Riverkeeper, Galveston Baykeeper, Raritan Baykeeper, Inc. d/b/a NY/NJ Baykeeper, Snake River Waterkeeper, Ecological Rights Foundation, Our Children's Earth Foundation, Puget Soundkeeper Alliance, Lake Pend Oreille Waterkeeper, and Conservation

Law Foundation. The Federal Water Quality Coalition and Federal Storm Water Association intervened in the case as respondents on August 4, 2015. Before any briefs were filed in the MSGP Litigation, the parties entered into settlement discussions under the auspices of the Second Circuit's Civil Appeals Mediation Program. A Settlement Agreement resulted from these discussions, which all parties signed on August 16, 2016. The Settlement Agreement did not affect the 2015 MSGP, but stipulated several terms that EPA agreed to address in the proposed 2020 MSGP (the Settlement Agreement can be found in the docket for the 2021 MSGP (Docket ID# EPA-HQ-OW-2019-0372)). EPA understands that the terms of the Settlement Agreement, in particular the proposed "Additional Implementation Measures" (AIM) benchmark exceedance requirements, will increase regulatory certainty for those who must comply with the permit, as intervenors expressed, while resolving petitioners' concerns that the previous corrective actions for benchmark exceedances under the 2015 MSGP were not sufficient to ensure that the permit controlled discharges as sufficient to protect water quality, as is required by the CWA. Industrial stormwater discharges are explicitly required to meet all provisions of CWA §301, including applicable water quality standards (CWA §402(p)(3)(A)). For this reason, Maryland has reviewed and updated the permit Corrective Actions and added similar "AIM" measures which are discussed later in this Fact Sheet. EPA also agreed to fund a study conducted by the National Academies of Sciences, Engineering, and Medicine's (NAS) National Research Council (NRC). In the Settlement Agreement, EPA agreed that, when drafting the proposed MSGP, it would consider all recommendations suggested in the completed NRC Study. One of the other resulting changes that impacts this permit is the evaluation the benchmarks. The impacts for this permit are discussed in the benchmarks for aluminum and iron rationale section of this fact sheet.

In another case, petitioners challenged EPA's issuance of the construction stormwater general permit. The Court found that neither the SWPPP nor the NOIs are permits or permit applications because they do not amount to limits, and further that the permit requirement to develop a SWPPP is not an effluent limit (*Texas Independent Producers and Royalty Owners Assoc., et. al. v. EPA*, 410 F.3d 964 at 978 (7th Cir. 2005)).

In response to these decisions, the Department continues to follow EPA's lead by explicitly establishing effluent limitations in Part III.B and Appendix D of 22-MM permit, and separately, in Part III.C, clarified that the requirement to develop a SWPPP is an information gathering tool for dischargers, to document, among other things, how control measures will be selected, designed, installed, and implemented to comply with the permit's effluent limitations.

Like the MSGP, the 22-MM is consistent with the decision in *Texas Independent Producers and Royalty Owners Assoc., et. al. v. EPA*, 410 F.3d 964 (7th Cir. 2005), where petitioners challenged EPA's issuance of the construction general permit ("CGP") that covers stormwater discharges. In this case, the only one to specifically address SWPPPs, the court found that neither the SWPPP nor the NOIs are permits or permit applications because they do not amount to limits. 410 F.3d at 978. The court recognized that the CWA's public participation requirements are applicable only to "permits" and "permit applications," not NOIs and SWPPPs. *Id.* at 978. Further, the court found that the permit requirement to develop a SWPPP is not an effluent limit. The requirement to prepare a SWPPP is not an effluent limitation, instead it documents what practices the discharger is implementing to meet the effluent limitations in the permit. Likewise, the SWPPP itself does not constitute an effluent limitation because it does not restrict quantities, rates, and concentrations of constituents which are discharged (CWA § 502(11)). Instead, the requirement to develop a SWPPP is a permit "term or condition" authorized under §§ 402(a)(2) and 308 of the Act. Section 402(a)(2) states, "[t]he Administrator shall prescribe conditions for [NPDES] permits to assure compliance with the requirements of paragraph (1) of this subsection, including conditions on data and information collection, reporting, and such

other requirements as he [or she] deems appropriate.” SWPPP requirements set forth in the 22-MM permit are considered terms or conditions under the CWA because the discharger is documenting how they intend to comply with effluent limitations (and inspection and evaluation requirements) contained elsewhere in the permit. Thus, the requirement to develop a SWPPP and keep it updated is no different than information collection conditions authorized by §402(a)(2) of the CWA in other permits.

## **2.4 Stormwater Pollution Prevention Plan Requirements (SWPPP)**

Facilities seeking coverage under the 22-MM General Permit must prepare a SWPPP in accordance with provisions set forth in Part III.C of the permit, prior to submitting a Notice of Intent (NOI) for coverage.<sup>1</sup> The SWPPP, together with additional documentation required under Part III.C.8 is intended to document the selection, design, installation, and implementation of control measures (including inspection, maintenance, monitoring, and corrective action) used to comply with narrative effluent limits set forth in Parts III.A and B of the permit.

In general, Part III.C requires the SWPPP to include information for the following: (1) stormwater pollution prevention team, (2) site description, (3) summary of potential pollutant sources, (4) description of control measures, (5) schedules and procedures, (6) signature of an authorized signatory (defined in Part II.C of the permit) and (7) documentation regarding SARA Title III, Section 313 (for applicable facilities). Additionally, the SWPPP must be kept up-to-date, and modified whenever necessary in accordance with Part III.C.8 to document any conditions triggering corrective action under Part IV.A, or any changes in control measures found necessary to meet the effluent limitations following any occurrence identified in Part IV.B of the permit. The permittee must retain a copy of the current SWPPP at the facility which must be made available to the Department at the time of an onsite inspection or upon request, in accordance with Part III.C.8 of the permit.

## **2.5 Public Involvement**

The Department makes the 22-MM permit and this Fact Sheet available for public comment. Interested persons can also find pending NOI applications or obtain copies of the registration letter, application, for a permitted facility on the Department’s website at <https://mdewwp.page.link/WWPPortal> or by submitting a request to the Department.

## **2.6 Development of Effluent Limitations and Requirements**

The CWA defines “effluent limitation” as any restriction established by a State or the Administrator on quantities, rates, and concentrations of constituents which are discharged from point sources into navigable waters (CWA §502(11)). In setting appropriate permit limits the Department must take into consideration applicable technology-based and water quality-based standards. Technology-based limitations ensure that treatment methods are operated in an efficient and effective manner. Water quality-based limitations take into account statutory criteria which protect receiving streams for various uses, as well as addressing restoration of waters which are already impaired.

The Department expects the technology-based effluent limitations and other terms and conditions of the permit will be sufficient to protect water quality. However, if at any time the permittee or the Department determines that discharges cause or contribute to an exceedance of applicable water quality standards, the permittee must

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<sup>1</sup> A SWPPP prepared for coverage under a previous NPDES permit, must be reviewed and updated to implement all provisions of this permit prior to submitting the NOI.

take corrective actions to the satisfaction of the Department (Part IV of the permit). If the concentration of pollutant is sufficient to exceed an instream water quality standard (i.e. “contributes to a violation of a water quality standard”) this would also be a violation of the permit. Furthermore, the Department may impose additional water quality-based monitoring, controls, or limitations on a site-specific basis, or require the discharger to obtain coverage under an individual permit, if discharges are not adequately controlled to meet applicable water quality standards (Part III.B.2.a of the permit).

EPA’s approach requiring water quality-based effluent limits (WQBELs) was followed to better ensure that discharges are controlled as necessary to meet water quality standards. This permit contains specific WQBEL requirements applicable to impaired waters and anti-degradation policies. The Department retains authority to assess each operator’s discharge to determine if more stringent requirements are necessary to achieve water quality standards, including the option of requiring an operator to obtain coverage under an individual permit. The following discussion of Discharges to Impaired Waters and anti-degradation is our breakdown of the permit’s new WQBEL requirements.

**2.6.1 Technology Based Effluent Limitations and Requirements**

Technology standards are established on the performance that can be reasonably expected from treatment and control technologies. Effluent Limitation Guidelines (ELGs) are a type of technology-based standard that establish pollutant limits for wastewater discharges from specific industrial categories. ELGs for the Mineral Mining and Processing Point Source Category (40 CFR Part 436), which limit wastewater discharges from mine drainage, mineral processing operations and stormwater runoff, form the primary regulatory basis for the limits applied in the 22-MM permit.

In addition, Table 4 identifies stormwater-specific limits are incorporated in the permit to coincide with effluent limitation guidelines which are mandatory for certain facilities covered by the permit as authorized under §402(a)(1) of the Clean Water Act:

**Table 3 - Stormwater-Specific Effluent Limitations Guidelines**

Regulated Discharge	Title 40 CFR	22-MM Sector
Discharges resulting from spray down or intentional wetting of logs at wet deck storage areas	Part 429, Subpart I	A
Runoff from asphalt emulsion facilities	Part 443, Subpart A	D
Runoff from material storage piles at cement manufacturing facilities	Part 411, Subpart C	E
Mine dewatering discharges at crushed stone, construction sand and gravel, or industrial sand mining facilities	Part 436, Subparts B, C, and D	J

Over several iterations of the General Permit, the Department developed additional limitations for dewatering specific to certain process waters, which include controls for sediment, temperature, and oil & grease. Part III.B.1.b of the 22-MM permit outlines narrative technology-based requirements which are applicable to all permittees. Appendix D contains additional narrative requirements, as well as numerical technology-based effluent limitations, applicable to each sector specifically. Detailed rationale for the benchmarks and numeric

limits are discussed later in this factsheet. Those narrative requirements are now consistent with the MSGP to recognize that they are the Best Available Technology to address specific activities in the permit.

### **2.6.2 Water Quality-Based Effluent Limitations**

Narrative requirements based on water quality are found in 22-MM Part III.B.2 and numerical limits are implemented on a sector-specific basis in Appendix D of the permit. Further discussion of how these parameters are limited in the permit is found later in this Fact Sheet. The Department also reserves the right to require additional actions including obtaining an individual permit if it is determined that discharges from a facility cause an exceedance of the water quality standards outlined in COMAR 26.08.02.03.

### **2.6.3 Impaired Waters Addressed by the Permit**

The permit contains requirements for new and existing discharges to impaired waters with or without EPA approved or established TMDLs. New dischargers are only eligible for discharge authorization if they demonstrate (and document) that there is either no exposure of stormwater to the pollutant for which the water is impaired, or the impairment pollutant is not present at the facility, or that the discharge is not expected to cause or contribute to a water quality standards exceedance. In the latter case, the operator must provide data to the Department showing that any discharge of the pollutant will meet in-stream water quality criteria at the point of discharge or that there are sufficient remaining waste load allocations (WLAs) in a TMDL to allow the discharge, and that the existing dischargers to the waterbody are subject to compliance schedules to bring them into attainment of the water quality standards consistent with 40 CFR §122.4(i) requirements.

For existing discharges to impaired waters with State approved or established TMDLs, the Department will determine if more stringent requirements are necessary to ensure that the permittee is discharging consistent with the TMDL and applicable WLA. The discharge registration may be authorized if it is consistent with the allocations provided under a final approved total maximum daily load (TMDL) for the receiving waters. If the water is impaired but there is no completed TMDL, the discharger is required to control its discharge as necessary to meet applicable water quality standards and may be required to conduct routine monitoring for the pollutants for which the waterbody is impaired. Under Section 303(d) of the Clean Water Act states are required to develop a publicly available list of impaired waters (known as the “303(d) list”) for which technology-based regulations and other pollutant controls are not able to achieve water quality standards for that water body’s designated use, and to establish Total Maximum Daily Loads (TMDLs) (the maximum amount of a pollutant the waters can assimilate and still meet water quality standards) for such waters.

#### **2.6.3.1 Maryland’s Phase III Watershed Implementation Plan for the Chesapeake Bay TMDL**

In 1996 the U.S. Environmental Protection Agency (EPA) listed certain sections of the Virginia portion of the Chesapeake Bay as “impaired” by low levels of dissolved oxygen, which were insufficient to adequately support aquatic life. Recognizing the low dissolved oxygen levels that existed in portions of the Upper Bay, Maryland listed all of the upper Chesapeake Bay tidal water segments as not meeting standards for nutrients (phosphorus and nitrogen) and sediments.

In 2000, the Bay watershed partners signed “Chesapeake 2000,” an agreement among Maryland and other Bay states, the U.S. EPA, and the Chesapeake Bay Commission to clearly identify actions needed to achieve water quality standards in the Chesapeake Bay. With the Agreement came the understanding that if voluntary actions were not successful in reaching water quality goals, EPA would complete a TMDL by the end of 2010.

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Although much has been accomplished, progress has not been enough to reach the pollution reduction goals set out in the Agreement. Since that time EPA has led the process to develop TMDLs for the Chesapeake Bay.

In December 2010 EPA issued a final TMDL for sediment and nutrients in the Chesapeake Bay.<sup>2</sup> Upon publication, each state in the Bay watershed was required to develop a Watershed Implementation Plan (WIP) for meeting the pollution load reductions required by the TMDL. This plan had to provide what EPA called “reasonable assurance” or a demonstration that achieving the pollution load reductions required by the TMDL can reasonably be met. In other words, that current or planned resources and commitments to reduce pollution are expected to be sufficient meet the required pollution load reductions. Implementation is discussed later, in the section of the factsheet regarding changes to the permit. Maryland's Phase II WIP outlines Final Strategy Loads for a variety of sources, one of which is stormwater from extractive sources, defined as contributions from mining operations (SIC Codes 10xx and 14xx). The Final Strategy Loads for stormwater from extractive sources of 0.083 million pounds per year of total nitrogen, 0.023 million pounds per year of total phosphorus, and 22.311 million pounds per year of sediment were designed to be achievable through implementation of erosion and sediment controls. The Phase III WIP does not include any additional strategies or reductions for extractive lands/mines.

This permit addresses the goals of the WIP by requiring the use of the Best Available Technology in erosion and sediment controls as required by local jurisdictions. Examples of the requirements include:

Inclusion of requirements to implement specific controls. The 22-MM requires very specific controls to be implemented. *“Erosion and Sediment Controls.* You must minimize erosion by stabilizing exposed soils at your facility in order to minimize pollutant discharges and placing flow velocity dissipation devices at discharge locations to minimize channel and streambank erosion and scour in the immediate vicinity of discharge points. These requirements include timeframes for the temporary and permanent stabilization of all inactive, disturbed areas; specifically three (3) calendar days for perimeter sediment controls and slopes steeper than 3:1 and seven (7) calendar days for all other areas not under active grading. If the discharge is not by a discreet conveyance, such as a pipe, install a trap, weir, or any other appropriate alteration that will allow you to retrieve effluent samples. You must also use structural and non-structural control measures to minimize the discharge of sediment. In selecting, designing, installing, and implementing appropriate control measures, you are encouraged to consult with the Department’s Soil Erosion & Sediment Control resources”

In addition to required controls, the 22-MM continues to require implementation of visual monitoring and benchmarks, to effectively verify that the controls are adequate to minimize sediment during wet weather events.

Regarding urban stormwater, we have not implemented restoration of impervious surfaces in this permit, as we did with the 20-SW. Our rationale for not focusing on impervious surfaces at mines, concrete and asphalt plants includes the following reasons.

- Most concrete or asphalt plants are less than 5 acres; therefore, any required restoration would only be applicable to a small percentage of sites covered by this permit.
- Extractive industries may produce higher nutrients during exploration, but deeper soil profiles are not considered rich sources of nitrogen. Our focus on sediment and erosion controls addresses this phase in a similar way to how our construction permit regulates wet weather discharges during other earth disturbing activities.

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<sup>2</sup> *Chesapeake Bay Total Maximum Daily Load for Sediments, Nitrogen and Phosphorus* (December, 2010, 76 Fed. Reg. 549).



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- Literature review supports a focus on pH, temperature, sediments and metals from these activities. Each of these pollutants are currently addressed through the permit through other control measures.

Based on these reasons, the 22-MM is consistent with the Chesapeake Bay TMDL and Maryland's strategies in the WIPs.

**2.6.3.2 Total Maximum Daily Loads for Sediment**

Process wastewater and stormwater from facilities covered under this permit have reasonable potential to contain sediment. In addition to the Bay TMDL for sediment, there are several localized impairments which have been evaluated by the Department during this permit renewal. The table below identifies completed TMDLs for sediment currently in effect in Maryland.

**Table 4 - TMDLs in Maryland for Sediment**

Waterbody	TMDL	Approved
Adkins Pond	Total Maximum Daily Loads of Phosphorus and Sediments to Adkins Pond in the Pocomoke River Watershed in Wicomico County, Maryland	March 27, 2002
Anacostia River (Tidal)	Total Maximum Daily Loads of Sediment/Total Suspended Solids for the Anacostia River Basin, Montgomery and Prince George's Counties, Maryland and The District of Columbia	July 25, 2012
Anacostia River (Non-Tidal)	Total Maximum Daily Load of Sediment in the Antietam Creek Watershed, Washington County, Maryland	July 25, 2012
Antietam Creek	Total Maximum Daily Load of Sediment in the Antietam Creek Watershed, Washington County, Maryland	Dec. 18, 2008
Big Millpond	Total Maximum Daily Loads of Phosphorus and Sediment to Big Millpond, Worcester County, Maryland	April 4, 2002
Bynum Run	Total Maximum Daily Load of Sediment in the Bynum Run Watershed, Harford County, Maryland	Sept. 30, 2011
Cabin John Creek	Total Maximum Daily Load of Sediment in the Cabin John Creek Watershed, Montgomery County, Maryland	Sept. 30, 2011
Catoctin Creek	Total Maximum Daily Load of Sediment in the Catoctin Creek Watershed, Frederick County, Maryland	July 31, 2009
Centennial Lake	Total Maximum Daily Loads of Phosphorus and Sediments to Centennial Lake, Howard County, Maryland	April 24, 2002
Chesapeake Bay	Chesapeake Bay Total Maximum Daily Load for Sediments, Nitrogen and Phosphorus	Dec. 29, 2010
Clopper Lake	Total Maximum Daily Loads of Phosphorus and Sediments to Clopper Lake, Montgomery County, Maryland	April 4, 2002
Conococheague	Total Maximum Daily Load of Sediment in the Conococheague Creek Watershed, Washington County, Maryland	Nov. 24, 2008
Evitts Creek	Total Maximum Daily Load of Sediment in the Evitts Creek Watershed, Allegany County, Maryland	Jan. 16, 2007
Georges Creek	Total Maximum Daily Load of Sediment in the Georges Creek Watershed, Garrett and Allegany County, Maryland	Dec. 27, 2006
Gwynn's Falls	Total Maximum Daily Load of Sediment in the Gwynn's Falls Watershed, Baltimore City and Baltimore County, Maryland	March 10, 2010
Johnson Pond	Total Maximum Daily Loads of Phosphorus and Sediments to Johnson Pond in the Upper Wicomico Watershed, Wicomico County, MD	Feb. 13, 2001
Jones Falls	Total Maximum Daily Load of Sediment in the Jones Falls Watershed, Baltimore City and Baltimore County, Maryland	Sept. 29, 2011

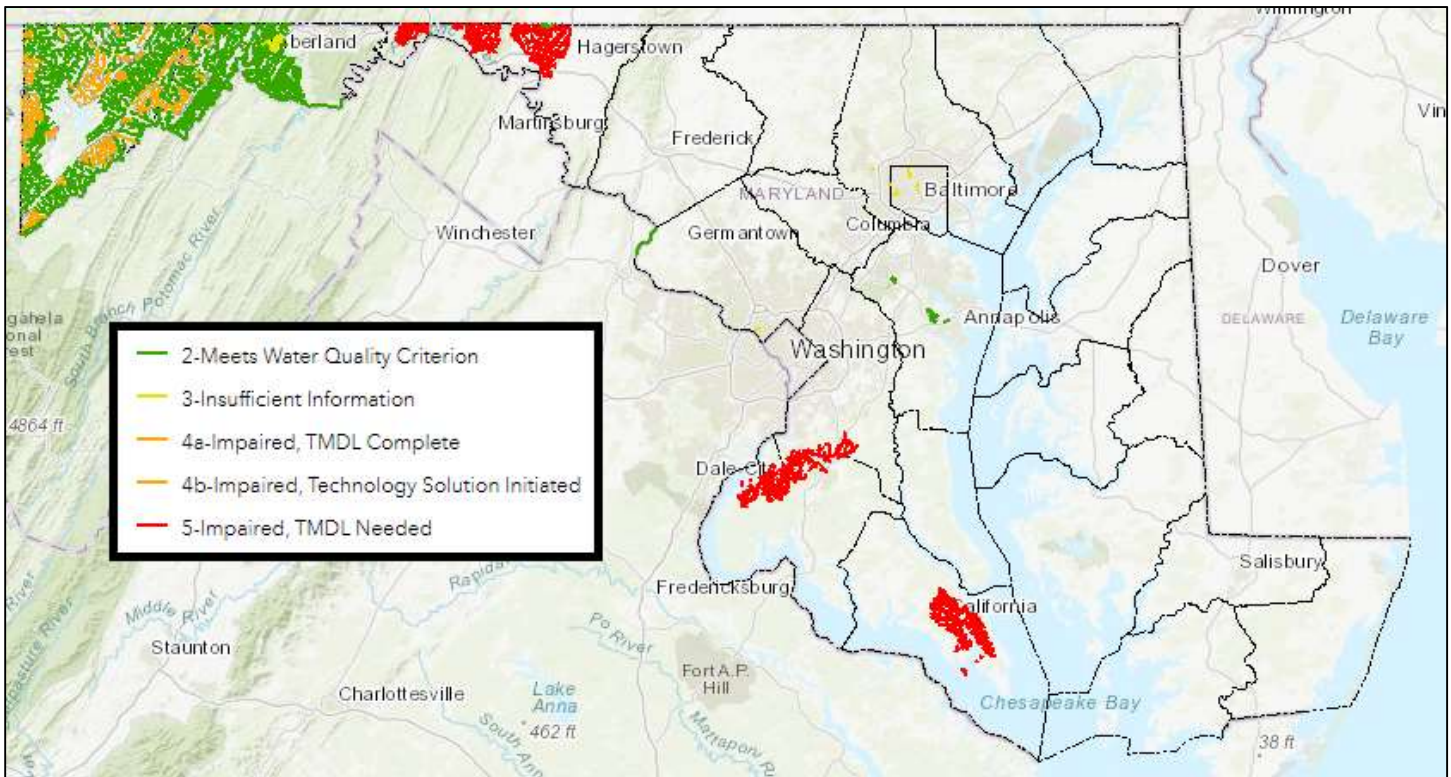
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Lake Linganore	of Phosphorus and Sediments to Lake Linganore in the Lower Monocacy Watershed in Frederick County, Maryland	May 13, 2003
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The permit does reserve the ability to assign specific WLA to sites that may be called out in a local TMDL. The focus of this permit addresses sediment TMDLs by limiting process water flows for TSS, establishing best management practice (BMP) requirements for stormwater, and implementing benchmark requirements discussed above for applicable sectors.

**2.6.3.3 pH Impairments**

Process waters generated by mineral mines, quarries, borrow pits, and concrete and asphalt plants also have potential to affect pH. In Maryland, pH impairments are primarily caused by extraction of coal in the western portion of the State, and not from the activities covered by this permit. In order to address pH impairments, TMDLs are often developed to establish load allocations and waste load allocations for surrogates which contribute to pH excursions (i.e. iron, sulfates, nitrates). The following map (Figure 1) illustrates waterbodies/watersheds which are currently listed as impaired for pH.



**Figure 1 - 2022 pH Assessment Map**

In western Maryland, the TMDL has been completed, as illustrated in the following map (Figure 2). The other watersheds, TMDLs still must be determined, or in cases where a reassessment determined that the waters now meet water quality, the criteria has been updated for that case.

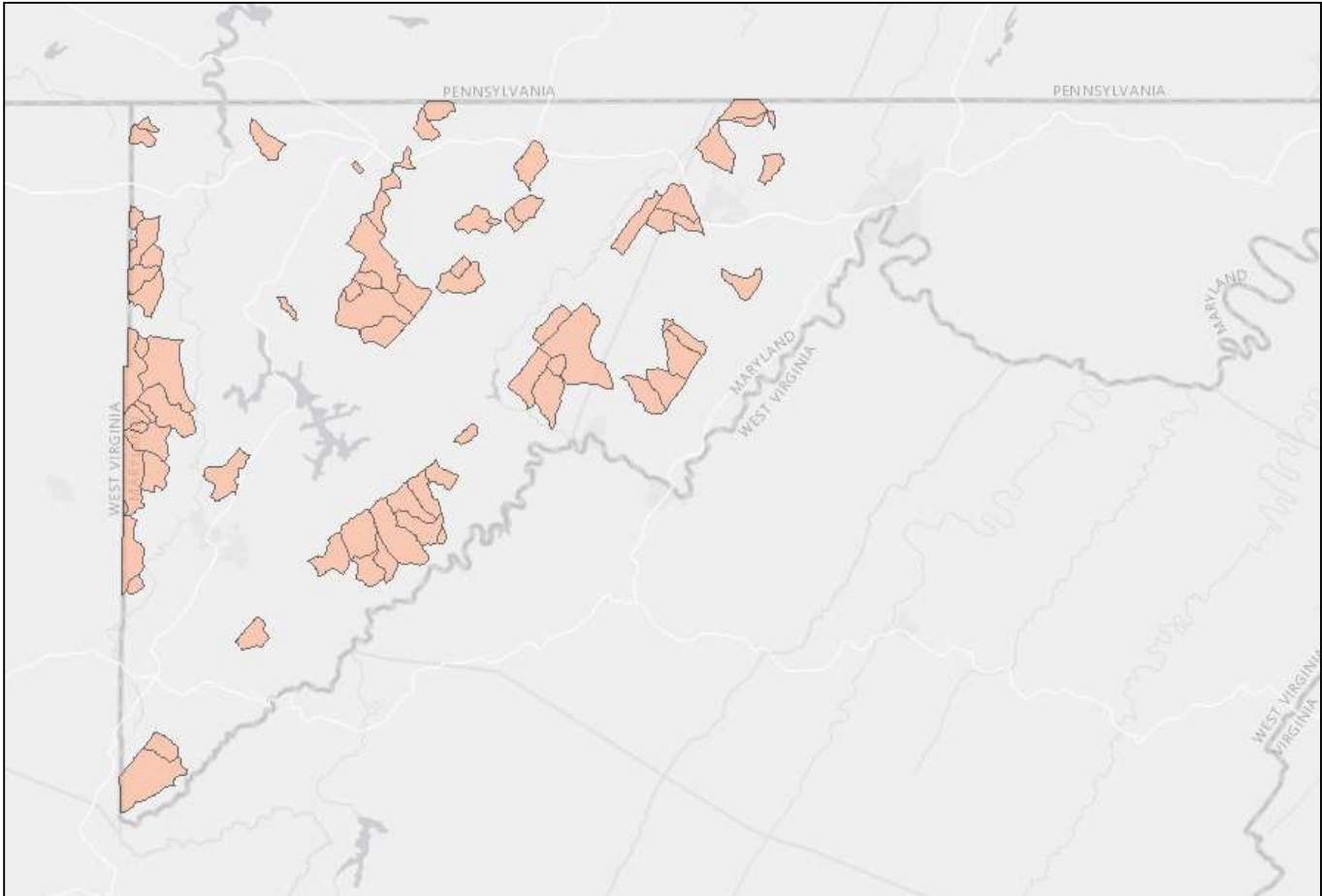


Figure 2 - Established TMDLs with pH surrogates.

#### 2.6.4. Anti-degradation and Tier II Requirements

Tier II waters are water bodies where existing water quality exceeds conditions necessary to meet minimum water quality standards under §101(a)(2) of the Clean Water Act. The Department's anti-degradation policy contained in COMAR 26.08.02.04 protects Tier II waters from degradation to minimum water quality standards for that water body's designated use. The Department has clarified its expectation of operators to meet anti-degradation requirements as part of the permit authorization process as well as to comply with these provisions after authorization is received. If an NOI indicates that an operator is seeking coverage for a new discharge to a Tier II waterbody, the Department will determine if additional requirements are necessary to be consistent with the applicable anti-degradation requirements, or if alternatively, an individual permit application is necessary. Part III.B.2.c of the permit addresses these anti-degradation requirements for facilities discharging to Tier II waters. The following map provides the existing listings of Tier II watersheds in the state.

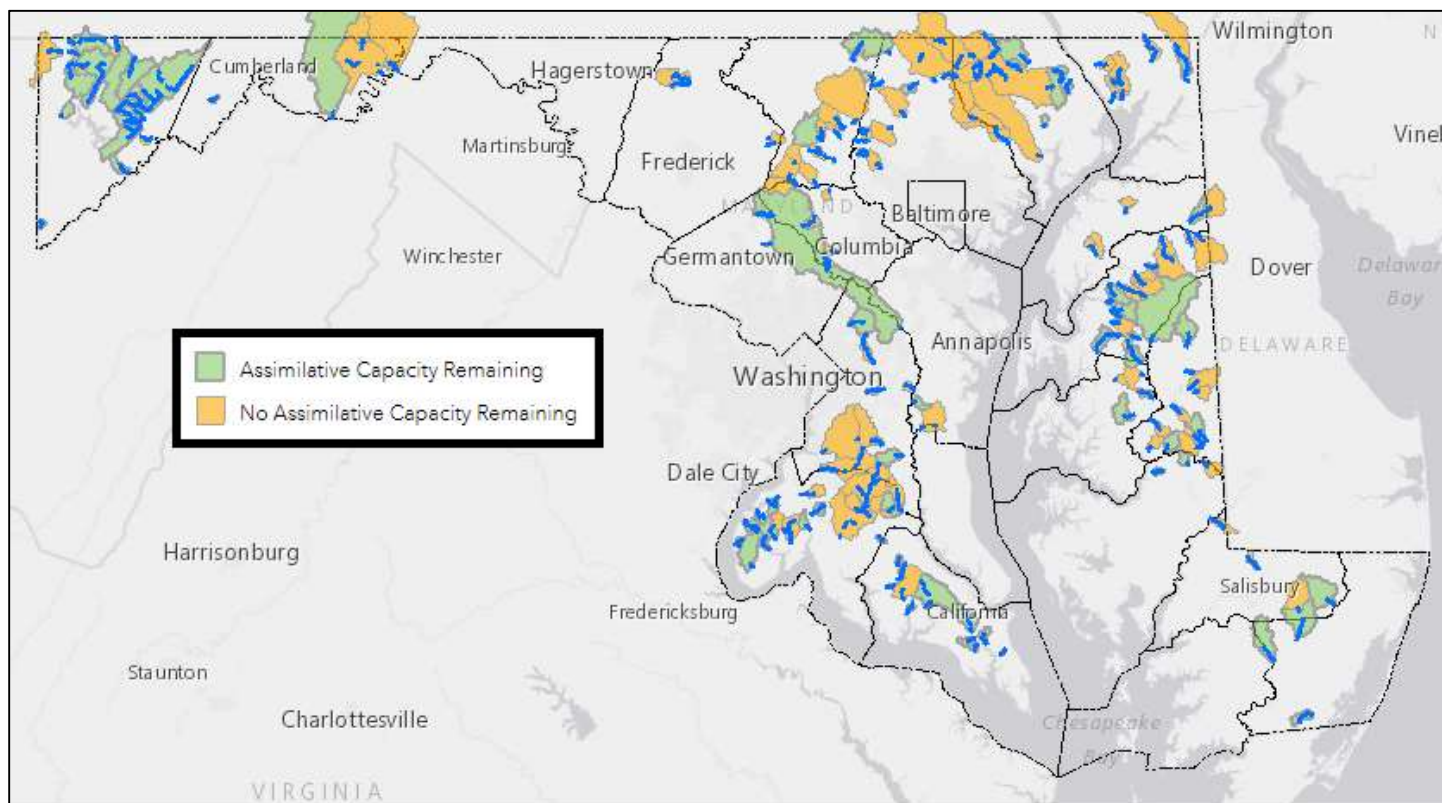


Figure 3 - Tier II Watershed in Maryland (2022 Updated Map)

### 2.6.5 Rationale for Benchmarks and Effluent Limits

Benchmark and the effluent limits rationale are described in this section. Note that in a prior section the Stormwater-Specific Effluent Limitations Guidelines (ELGs) were listed. The ELGs are based on required technology used for pollution control and are required for certain discharges, unless there is a more restrictive water quality basis for a limit. This evaluation of technology vs water-quality based criteria is part of the rationale described in this section.

#### 2.6.5.1 Benchmark Monitoring (vs Numeric Limits)

The Department continues to institute benchmark monitoring as part of the alignment with EPA's MSGP. Established benchmarks are not numerical effluent limitations, rather they are values for parameters EPA has determined are indicators of the effectiveness of stormwater treatment on a sector-specific basis. Applicable parameters were first included in the 15-MM and are carried forward in the renewal as identified for each sector in Appendix D of the 22-MM permit. For the additional background on the selection of the benchmarks, refer to the factsheet of the 15-MM.

In the cases where facilities exceed the listed benchmark, the permit allows the permittee to document whether the exceedance is attributable to natural background contamination or if further reductions are not technologically available and economically practicable and achievable in light of best industry practice. However, except in these cases, the operator must undertake corrective action to reduce the pollutant concentration in its discharge.

The benchmark values, based on water quality criteria of some metals, are dependent on water hardness. In the MSGP, EPA is requiring permittees to determine the hardness of their receiving water for these parameters. The Department agrees with this approach. Once the site-specific hardness data have been collected, benchmark values are calculated using a conversion table based on 25 mg/L incremental hardness ranges.

EPA did update benchmarks for both aluminum and iron based on the NRC Study (refer to “Conformance of this Permit with Applicable Court Decisions” above).

**Aluminum:** The 2021 MSGP benchmark threshold for aluminum changed to 1,100 µg/L (1.1 mg/L) from the 2015 MSGP threshold of 750 µg/L. The 2015 MSGP benchmark value for aluminum was set to 750 µg/L (0.75 mg/L) based on the 1988 national recommended acute freshwater aquatic life criteria. In 2018, EPA updated the recommended aluminum criteria to reflect the latest scientific understanding of how water chemistry parameters alter the bioavailability of aluminum and affect toxicity to aquatic species. The updated criteria use a criteria calculator that incorporates a multiple linear regression method to derive values resulting from the interaction of total hardness, pH, and dissolved organic carbon (DOC). Therefore, rather than setting a single fixed value, the new recommended criteria values vary depending on the water chemistry conditions in the waterbody. The NRC study recommended that the 2021 MSGP benchmark threshold for aluminum should reflect the updated criteria. Given the site-specific nature of the new criteria, EPA explored the best way to update the MSGP’s benchmark using the revised recommended aluminum criteria, as discussed in additional detail below. The 2021 MSGP incorporates the revised recommended criteria in two ways, 1) using a single nationally representative value based on the criteria calculator as the MSGP benchmark threshold, and 2) providing operators who may exceed this benchmark the opportunity to conduct a site-specific analysis using the criteria model and representative ambient water chemistry data for pH, DOC, and hardness for the site to demonstrate to EPA that their discharges would not exceed their refined site-specific value. Based on the change in the MSGP, Maryland is also using the 1.1 mg/L in this renewal and in other MDE issued permits with benchmarks. Since a change to a benchmark is not a change to a permit limit, this change is not considered backsliding.

**Iron:** The NRC study found few studies on the acute effects of iron on aquatic organisms and recommended that EPA no longer require an iron benchmark. EPA proposed to remove this benchmark in the 2020 MSGP. The Department prefers to use the BPJ concentration of 3 mg/L for iron to establish a benchmark. This is a concentration that is considered a treatable standard for daily maximum. Iron does produce deposits of iron oxide, which stains concrete or stream beds. This coloration is considered pollution. For this permit, only composting subsectors included iron. For this sector the benchmarks is being increased from 1 mg/L to 3 mg/L. Since a change to a benchmark is not a change to a permit limit, this change is not considered backsliding.

These values are updated in this permit. Additional supporting data are available in the EPA’s docket for their permit, as well as the 20-SW response to comments.

**Table 5 – Comparison of 15-MM and 22-MM Benchmark Values.**

<b>Pollutant</b>	<b>Benchmark</b>	<b>Changed from 15-MM</b>
<b>Chemical Oxygen Demand</b>	<b>120 mg/L</b>	<b>No</b>
<b>Total Suspended Solids (TSS)</b>	<b>100 mg/L</b>	<b>No</b>
<b>Nitrate + Nitrite Nitrogen **</b>	<b>0.68 mg/L</b>	<b>No</b>
<b>Total Phosphorus</b>	<b>2.0 mg/L</b>	<b>No</b>
<b>pH</b>	<b>6.0 – 9.0 s.u.</b>	<b>Yes</b>

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<b>Aluminum (T)</b>	<b>1.1 mg/L</b>	<b>Yes</b>
<b>Iron (T)</b>	<b>3.0 mg/L</b>	<b>Yes</b>
<b>Lead (T)*†</b>	<b>0.082 mg/L</b>	<b>No</b>
<b>Zinc (T)†</b>	<b>0.12 mg/L</b>	<b>No</b>
<p>(T) Total recoverable</p> <p>* New criteria are currently under development, but values are based on existing criteria.</p> <p>** The benchmark values for nitrate plus nitrite nitrogen may be reported as either the concentration in the discharge, or as a net concentration calculated by subtracting the concentration of nitrate plus nitrite nitrogen in a contemporaneous sample of rainwater from the concentration in the discharge.</p> <p>† These pollutants are dependent on water hardness. The benchmark value listed is based on a hardness of 100 mg/L. When a facility analyzes water samples for hardness, the permittee must use the hardness ranges as described in Appendix C of the 22-MM permit to determine the applicable benchmark value for that facility.</p>		

2.6.5.2 Total Suspended Solids (TSS) Effluent Benchmarks and Limits

Total suspended solids are limited across a number of sectors in this permit based on a variety of rationales. This section will break down the applicable rationales by the associated sector. Note that benchmarks are discussed in this section, however the rationale for use of benchmarks and the numeric values established are discussed later in this document.

**Table 6 - Summary of TSS limits and benchmarks in the 22-MM**

<b>Category of Industry</b>	<b>Daily Maximum</b>	<b>Monthly Average</b>	<b>Sampling Frequency</b>	<b>Limit vs Benchmark</b>
Log Storage and Handling Facilities - SIC 2411	100 mg/l	-	1/quarter	Benchmark
Natural Woodwaste Facilities - SIC 2499	100 mg/l	-	1/quarter	Benchmark
Asphalt Paving and Roofing Materials - SIC 2951, 2952	100 mg/l	-	1/quarter	Benchmark
Asphalt Emulsion Facilities	23 mg/l	15 mg/l	1/month	Limit
Concrete and Gypsum Product Manufacturers SIC 3271-3275	100 mg/l	-	1/quarter	Benchmark
Material Storage Pile Runoff at Cement Manufacturing Facilities	50 mg/l	-	1/month	Limit
Concrete Mixer Trucks, Moulds, Buildings and Equipment Washing	60 mg/l	30 mg/l	1/month	Limit
Sand and Gravel Mining SIC 1442-1446	100 mg/l	-	1/quarter	Benchmark
Stone and Minerals SIC 1411, 1422-1429, 1481, 1499	100 mg/l	-	1/quarter	Benchmark
Dewatering only discharges at crushed or broken limestone mining facilities - SIC 1422	31 mg/l	15 mg/l	1/month	Limit
Dewatering and Process Water at crushed or broken limestone mining facilities - SIC 1422	37 mg/l	17 mg/l	1/month	Limit
Dewatering only discharges at crushed stone mining facilities (SIC 1423 – 1429)	66 mg/l	30 mg/l	1/month	Limit
Dewatering and Process Water at crushed stone mining facilities (SIC 1423 – 1429)	60 mg/l	45 mg/l	1/month	Limit

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Dewatering and Process Water at Construction sand and gravel mining facilities (SIC 1442) and clay mines (SIC 1455-1459)	66 mg/l	30 mg/l	1/month	Limit
Dewatering and Process Water at Industrial Sand Mining facilities (SIC 1446)	45 mg/l	25 mg/l	1/month	Limit
Concrete or Asphalt Recycling	100 mg/l	-	1/quarter	Benchmark

2.6.5.2.1 Mineral Mining Operations

The specific numeric limits in the were established in previous permits (summarized in the above table) for sediment at mining operations were chosen as follows: Suspended solids must be limited for process water discharges in this permit as mining exposes bare rock and soils, heavy equipment stirs up dust and sediment in standing water, and washing is performed specifically to remove and thus entrain solids. The origin of the decision to apply numeric limits to water associated with mining pits and washing was the 1977 ELG for this category, but the choice remains logical as these facilities are areas of concentrated disturbance and these flows are amenable to more thorough controls than just the best management practices for sediment and erosion control that are applied to construction activity. All solids limits are technology-based. There are no water quality criteria for suspended solids, though the majority of Maryland’s waters are impaired by solids. There are water quality standards for turbidity, but there is no direct correlation between suspended solids and turbidity. In this case, the technology standards are more stringent than the water quality standards. We established standards for quarries, sand & gravel mines (that includes borrow pits), aggregate washing, and concrete washing because those are the significant sources and removal of solids from the water is an important part of wastewater treatment. Sediment associated with stormwater from asphalt plants can be adequately controlled by good management practices. For quarry dewatering and process wastewater, the differing numbers reflect the varying rates of generation and settleability of solids for carbonate and noncarbonate mines. The numbers in the current permit came from *Suspended Solids Removal in the Crushed Stone Industry*, a 1981 report by Dolores Funke and P. Michael Terlecky of Frontier Technical Associates, Inc. When the previous MM general permits were issued, the Crushed Stone non-carbonate category for dewatering+process (146 mg/L max and 77 mg/L ave) limits were deemed by the Department to be “too generous” so the permit was based on the 60 mg/L max and 45 mg/L ave from other industries, which was determined to be achievable.

**Table 7 - Mining Limits for TSS (all sampled monthly)**

<b>Category of Industry</b>	<b>Monthly Average</b>	<b>Daily Maximum</b>
Carbonate quarry discharge, dry weather	15 mg/l	31 mg/l
Carbonate quarry discharge, wet weather	[Reserved]	[Reserved]
Carbonate process discharge	17 mg/l	37 mg/l
Non-carbonate quarry discharge, dry weather	30 mg/l	66 mg/l
Non-carbonate quarry discharge, wet weather	[Reserved]	[Reserved]
Non-carbonate process discharge	45 mg/l	60 mg/l
Sand and gravel operations, borrow pits, and clay mines, dry weather	30 mg/l	60 mg/l

That report also proposed a separate set of limits for dewatering for wet weather, the assumption being that it is not practical to maintain quality control to meet the fair weather limits during storm surges. Consistent with

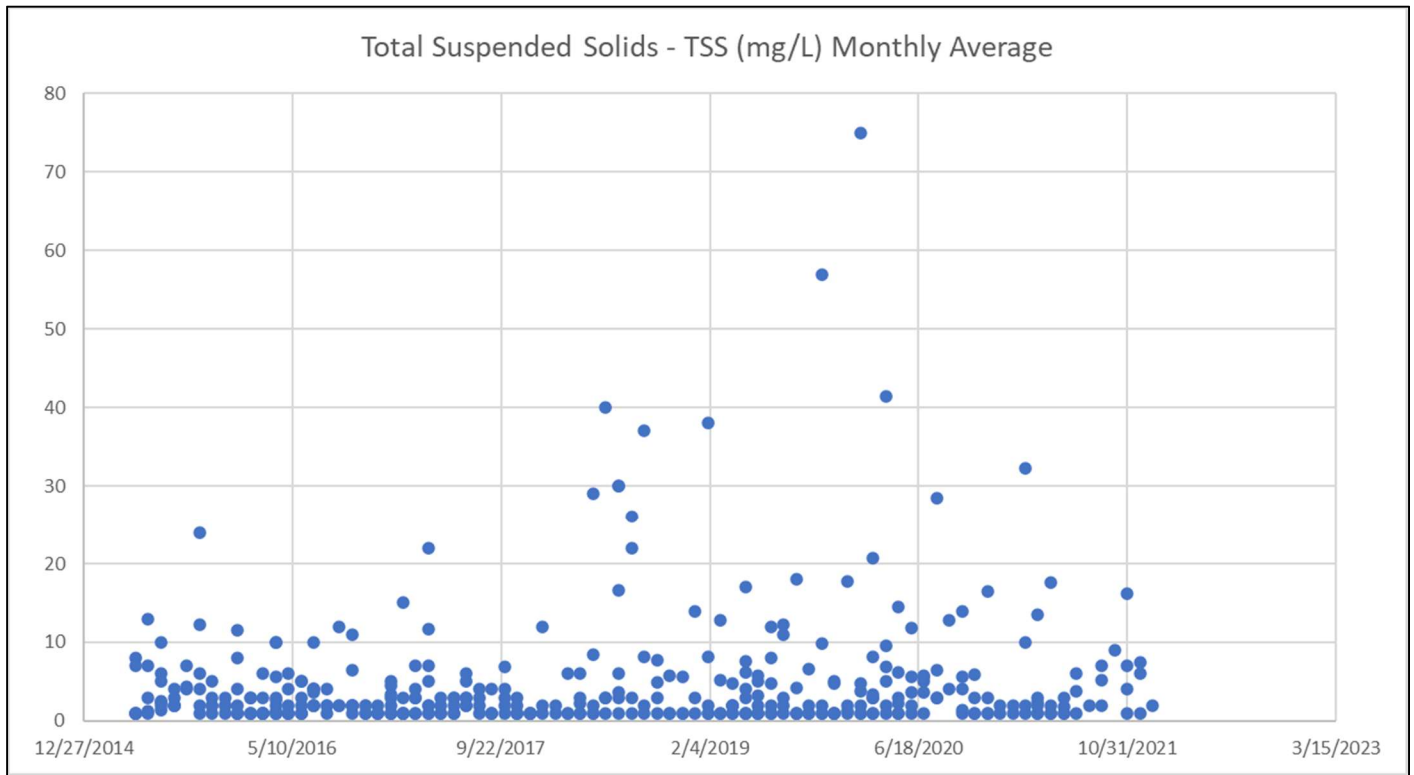
EPA's stormwater permits, and other industrial stormwater permits issued by Department, the previous permit implemented benchmarks for wet weather. This permit continues the established method for evaluating sediments in wet weather which is further described in Benchmark Monitoring.

The data reported by the permittees (DMRs) was evaluated for each of these mining categories below. Similar to the previous permit term, the data from carbonate quarry discharges largely meeting the permit limits (Category 1 and 2).

For fair weather dewatering of sand & gravel and borrow pits, the current limits are achievable and consistent with solids limits in other industrial sectors. So we left these unchanged.

#### 2.6.5.2.1.1 Mining Category 1 Carbonate Quarry Dewatering

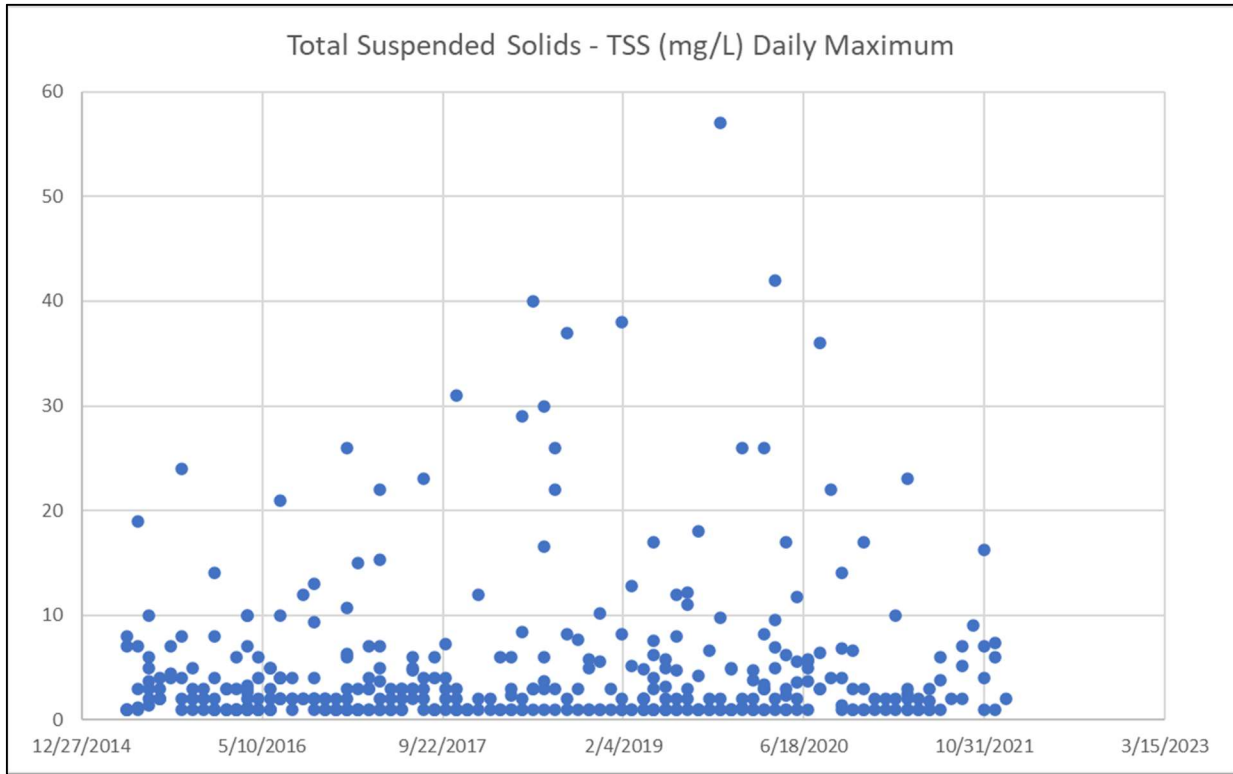
This category has total suspended solids (TSS) limits of 15 mg/L monthly avg and mg/L 31 daily maximum. These numeric limits apply to dewatering discharges at crushed or broken limestone mining facilities (SIC 1422). The first two graphs (Figures 5 and 6) show the data from this permit term, and the third (Figure 7) is from the previous permit term.



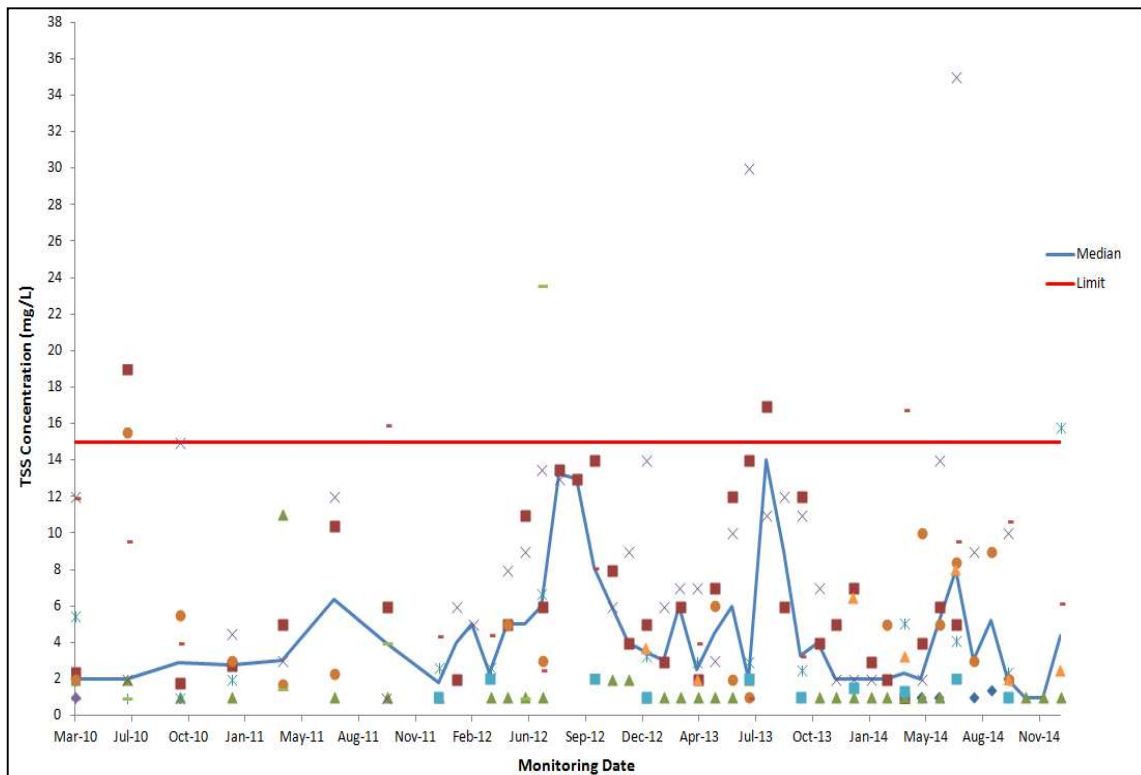
**Figure 4 – 15-MM TSS Data from Carbonate Quarries for Monthly Average (Limit 15 mg/L)**



**General Permit for Discharges from Mineral Mines, Quarries, Borrow Pits, and Concrete and Asphalt Plants**  
 Discharge Permit No. 22-MM  
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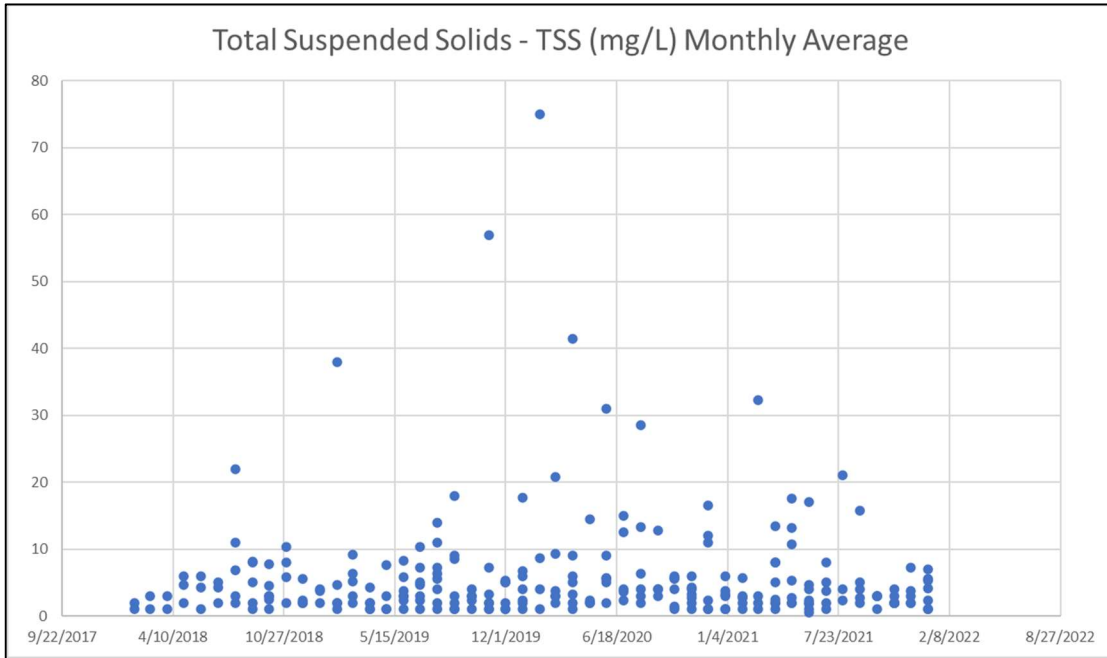
**Figure 5 – 15-MM TSS Data from Carbonate Quarries for Daily Maximum (Limit 31 mg/L)**



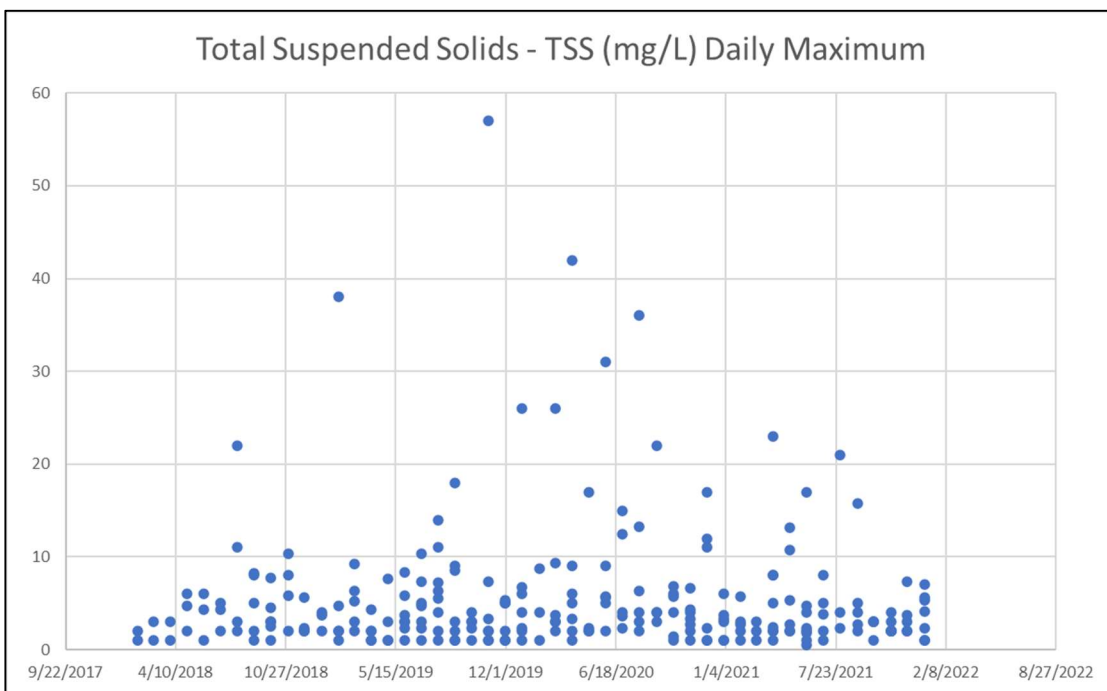
**Figure 6 – 10MM TSS Data from Carbonate Quarries for Monthly Average (Limit 15 mg/L)**

2.6.5.2.1.2 Mining Category 2 Carbonate Quarry Dewatering & Process Water

This category has total suspended solids (TSS) limits of 17 mg/L monthly avg and 37 mg/L daily maximum. These numeric limits apply to dewatering and process water discharges at crushed or broken limestone mining facilities (SIC 1422). The graphs (Figures 8 and 9) show the data from this permit term.



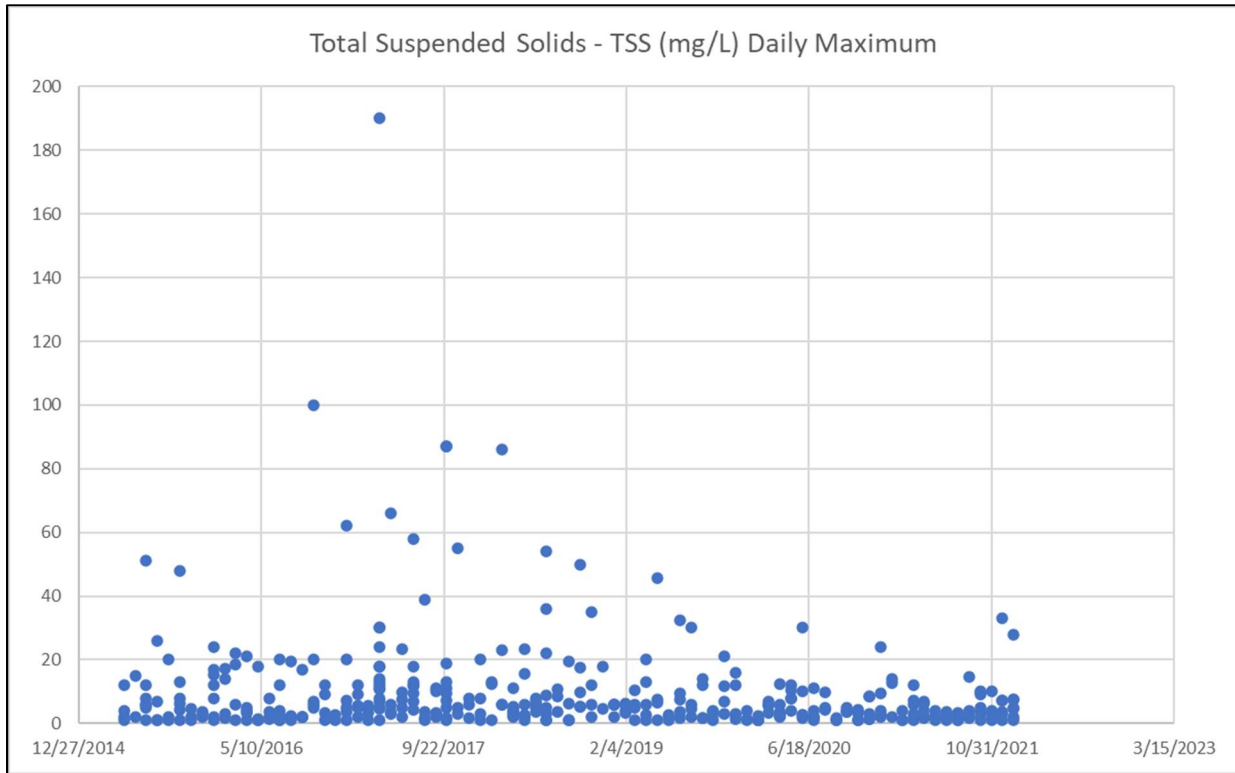
**Figure 7 – 15-MM TSS Data for Monthly Average (Limit 17 mg/L)**



**Figure 8 – 15-MM TSS Data for Daily Maximum (Limit 37 mg/L)**

2.6.5.2.1.3 Mining Category 3 Non-carbonate Quarry Dewatering

This category has total suspended solids (TSS) limits of 30 mg/L monthly avg and 66 mg/L daily maximum. These numeric limits apply to dewatering discharges at crushed stone mining facilities (SIC 1423 – 1429). The graph shows the daily maximum data from this permit term. The monthly average data was difficult to break out since other categories have 30 mg/L monthly average, however the combined 30 mg/L monthly average graph is listed in the Sand & Gravel, Clay Mines Dewatering & Process Water portion of this fact sheet.



**Figure 9 – 15-MM TSS Data for Daily Maximum (Limit 66 mg/L)**

2.6.5.2.1.4 Mining Category 4 Non-carbonate Quarry Dewatering & Process Water

This category has total suspended solids (TSS) limits of 45 mg/L monthly avg and 60 mg/L daily maximum. These numeric limits apply to dewatering and process water discharges at crushed stone mining facilities (SIC 1423 – 1429). The graph shows the monthly average data from this permit term. The daily maximum data was difficult to break out since other categories have 60 mg/L daily maximum, however the combined 60 mg/L daily maximum graph is listed in another category.

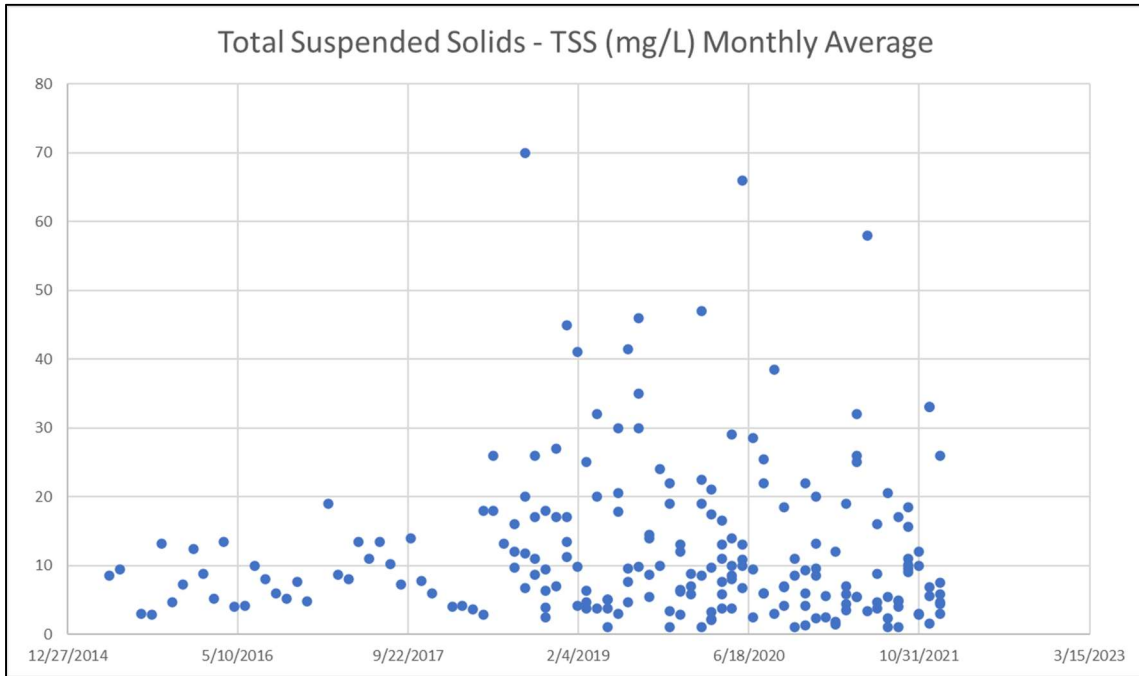


Figure 10 – 15-MM TSS Data for Monthly Average (Limit 45 mg/L)

2.6.5.2.1.5 Mining Category 5 Sand & Gravel, Clay Mines Dewatering & Process Water

This category has total suspended solids (TSS) limits of 30 mg/L monthly avg and 60 mg/L daily maximum. These numeric limits apply to dewatering discharges at construction sand and gravel mining facilities (SIC 1442) and clay mines (SIC 1455-1459). The graphs show the monthly average data and daily maximum from this permit term.

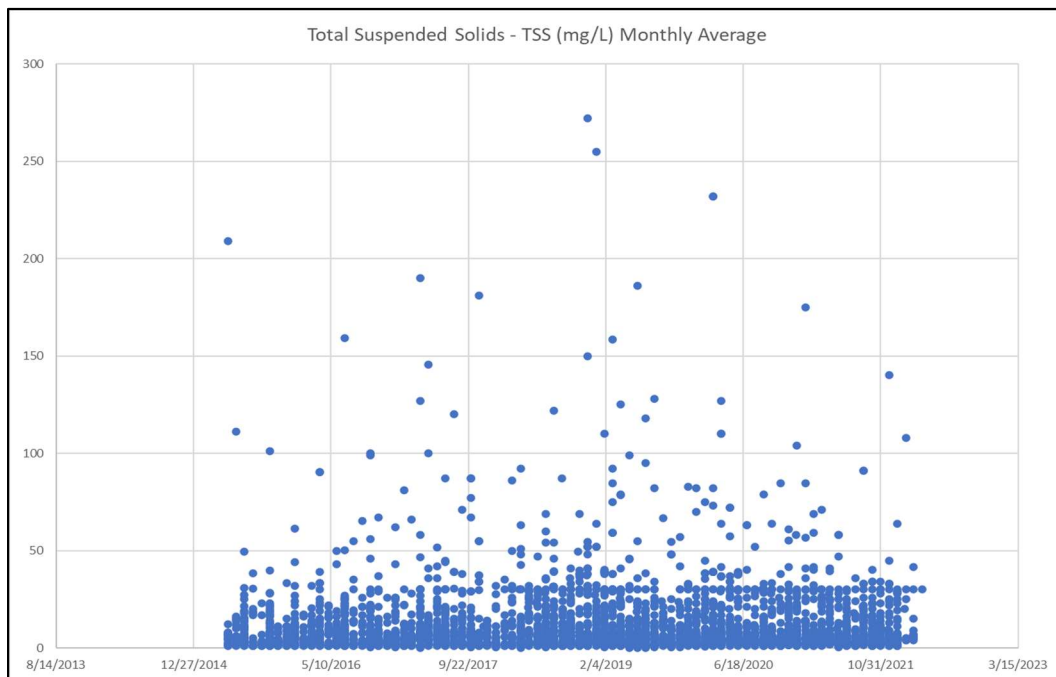
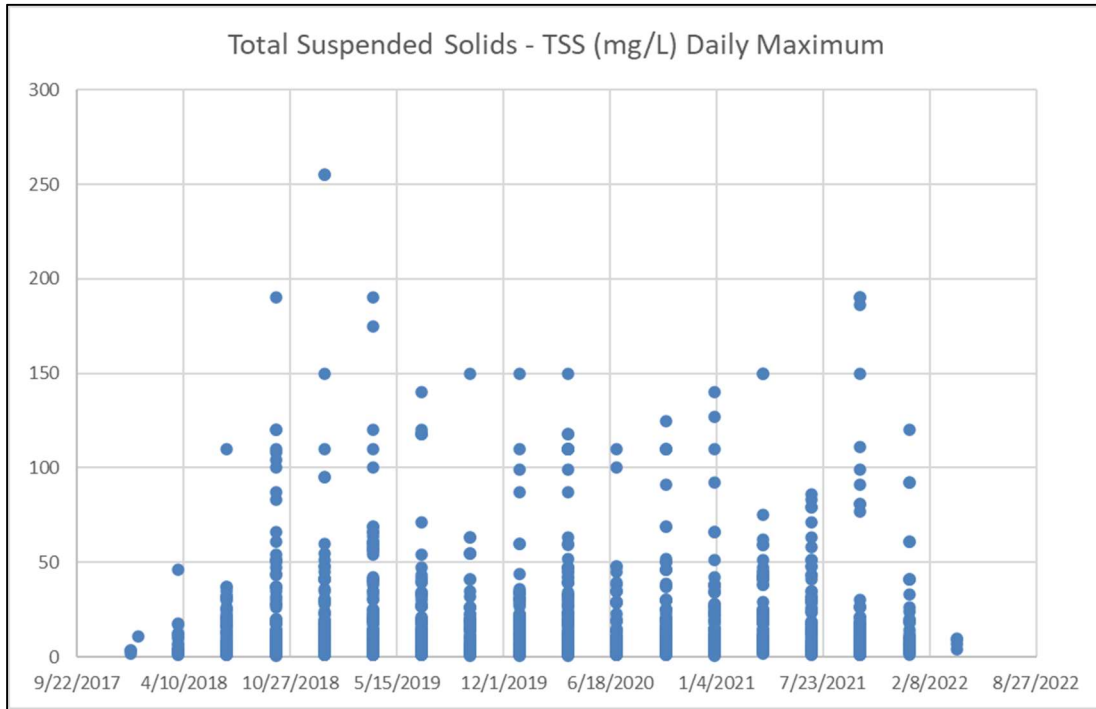


Figure 11 – 15-MM TSS Data for Monthly Average (Limit 30 mg/L)



**Figure 12 – 15-MM TSS Data for Daily Maximum (Limit 60 mg/L)**

**2.6.5.2.2 Industrial Stormwater**

The previous permit established wet weather dewatering limits (both for quarries and sand & gravel) through implementation of the benchmarks established in the MSGP. In addition, visual monitoring continues the long established requirement to view the settleable solids, but in addition, a review of color, turbidity and other characteristics as required consistent with the states stormwater permits. This continues to be appropriate for the constituents of concern. However there are ELGs for runoff for specific activities. Each of these categories are touched on below.

**2.6.5.2.2.1 Category 1 Benchmark Requirements**

This category has total suspended solids (TSS) benchmarks of 100 mg/L. These benchmarks apply to stormwater discharges at Sector A Timber Products, Asphalt Paving and Roofing Materials SIC 2951, 2952, Concrete and Gypsum Product Manufacturers SIC 3271-3275, Sand and Gravel Mining (SIC 1442-1446) and Stone and Minerals (SIC 1411, 1422-1429, 1481, 1499), and Concrete Crushing and Asphalt Recycling. The graph shows the data from this permit term. The average of all TSS Benchmark values for 2018 was 45.3 mg/L, 2019 was 65.9 mg/L, 2020 was 112.2 mg/L, and 2021 was 81.4 mg/L. We list this as "Concrete or Asphalt Recycling" included pH from contact with crushed concrete, in addition to TSS.

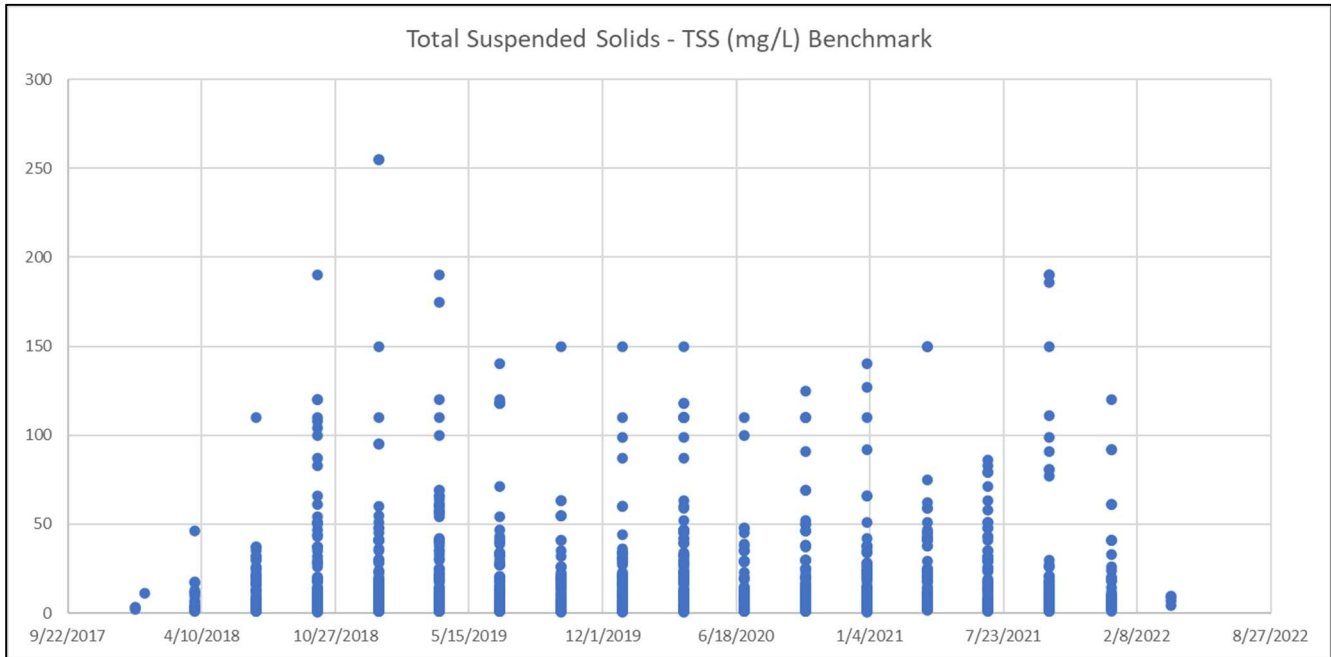


Figure 13 - TSS Data for Quarterly Benchmarks (Goal 100 mg/L)

2.6.5.2.2.2 Category 2 Runoff from Asphalt Emulsion Facilities

The 22-MM permit limits TSS in runoff from asphalt emulsion plants to a daily maximum of 23 mg/L and a monthly average of 15 mg/L based upon the ELG at 40 CFR § 443.13. TSS from other asphalt operations in runoff is based on performance using benchmarks established in the 15-MM.

2.6.5.2.2.3 Category 3 Runoff from Material Storage Pile at Cement Facilities

The TSS limit of 50 mg/L maximum for runoff from material storage piles at cement facilities is based upon the ELG at 40 CFR §411.32. The graph shows the daily maximum from this permit term.

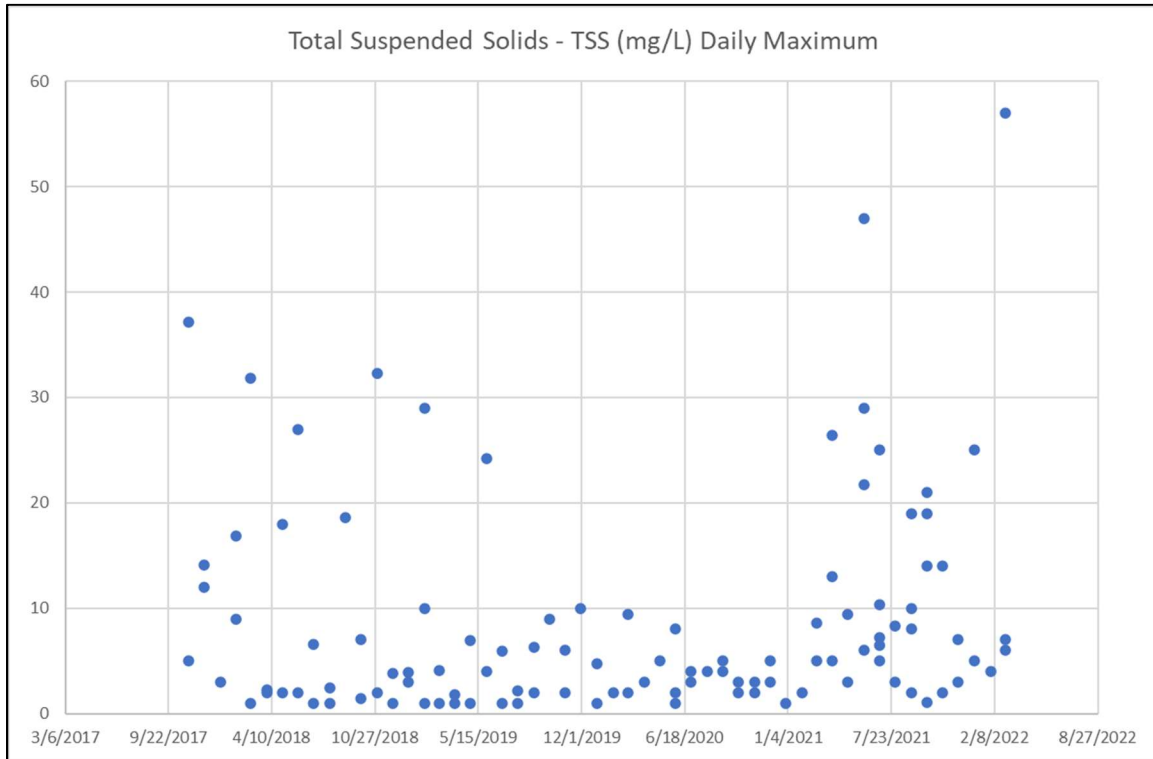


Figure 14 – 15-MM TSS Data for Daily Maximum (Limit 50 mg/L)

### 2.6.5.2.3 Washwater from Concrete Washout from Concrete Mixer Trucks, Molds, or Equipment

TSS limits for washing of concrete molds, trucks, buildings, and equipment (60 mg/L daily maximum, 30 mg/L monthly average) have been carried over for the past several iterations of the MM general permit based on exhibited achievability. The limits were originally established based on best professional judgment with the values selected by borrowing from several other industries. Monitoring results over the past permit cycle continue to demonstrate that the limits are achievable.

### 2.6.5.3 pH Limits

In addition to limits on sediment (total suspended solids), this permit limits the pH of mine dewatering discharges within the range of 6 to 9, to comply with Federal regulations found in 40 CFR §436.22. The other discharges covered are also subject to the same limits based on best professional judgment. This daily minimum of 6 to a maximum of 9 limit for pH is established as a limit that can be achieved with existing controls.

In the 15-MM, the Department also established an average pH limit of 6.5 to 8.5. Applying an average, in addition to a minimum and maximum pH limit was a unique approach. The basis for using an average was the EPA National Standard based on the "Quality Criteria for Water", 1986 ("Gold Book"). The National Criteria established a basis for chronic toxicity in the range of 6.5 to 9.0 for fresh water streams, and 6.5 to 8.5 for salt water streams. Typically, a chronic toxicity standard translates to an average limit. The National Criteria have no acute criteria. In Maryland, our instream water standards for pH are 6.5 to 8.5. The monthly average was intended to ensure the end of pipe was consistent with the instream standard.

The inclusion of both average and maximum limitations was an effort to eliminate the need for applying a “pH difference” concept, which proved to be confusing for permittees and difficult for enforcement. During interactions with contacts within the industry, questions were raised as to why multiple pH ranges are necessary for daily maximums versus monthly average. The belief is that having a single pH range, preferably the former “maximum” range of 6.0 – 9.0, would make compliance requirements and Discharge Monitoring Report (DMR) completion and review much simpler.

In evaluating the implementation, it is questionable whether a pH average limit at end of pipe is a worthwhile goal. The technology-based limits (6.0-9.0) are proven to be achievable via best available technology. However, to further treat to meet the instream standard at end of pipe encourages unnecessary treatment to correct minor excursion (for instance to treat 6.0 to 6.5). The result of additional treatment produces salts in the discharges. Unless there are water quality standards that are impacted by the discharge, this is not justified. Should a facility be of specific concern due to its location or history, the permit reserves the right to require more stringent limits or require an individual permit on a case-by-case basis.

With this renewal, we have required more frequent monitoring, but have applied only the daily maximum technology-based limits. This is consistent with pH effluent requirements for similar permits in neighboring states and with the Federal ELGs for mine dewatering. In reality, the pH control may justify continuous monitoring to maintain effective treatment. Establishing reporting requirements for only a maximum and minimum value will simplify reporting in NetDMR, yielding less confusion when assessing compliance. The implementation of more frequent once-weekly monitoring will require permittees to maintain more consistent control of their treatment systems. The Department has determined that a combination of these two changes will better enforce protection of the in-stream water quality standard than application of a monthly average limit at the end-of-pipe. Furthermore, the elimination of the monthly average parameter will eliminate the need for manual overtreatment (as described above), as permittees would not need to offset a sample or two outside of the 6.5-8.5 range but within the 6.0-9.0 range in order to meet an average limitation (i.e. if a site typically discharges at 8.4, but has one sample of 8.9, they would likely over adjust to discharge at 7.9 for a future sampling event to meet the average limit).

Continued exceedances of the daily maximum limitation will have consequences. If the permittee isn't meeting the daily maximum limitations, they will need to examine the technologies that allow them to meet the limits and implement.

This is not considered backsliding per Clean Water Act §402(o)(3). The limit issued in the previous was not based on a state water quality standard at end of pipe, it was based on long term exposure in stream. Additional protections are provided for pH-impaired watersheds via required WLA's for applicable surrogates. By removing the long term “average pH” limit and continuing the BPJ and ELG based limit of 6.0 to 9.0, the permit enforces limits that are directly enforceable. In this case, the limits kept in place comply with an ELG and on a site-by-site basis address water quality standards. The limits and monitoring regime in the 22-MM permit will provide equivalent, if not enhanced, protection of the in-stream standard compared to the requirements of the 15-MM permit.

The 22-MM also continues to allow wastewater discharge to groundwater from hydrodemolition with a pH range of 2.0 to 12.5 with a narrative condition for the permittee to maintain pH as close to 7.0 as possible. We chose this limit using best professional judgment after reviewing limitations and rationale in a similar Ohio permit. Since this is a groundwater-only discharge, and for limited duration, the limit is designed to provide protection for groundwater while limiting the amount of acid mixed to neutralize the water and by extension minimizing potentially problematic dissolved solids or salt formulation.



The pH values reported during this permit are graphed below.

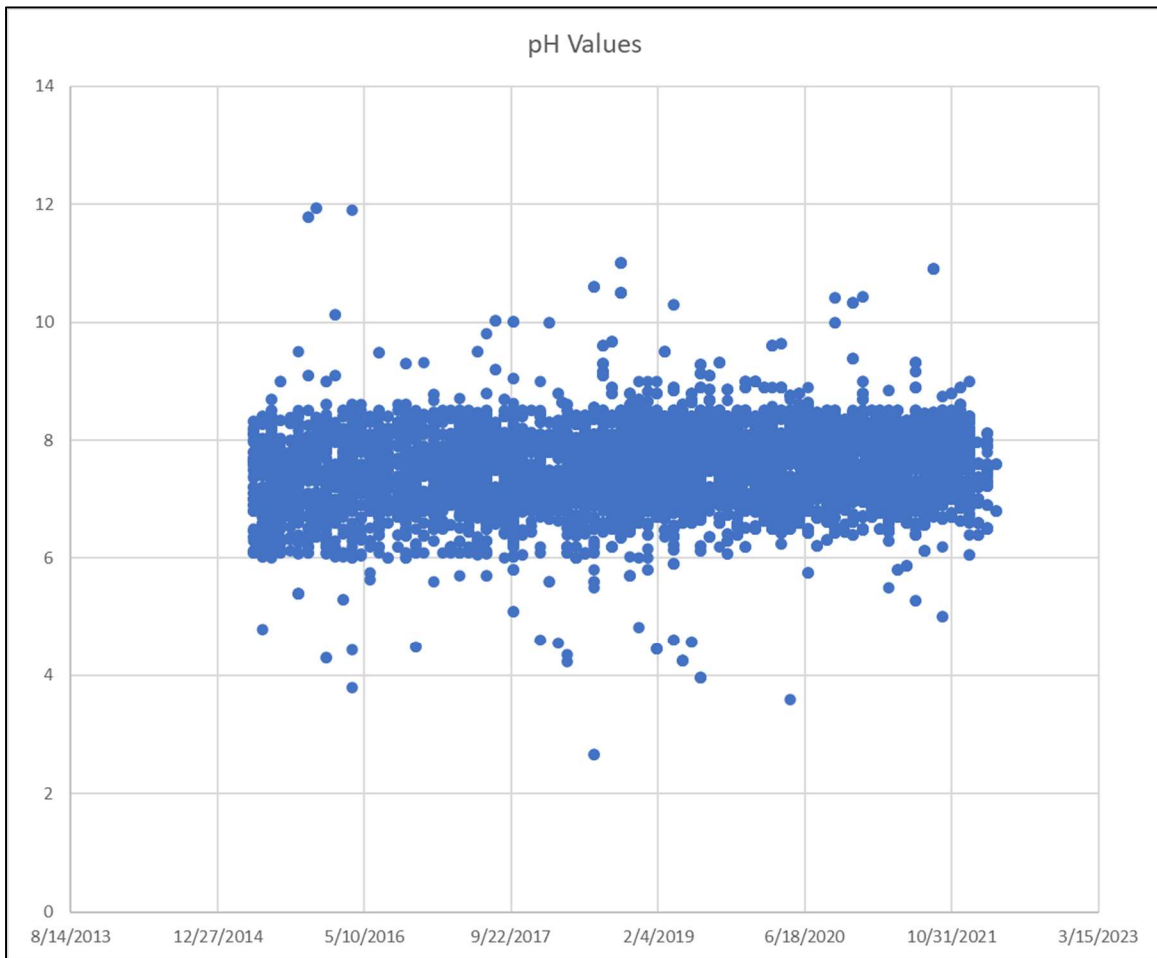


Figure 15 - pH DMR values (limit 6 - 9)

#### 2.6.5.4 Oil and Grease Limits

The ELG for asphalt emulsion facilities (Sector D) at 40 CFR §443.13 require limits of 15 mg/L daily maximum and 10 mg/L monthly average for oil and grease.

A limit is also appropriate for discharges from plants that manufacture concrete products (Sector E) other than bulk concrete, where oil is used as mold releases, and could be appropriate for vehicle washing operations in excess of the typical dust spray or tire wash. The upper limit of 15 mg/l represents the concentration achievable by traditional oil separation technology. These limits have been used in Maryland permits (including the previous MM) without challenge for over 30 years. Thus, it shall be continued in the 22-MM using best professional judgment.

Because this is a technology-based limit, it must be applied before the wastewater commingles with other wastewaters. The limit of 15 mg/l is not applicable to mining operations, ready-mix plants, and asphalt plants where minimal random dripping from vehicles occurs, but resultant oil levels would not have reasonable potential to approach the proposed limits. In lieu of numeric limits, we include a footnote prohibiting a visible sheen, since even low levels of oil and grease are visible to the naked eye.

The reported oil and grease concentrations included 11 which exceeded the permit limit. Average of the maximum values is 5.9 mg/L.

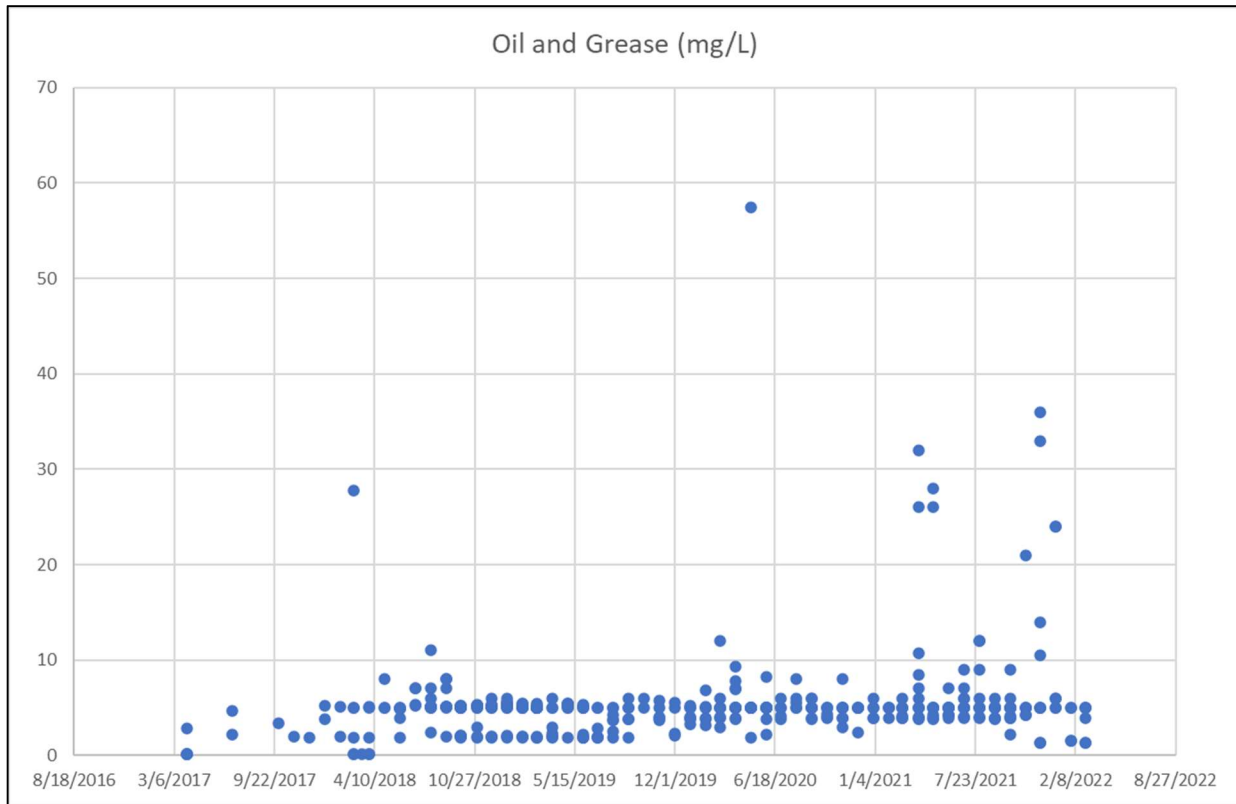


Figure 16 - Oil and Grease Reported (Limit 15 mg/L)

### 2.6.5.5 Temperature Limits

An unintended effect of settling ponds is the solar heating of their contents, so the discharger must be responsible for avoiding any violation of stream standards for the protection of water quality. Depending on whether the discharge is to Use I, II, III, or IV waters (as defined in COMAR 26.08.02.02B), the respective stream standards are 90°F, 90°F, 68°F, and 75°F. Our objective is not to maintain the discharge itself below a certain temperature, but rather to prevent a discharge from causing the receiving water to exceed its standard (or if ambient conditions already exceed the applicable standard, to prevent further exceedance). Since receiving streams will always be significantly beneath the respective water quality standard during cooler months, the limit is only applied during the summer months. Essentially, the limits are crafted such that a discharge may be as warm as the water quality standard or the receiving stream or, if the stream is already warmer than the standard, the discharge may be as warm as the stream. In either case, the discharge may not make the stream measurably warmer after a 50-ft mixing zone (COMAR 26.08.03.03). We quantify this as “temperature difference” to create a monitoring result that is a single number rather than many with caveats, making the results more immediately understandable and more amenable to entry in a database. We do not include a limit for discharges to Use I or Use II waters because we have determined there is no reasonable potential for a solar heated settling pond to cause in-stream exceedance of 90°F based on climate in Maryland.

Average discharge temperature to both Use III and Use IV streams was 70.5°F. When these tests indicate a higher temperature at point of discharge, then the permit required instream tests to verify if the actual stream

temperature meets or exceeds the water quality standards. In an audit of the DMR data, there were 81 discharges that exceeded 75 degrees. Looking over DMR records, consistent with the permit, the temperature instream and downstream was also reported to show that there was no impact to the stream temperature for that designated use class in nearly all cases. However, there was one exceedance where the stream temperature was impacted and this was flagged as a violation of the permit. Note: values appear missing in ICIS; however, these are values reported as zero, which will download as blank, or compliant.

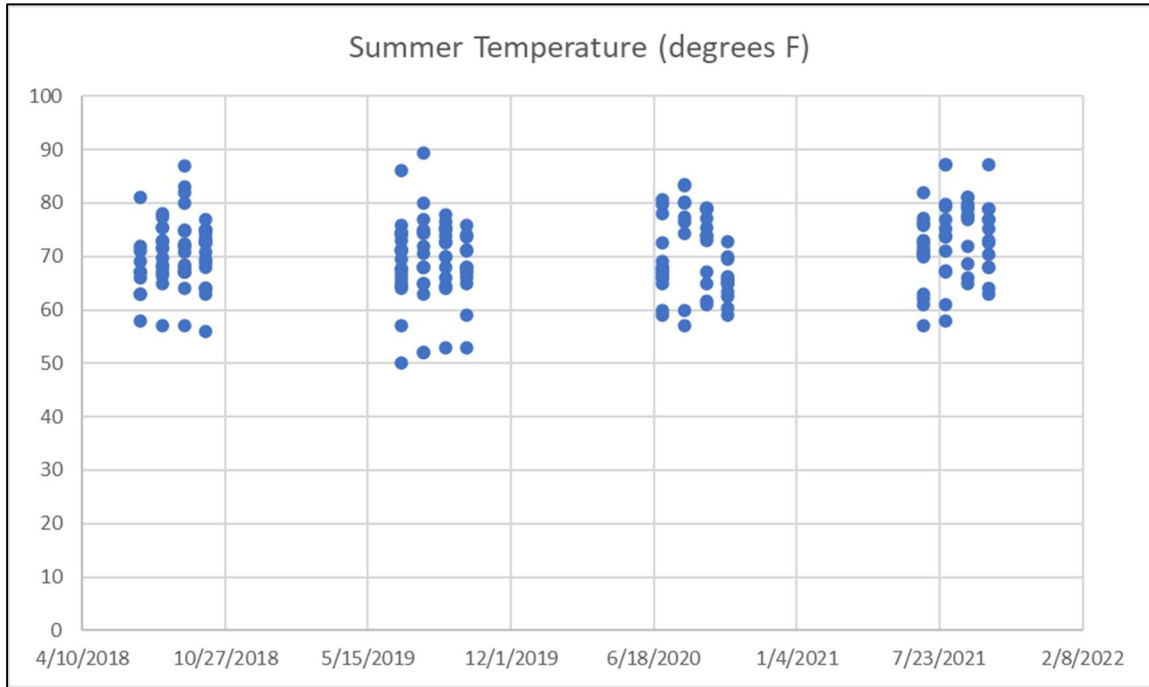
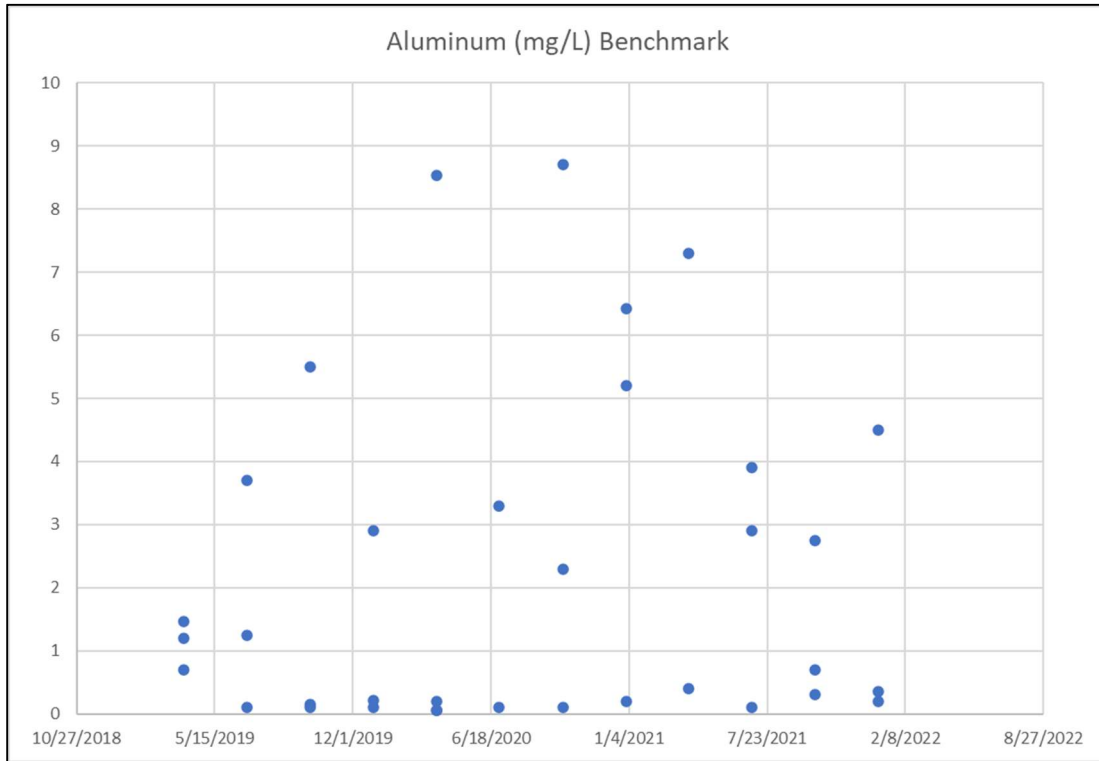


Figure 17 – Discharge temperature reporting is required for Use III (68 F standard) and Use IV (75 F standard) streams

#### 2.6.5.6 Aluminum Benchmarks

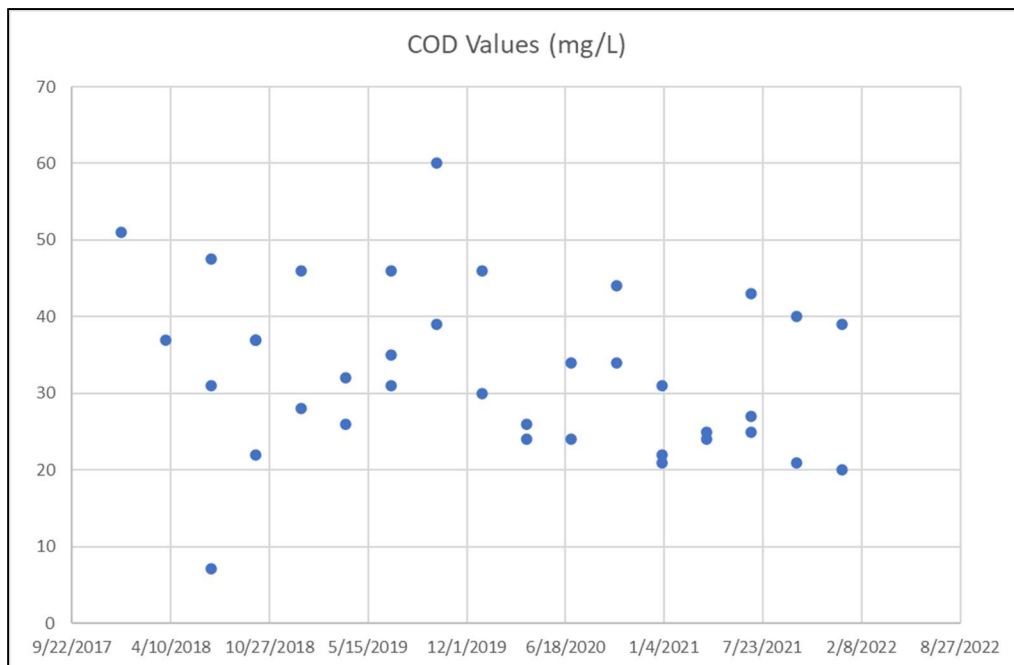
Aluminum benchmarks were new last permit term to the permit and were chosen consistent with the EPA MSGP for Subsector E1 Benchmarks (Clay Product Manufacturers SIC 3251-3259, 3261-3269). Only a small number of clay product manufactures exist in Maryland. This is a very limited subset of all those permitted. The data indicates the benchmark is exceeded by a wide margin over 17 times. These types of exceedances are being addressed by inclusion of the Additional Implementation Measures. Aluminum benchmarks were one of the limits that were updated in the most recent MSGP, and the new benchmark is 1.1 mg/L total recoverable aluminum. Refer to discussion in Part 2.6.5.1 on Benchmark Monitoring (vs Numeric Limits).



**Figure 18 - Reported DMRs for Aluminum (Benchmark is 0.75 mg/L)**

**2.6.5.7 Chemical Oxygen Demand (COD)**

COD benchmarks were new for the last permit term and were chosen consistent with the EPA MSGP for Sector A4 Benchmarks (Natural Wood waste Facilities SIC 2499). Natural wood waste is only found at a limited number of sites and, based on the data, they easily meet the 120 mg/L benchmark.



**Figure 19 - Chemical Oxygen Demand (COD) Reported (Benchmark is 120 mg/L)**

#### 2.6.5.8 Total Phosphorus

Effluent limitations for total phosphorus have been continued from the previous permit for runoff from phosphate fertilizer facilities (Sector C) which has contacted raw materials at the site prior to discharge. Both the daily maximum (105 mg/L) and monthly average (35 mg/L) limitations are taken from the ELG at 40 CFR §418.13(d). This permit does not provide authorization to discharge process wastewaters from manufacturing of fertilizers, which would require an individual discharge permit. No operators applied under this sector or were subject to these limitations.

#### 2.6.5.9 Debris

Timber facilities (Sector A) which include a wet deck storage area are subject to an ELG (40 CFR §429.103) which prohibits the discharge of “debris” from water generated during the intentional spraying or wetting of logs (wet decking) in storage areas. The definition of “debris” for these purposes, taken from 40 CFR §429.11(i), is “any woody material, such as bark, twigs, branches, heartwood or sapwood that will not pass through a 2.54 cm (1.0 in) diameter round opening.” This non-numeric limit is continued as part of the limitation in the 22-MM.

### **3. SUMMARY OF MAJOR CHANGES IN THE 22-MM PERMIT**

The Department has instituted changes in the general permit for this 22-MM renewal as summarized in this section. There were also minor changes which are a result of the clarifications or corrections made during the renewal of the industrial stormwater requirements in the 20-SW, which contains very similar controls to this permit.

#### **3.1 Environmental Justice (EJ)**

An important environmental initiative and consideration for upcoming permits involves incorporating Environmental Justice (EJ) protections. The concept behind EJ is that all people— regardless of their race, color, national origin or income —are able to enjoy equally high levels of environmental protection. Additional background may be found on our website <https://mdewwp.page.link/EJ>. When issuing the 20-SW, the Department received varied suggestions regarding EJ considerations for communities with concentrations of industrial sites. The result of these suggestions was a renewed focus on compliance with the terms of the permit in these areas, especially since they have concentrations of industrial activity. The focus of changes in this permit related to EJ is to increase transparency in census tracts that have more significant indicators of populations identified through EJ scoring. One of the transparency items is discussed below, which is the inclusion of signage on-site, so that the community know that the facility. The other change is the requirement for operators in these census tracts to submit their annual comprehensive reports annually through NetDMR, so that they are available to inspectors or to the community interested in understanding compliance issues at the site.

#### **3.2 NOI Simplification**

The industry suggests that the NOI should be as simple as “no change from previous” for renewals, since the assumption is that site configuration and outfalls would likely not change for most facilities. From the State’s perspective, we cannot assume nothing changed, and especially information such as point of contact or impairments need to be update at the time of re-applying. Since the format of the NOI is not changing, it is

important and easy to copy from the previous NOI into the renewal. When the state implements eNOI, it will be possible to repopulate fields of the NOI.

### **3.3 Clarifying Applicable Segments Covered**

The permit table for primary industrial activity in Appendix A has been updated to clarify that stand-alone maintenance facilities supporting either plants or mining are covered by this permit. Refer to Part 1.1 of this Fact Sheet. This will make it less confusing for applicants who are unsure if they need separate “SW” permit coverage.

### **3.4 No Exposure Certifications**

The MM permit has allowed for facilities to file for the exemption from stormwater permitting under condition of No Exposure. The condition is very similar to the other stormwater permits. Although most mines wouldn’t fall under this category, plants or support activities may be able to achieve this status. Industry requested that the Department create specific guidance specifically to address the types of sites under this permit, similar to the “Guidance Manual for Conditional Exclusion from MDE’s Stormwater Permitting (12-SW) Based On “No Exposure” of Industrial Activities to Stormwater”. Industry also requested that the state consider allowing small and minority owned businesses to utilize photographic or other evidence of compliance in their submissions of No Exposure Exemption. The changes requested are consistent to those made in the 20-SW for smaller facilities (less than 5 acres) and have been included in the renewal.

### **3.5 Signage at Facilities**

The EPA added signage requirements to the MSGP and Maryland followed suit with signage requirements at industrial facilities in the 20-SW. Requirements for signage are important for the community. As mentioned above, this is an important EJ addition. When considering how to implement signage at large facilities such as mineral mines, the following feedback was received.

*“Traffic safety at site entrances due to construction vehicle travel (the need to discourage public vehicles from stopping at potentially hazardous areas to read/record sign information);*

- *The large perimeter of facilities such as surface mining sites, and;*
- *The abundance of signage already existing at many site access points (pertaining to general safety, regulatory safety requirements, blasting, etc.).”*

The industry offered possible solutions such as QR codes or other similar technology-based solutions (providing digital access to the necessary information) to minimize the amount of signage necessary. Publication of the information on a website associated with the facility is another possible solution. The need to reference the appropriate regulatory/compliance department (ex. MDE Mining Program for surface mining operations) was also mentioned. The general idea is to allow the permittee flexibility regarding how and where this information is conveyed to the public. The renewal includes requirements for signage. The permit provides flexibility where safety is a concern. When exercising safety based alternatives, the sign must be discussed with the Department’s compliance program to identify the suitable alternative.

### **3.6 Climate - Control Measure Selection and Design Considerations:**

The EPA added climate adaptation requirements to the MSGP, and Maryland followed suit by including similar requirements in the 20-SW. Similar requirements have been included in the 22-MM. The changes are made in four places. The first is related to “Planned Changes”. This requires the operator to 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. The second change relates to “Control Measure Selection and Design Considerations”. This condition requires the permittee to consider 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. The third change deals with the SWPPP, reinforcing that their SWPPP must be kept 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. That last change is discussed below related to dewatering of quarry sites.

### **3.7 Emergency Dewatering (Quarry Sites)**

The industry expressed the need for a mechanism to allow for emergency dewatering (particularly for quarry operations) following significant storm events. These facilities supply material that is critical for storm & flood recovery, relief, and re-building. Especially during significant flooding events, sediment and other pollutants originating upstream of a regulated facility may have the potential to be carried into quarry sumps/pits, the inflow of which the facility may have little or no ability to control. Therefore, a mechanism is needed in the permit to allow the expedient recovery of such facilities following these events. These events are considered “bypass” and/or “upset” language in the 15-MM Permit (Part IV. D & E), which are in the standard terms and conditions. However, the situation is further clarified in the mining section, including the appropriate MDE contacts are in these situations, to determine the appropriate timeframe and any additional remedial measures, relative to the impact caused by the event.

### **3.8 Improved Process for the Use of Additives**

The 15-MM permit required notice prior to the use of any chemical additives. Since that permit was issued, a streamlined approach has been developed has now been applied to all our stormwater permits. The process provides a list of approved products on MDE website, and includes a process to approve additional products that takes into account toxicity. This approach has been added to this renewal.

### **3.9 Benchmark Updates**

As described in the “Conformance of this Permit with Applicable Court Decisions” and “Rationale for Benchmarks and Effluent Limits” of this fact sheet, the terms of the EPA Settlement Agreement resulted in changes which included a change in the benchmarks. This permit includes the updated aluminum benchmark and an updated benchmark for iron. Refer to Part 2.6.5.1 of this Fact Sheet for additional discussion. The new total recoverable aluminum benchmark went from 0.75 mg/L to 1.1 mg/L. and iron went from 1.0 mg/L to 3.0 mg/L. The MSGP also added options based on exceedances of aluminum and copper which will be added to the renewed permit.

### **3.10 Reduction of Benchmark Monitoring**

Benchmarks were first used for the MM, this past permit term. The 15-MM permit required quarterly numeric monitoring of stormwater runoff, and comparing this concentration to benchmarks to prove the effectiveness of stormwater controls. If the permittee could meet those benchmarks they could petition to be released from further testing during the term of the permit. Now that the renewal is in process, the operators have a few suggestions about how to handle benchmark monitoring in the renewal. The suggestions are 1) either relief from benchmarks at sites that have already met the benchmarks in the 15-MM or 2) a reduction in the frequency of benchmarks. The industry cited the example of the USA EPA New Source Performance Standards for air quality monitoring where new monitoring conducted is only required following new additions or major modifications.

The industry suggestion to use the air permitting New Performance Standards was meant to provide a basis for rethinking the re-evaluation of the benchmarks. The Clean Air Act authorizes the EPA to develop technology based standards which apply to specific categories of stationary sources. These standards are referred to as New Source Performance Standards (NSPS) and are found in 40 CFR Part 60. The NSPS apply to new, modified and reconstructed affected facilities in specific source categories such as manufacturers of glass, cement, rubber tires and wool fiberglass, petroleum refineries, kraft pulp mills, equipment leaks and many combustion sources. There are approximately 90 NSPS. A full list of NSPS sources can be found here: <https://www.epa.gov/stationary-sources-air-pollution/new-source-performance-standards>.

In general, EPA measures NSPS compliance by requiring affected facilities to conduct initial performance tests. As for initial testing and subsequent testing, it really depends on the specific NSPS regulation. Newer post-1990 NSPS regulations have initial testing requirements and also continuous compliance monitoring, record keeping, and reporting requirements and sometimes, subsequent performance testing annually, or every three years, or based on a certain amount of hours of operation. We also reserve the right at any time to require performance testing under COMAR 26.11.01.04 to demonstrate compliance.

For major sources covered by a federal Title V - Part 70 operating permit that we are delegated to issue by EPA (Title V of the Clean Air Act, Part 70 of CFR), additional testing, monitoring, record keeping, and reporting requirements are included such as periodic performance testing (annually or at least once during the term of the five-year permit) to demonstrate compliance with all applicable standards including NSPS regulations. Sometimes, larger sources are even required to install continuous emissions monitors in lieu of stack testing to demonstrate continuous compliance. If a facility fails to meet an NSPS limit during a subsequent test, MDE's Compliance Program would definitely investigate to determine if it is a true violation of the NSPS limit.

Some of the State's NSPS sources are very small (such as a boiler or a crushing and screening plant) and not likely to change their operations in a way that will impact their compliance status after the initial test. However, even if the NSPS regulation only requires an initial performance test to demonstrate compliance, the State reserves the right to require additional periodic testing and/or monitoring to demonstrate continuous compliance.

In response to this specific request, NSPS for stationary air sources is an entirely different framework than NPDES permitting under the Clean Water Act. Industrial activities at sites are constantly changing. We also know that climate patterns are changing. Retesting for benchmarks is more akin to industrial sites with



individual permits submitting an application every 5 years, which consists of water testing results. The benchmarks are important ongoing measures of performance.

The second idea presented by industry had to do with reduced testing based if they met benchmarks in the previous permit. Other states have different timing regimes for testing, therefore this isn't unprecedented. This is in essence rewarding sites that have proven clean operations. In consideration of this, accommodations have been included in the renewal. If the permittee met the benchmarks in the previous permit, and the first 2 quarterly benchmarks tests are found to be below a certain threshold (10% the benchmark), then the permittee could petition to be removed from ongoing benchmarks. From a permit perspective these sites have less reasonable potential to impact water quality. These sites would continue their visual monitoring. If industry is correct, those sites that have put in place good practices show that once again they are meeting the limits. Another benefit of this approach is for compliance, as the sites with exceptional stormwater controls should be less susceptible to site visits, which could be determined using meeting these lower benchmark values in the prioritization. Providing an incentive for facilities to maintain exceptional stormwater controls will only serve to better protect the environment.

### **3.11 pH Limitations (for various 15-MM Sectors)**

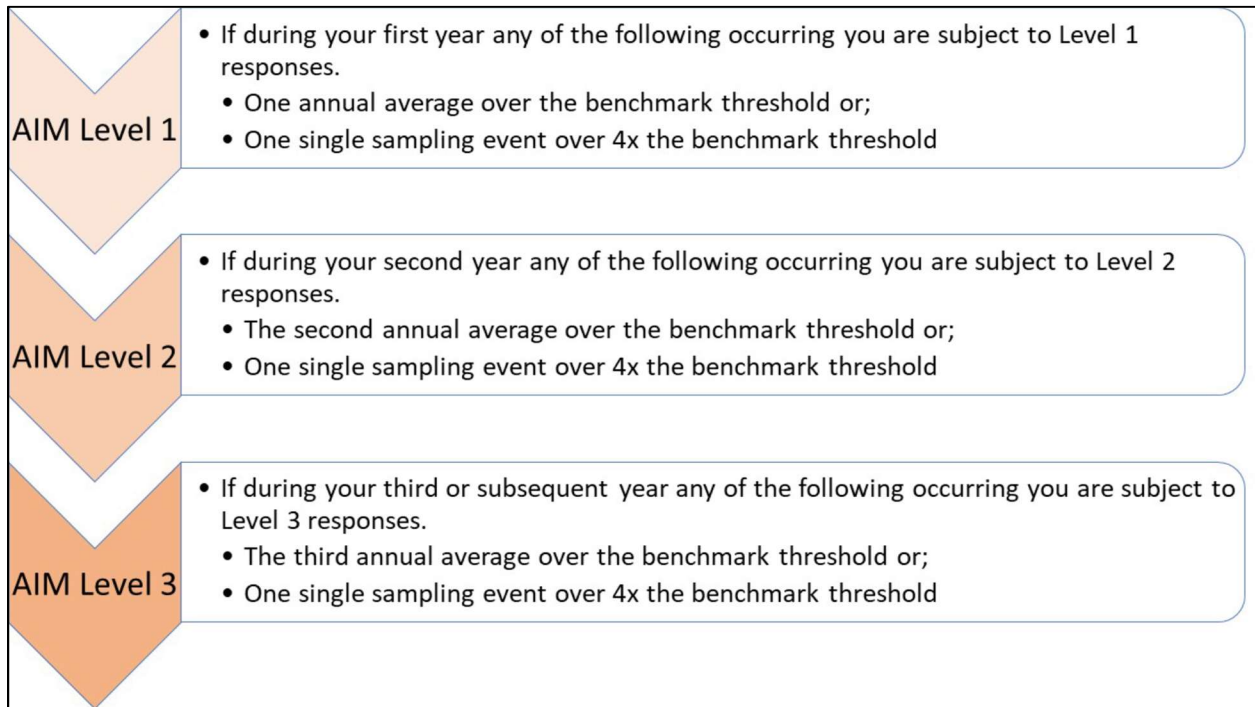
The permit does enforce numeric limits for pH for activities with surface water discharges. The previous permit provided a unique method for pH compliance, requiring both daily maximums (6.0-9.0) and longer-term average (6.5-8.5) limits. The sampling frequency for pH has been increased, and the average limits have been removed in the 22-MM. The rationale is discussed earlier in this fact sheet (Part 2.6.5.3).

### **3.12 NetDMR**

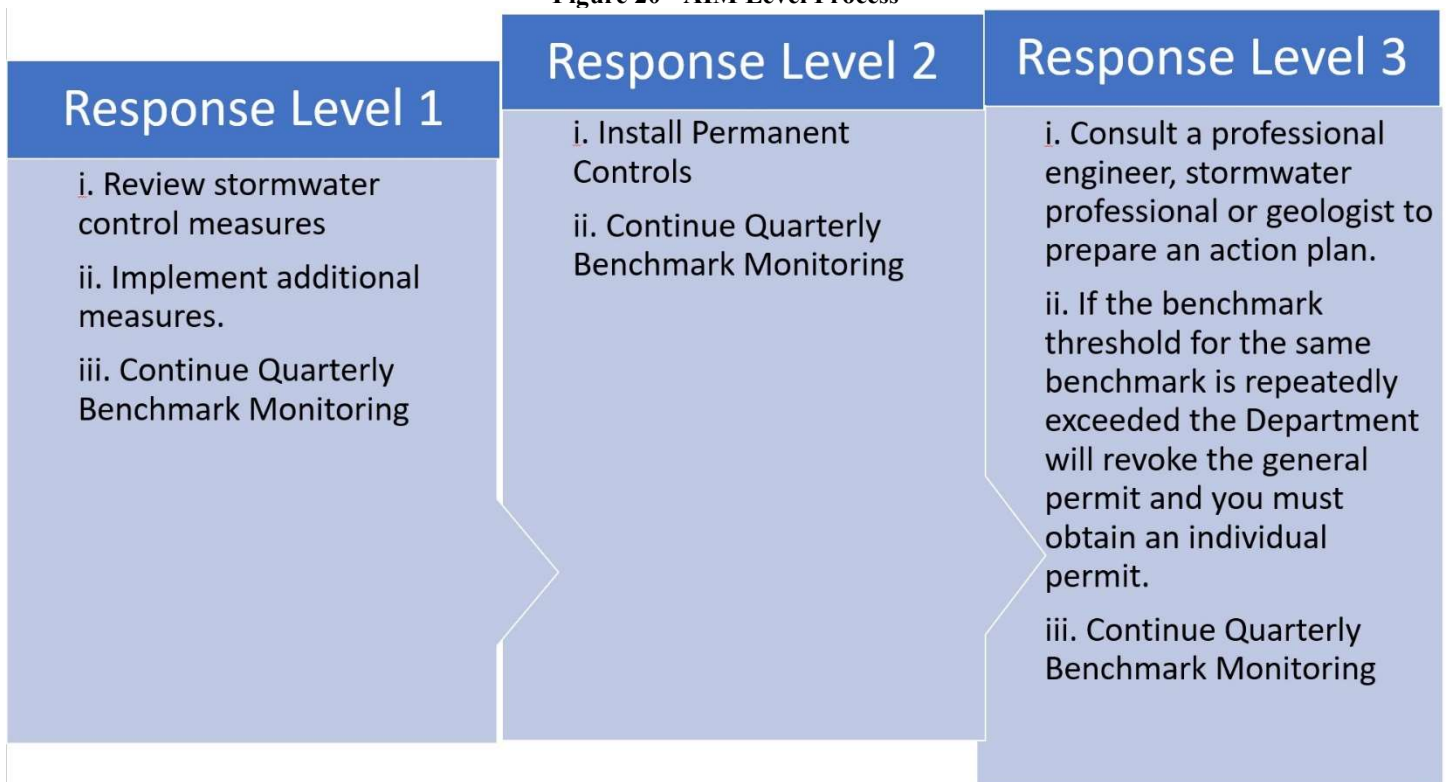
The previous permit required use of NetDMR to report ongoing compliance of discharge monitoring reports. Feedback from industry suggests that a separate discussion is desired in order to evaluate how to improve the user-friendliness of the NetDMR system and improve the rollout/transition to the renewed permit. Committee members universally expressed frustration both with the initial set-up (following the 15-MM Permit issuance) and on-going use of this system, particularly following changes to permitted outfalls. The Department has no option but to continue the use of NetDMR for submission of reports but will explore whether additional training options or system improvements may be possible.

### **3.13 Corrective Actions / AIM**

As described in the "Conformance of this Permit with Applicable Court Decisions" section of this fact sheet, the terms of the EPA Settlement Agreement resulted in enhancements to the MSGP corrective actions, in particular the "Additional Implementation Measures" (AIM) benchmark exceedance protocol. Maryland evaluated the approach and implemented similar changes in 20-SW. Based on the legal challenge and EPA settlement and the response to comments to the 20-SW, the Department has included the AIM protocol in the 22-MM permit for sites with benchmarks. Refer to the following figures for an overview and to Part 7 of this fact sheet for further details.



**Figure 20 - AIM Level Process**



**Figure 21 - Progression of Required Actions through AIM**

**4. PERMIT APPLICABILITY (Part I)**

Consistent with previous permits, to be eligible for coverage under this permit, operators of industrial facilities must meet the eligibility provisions described in Part I of the permit (and Part 1.1 of this Fact Sheet). The permit provides coverage for these industries. Without coverage in this general permit, or a site specific individual permit, discharges of stormwater associated with industrial activity and the various process waters that require permit coverage could be in violation of the CWA.

#### **4.1 Geographic Coverage (Part I.A)**

This permit provides coverage for classes of point source discharges that occur in the state of Maryland.

#### **4.2 Facilities Covered (Part I.B)**

This permit is available for industrial stormwater discharges and process water discharges from specific industrial sectors. Additional details are found in Part 1.1 of this fact sheet. The permit refers to a list of industries in Appendix A of the permit. Sector descriptions are based on Standard Industrial Classification (SIC) Codes and Industrial Activity Codes consistent with the definition of stormwater discharge associated with industrial activity at 40 CFR §122.26(b)(14)(i-ix, xi). See Appendix A in this permit for specific information on each sector.

#### **4.3 Limitations on Coverage (Part I.C)**

This Part is consistent with the State's other general permits, listing specific types of sites and discharges which are not eligible for coverage under this permit. In a review of these for the 20-SW, one of the limitations listed was specific to certain manufacturers. The Department decided to remove this limitation in the 15-MM, which was specific to discharges subject to effluent standards in 40 CFR Subchapter D Part 129. The standards in this part of 40 CFR apply to aldrin/dieldrin manufacturer or formulators, DDT manufacturer or formulators, endrin manufacturer or formulators, toxaphene manufacturer or formulators, benzidine manufacturer or benzidine-based dye applicators, PCB manufacturer, electrical capacitor or transformer manufacturers. None of those activities are relevant for mineral mines and associated activities, so this limitation was removed to eliminate confusion.

##### 4.3.1 Stormwater Discharges Associated with Construction Activity.

The mining industry had worked with EPA to include construction requirements and thereby reduce various stormwater permits required. The premise being that certain construction activities are part of what is considered mining. These activities were laid out as sector specific activities. The Department took this into account with the 15-MM. This permit distinguishes which types of earth disturbance activities are included in the permit (earth-disturbing activities conducted prior to active mining activities) and which are subject to separate Stormwater Permit for Stormwater Associated with Construction Activity (construction of staging areas to prepare for erecting structures such as to house project personnel and equipment, mill buildings, etc., and construction of access roads). This distinction continues in this renewal.

##### 4.3.2 Discharges Subject to Effluent Limitations Guidelines.

Like the MSGP, the Department covers discharges subject to stormwater-specific effluent limitations guidelines (ELGs) that are eligible for coverage under this permit. The specific ELGs included in the permit are listed. This condition clarifies that the permit does not cover any stormwater subject to any ELGs which are not specifically identified.

#### 4.3.3 Discharges Mixed with Non-Stormwater.

The 22-MM does not authorize stormwater discharges that are mixed with non-stormwater other than those non-stormwater discharges listed in Part I.E.3. (See Section 4.5 of this fact sheet for additional rationale.)

#### 4.3.4 New Discharges to Water Quality Impaired Waters.

Part I.C.6 of the permit requires any new discharger to demonstrate its ability to comply with 40 CFR §122.4(i) prior to coverage under the permit. To satisfy the requirements of 40 CFR §122.4(i), an operator must make a demonstration that the site has no reasonable potential to contribute to an in-stream excursion of the applicable water quality standards. This condition offers specific options to make such a showing where applicable.

#### **4.4 Prohibited Stormwater Discharges (Part I.D)**

This condition is continued from the 15-MM. It addresses situations where an exceedance has occurred, but the operator is following the permit condition requiring a corrective action.

#### **4.5 Eligible Discharges (Part I.E)**

Part I.E specifies which stormwater and non-stormwater discharges are eligible for coverage under the permit. As described earlier in this fact sheet, not all stormwater discharges associated with industrial activity are eligible for coverage under this permit (e.g., stormwater discharges regulated by certain national effluent limitations guidelines).

- Part I.E.1 clarifies that co-located activities are eligible for coverage in addition to the primary industrial activity. This portion of the permit anticipates secondary industrial activities which are often present alongside primary activities covered by this permit. Inclusion of these controls prevents the need for additional permits to cover stormwater from those secondary activities.
- Part I.E.2 reserves the Department's right to require coverage on a site-specific basis under Sector AD of this permit, should the need arise.
- Part I.E.3 identifies the specific categories of stormwater which are subject to ELGs that are eligible for coverage under this permit. The ELG requirements are included in applicable portions of Appendix D of the permit.
- Part I.E.4 lists various non-stormwater discharges which the Department has determined are allowable. If any limits apply, they are specified. For sources which do not have limits, the Department has determined that following the narrative instructions of the permit will make it such that the discharges have no reasonable potential to cause in-stream exceedance of water quality standards. It is notable that the effluent limitations in Part III of the permit include provisions which specifically state that discharges cannot cause exceedance of water quality standards.

- Part I.E.5 specifies that discharges containing chemical additives are allowed, subject to the Department's policy used across all of its permits. It references applicants to portions of the permit which govern the use of chemical additives, if necessary.
- Part I.E.6 notes that any additional discharges which are not otherwise required to have an NPDES permit are authorized when commingled with discharges regulated by this permit. Note that some of the discharges listed specifically in Part I.E.4 of the permit would also not required NPDES coverage. This condition does not imply that all discharges listed elsewhere in this permit would necessarily require an NPDES permit if they are standalone discharges.

Purpose: This provision lists the type of stormwater discharges eligible for coverage under the permit. Dischargers should use this section to determine which stormwater discharges from their site can be covered under the 15-MM. This provision also specifies which non-stormwater discharges are covered under the permit as exceptions to the general exclusion of non-stormwater discharge from eligibility. To be authorized under this permit, any sources of non-stormwater (except flows from firefighting activities) must be identified in the SWPPP.

#### **4.6 No Exposure Certification (Part I.F)**

This condition states that after submitting certification certified that there is no potential for the stormwater discharged from their facility to waters of the State to be exposed to pollutants a permittee is no longer authorized by, nor required to comply with, 22-MM stormwater requirements. To receive this exemption the permittee must submit a form found on the MDE website at <https://mdewwp.page.link/MMGP>. This exemption is non-transferable, does not require a fee, and is valid for five years or until conditions change.

Purpose: This provision allows permittees who become eligible for an exemption for no exposure from permitting under 40 CFR §122.26(g) to certify their eligibility for exemption. For background, under the conditional no exposure exclusion, operators of industrial facilities have the opportunity to certify to a condition of "no exposure" if their industrial materials and operations are not exposed to stormwater. As long as the condition of "no exposure" exists at a certified facility, the operator is excluded from NPDES industrial stormwater permit requirements provided that the operator notifies the permitting authority at least every five years consistent with 40 CFR §122.26(g) requirements. This section also notifies that permittee that their MS4 may require restoration of impervious surfaces at their facility.

Comparison to the 15-MM: The 22-MM includes new provisions that allow for operators with properties under 5 acres to certify by providing photographic evidence. The Department added this option when issuing its 20-SW permit in an effort to address the potential high costs of a 3<sup>rd</sup> party certification. The Department determined that operators under five acres in size tend to face larger business impacts from the expenses of 3<sup>rd</sup> party certification. The specific evidence provided will be loading docks, storage areas, dumpsters all of which are common areas that typically get exempt facilities in trouble. In addition to this allowance, the permit guidance written specifically for this industry is to be developed to address ancillary activities such as transportation activities.

#### **4.7 Alternative Permit Coverage (Part I.G)**

Part I.G clarifies that the Department may require any discharger covered under this general permit to apply for and obtain coverage under an individual permit or an alternative general permit. The permittee may request the

same. We also clarify that facilities shouldn't require two general permits for the same discharge, such as the 20-SW and 22-MM.

#### **4.8 Continuation of an Expired General Permit (Part I.H)**

If this permit is not reissued or replaced (or revoked or terminated) prior to its expiration date, dischargers are covered under an administrative continuance, in accordance with 40 CFR §122.26. Slight changes in the process have been included consistent with the Department's other general permits.

Purpose: Where the Department fails to issue a final general permit prior to the expiration of a previous general permit, the permittees need some certainty of how to operate to stay in compliance.

### **5. AUTHORIZATION UNDER THIS PERMIT (Part II)**

#### **5.1 How to Obtain Authorization (Part II.A)**

To obtain authorization under this permit, operators must be located in the State; meet the Part I.A-I.E eligibility requirements; select, design, install, and implement control measures in accordance with Part III.B.1 to meet numeric and non-numeric effluent limits; submit a complete and accurate NOI according to the instructions with that document; pay the applicable fee as specified in COMAR 26.08.04.09-1(C) and develop a SWPPP according to the requirements of Part III.C of the permit. These requirements apply to operators previously covered by the 15-MM, as well as new facilities seeking coverage. Amendments to this section from the 15-MM include those to address Environmental Justice requirements, identification of flood zone information to address site potential for impact due to climate change, and new information required for use of chemical additives (per the Department's policy).

The items required on the NOI meet requirements under 40 CFR Part 122 and various State regulations regarding what is necessary to obtain an NPDES permit.

#### **5.2 Deadlines for Coverage (Part II.B)**

The deadlines for applying for coverage are unchanged from the 15-MM. Existing permittees under the 15-MM are allotted six months to reapply, which provides ample time for any necessary SWPPP updates and to become familiar with new permit terms. New sources are required to submit at least sixty days in advance of operations to provide the Department time for review of the NOI and SWPPP. Any existing dischargers without a current permit shall submit as soon as possible to prevent continued noncompliance. No retroactive coverage is provided for such facilities.

Failure to abide by the deadlines applicable to each site may be subject to enforcement action.

#### **5.3 Required Signatures (Part II.C)**

This condition is not substantially changed from the 15-MM. It meets the requirements of 40 CFR §122.22 regarding authorized signatories for NPDES permit applications and reports.

#### **5.4 Failure to Notify (Part II.D)**

This condition is not substantially changed from the 15-MM. It specifies that facilities which require this permit and discharge without applying and obtaining coverage are in violation of State and Federal requirements and may be subject to penalty.

### **5.5 Additional Notification (Part II.E)**

We have added information to clarify contact information for compliance based on the facility type. This helps clarify that mining activities are inspected and under the compliance authority of the Department's Land Management Administration Mining Program. All other facilities are inspected by the Water and Science Administration Compliance Program.

### **5.6 Changes in Permit Coverage (Part II.F)**

#### 5.6.1 Planned Changes (Part II.F.1).

The language of this condition has been slightly modified from the 15-MM to require the application to account for potential impacts from climate change implications. The updated language is consistent with the 20-SW.

#### 5.6.2 Submitting a Notice of Termination (Part II.F.2).

Part II.F.2 is not substantially changed from the 15-MM and remains consistent with the Department's other general permits. It indicates when and how permittees should file Notices of Termination. The permittee's authorization to discharge under the permit terminates at midnight of the day that a complete Notice of Termination is processed and acknowledged by the Department. Note that under the Appendix D, Part J.11, there are some additional qualifications for mining sites who request termination.

#### 5.6.3 Notification of the Discharge of a Pollutant Not Limited in This Permit (Part II.F.3).

This was carried over from the 15-MM with no significant change.

## **6. STORMWATER MANAGEMENT REQUIREMENTS (Part III)**

### **6.1. Control Measures and Effluent Limits (Part III.B)**

#### 6.1.1 Control Measures and Technology-Based Effluent Limits (Part III.B)

This permit contains effluent limits that correspond to required levels of technology-based control (BPT, BCT, BAT) for various discharges under the CWA. Where an effluent limitation guideline or NSPS applies, the permittee may be notified by the Department to apply for an individual permit with appropriate numeric effluent limitations. This permit also addressed specific effluent limitation guidelines for certain categories of wet weather discharge (see Part 2.6.1 of this Fact Sheet). However, where EPA has not yet issued an effluent limitation guideline, EPA has determined, and the Department has accepted, an appropriate technology-based level of control based on best professional judgment. CWA Section 402(a)(1); 40 CFR §125.6. Because of the nature of stormwater discharges, it is infeasible to use numeric effluent limits to demonstrate the appropriate levels of control. (Refer to more detailed discussion below under "EPA's Authority To Include Non-Numeric Technology-Based Effluent Limits In NPDES Permits" and "EPA's Decision To Include Non-Numeric Technology-Based Effluent Limits In This Permit".) In such situations, the CWA authorizes EPA, and in turn the

Department, to include non-numeric effluent limits in NPDES permits<sup>3</sup>. The 22-MM includes a number of such non-numeric effluent limits. Several of these require facilities to “minimize” various types of pollutant discharges. Consistent with the control level requirements of the CWA, EPA in the MSGP, and the Department with the 22-MM, is clarifying in this permit that the term “minimize” means to reduce and/or eliminate to the extent achievable using control measures (including best management practices) that are technologically available and economically achievable (BAT) and practicable (BPT) in light of best industry practice. EPA has determined that the technology-based numeric and non-numeric effluent limits in this permit, taken as a whole, constitute BPT for all pollutants, BCT for conventional pollutants, and BAT for toxic and nonconventional pollutants that may be discharged in industrial stormwater.

Purpose: This permit defines the term “minimize” to provide a clear definition as to what is required of the discharger under this permit. To meet the effluent limits that require the discharger to “minimize” pollutants,” permittees are required to select, design, install and implement control measures that reduce or eliminate discharges of pollutants in stormwater to the extent achievable. These control measures must reflect best industry practice considering their technological availability and economic practicability (BPT) and achievability (BAT). Because toxic and nonconventional pollutants are controlled in the first step by BPT and in the second step by BAT, and the second level of control is “increasingly stringent” {EPA v. National Crushed Stone, 449 U.S. 64, 69 (1980)}, for simplicity of discussion, the rest of this discussion will focus on BAT. Similarly, because the BAT levels of control are BMPs and pollution prevention measures, they will also control conventional pollutants. Therefore, this discussion will focus on BAT rather than BCT or BPT for conventional pollutants. To determine technological availability and economic achievability, operators need to consider what control measures are considered “best” for their industry, and then select and design control measures for their site that are viable in terms of cost and technology. EPA believes that for many facilities minimization of pollutants in stormwater discharges can be achieved without using highly engineered, complex treatment systems. The specific limits included in Part III.B.1 emphasize effective “low-tech” controls, such as minimizing exposure to stormwater (albeit, without significantly increasing impervious surfaces), regular cleaning of outdoor areas where industrial activities may take place, proper maintenance of equipment, diversion of stormwater around areas where pollutants may be picked up, minimization of runoff through infiltration and flow dissipation practices, and effective advanced planning and training (e.g., for spill prevention and response).

Comparison to 15-MM: Updated language regarding the need for permittees to consider impacts from climate change has been included, consistent with the MSGP and 20-SW. No other significant changes have been made.

### Introduction to CWA Requirements to Control Pollutants in Discharges

The CWA requires that discharges from existing facilities, at a minimum, must meet technology-based effluent limitations reflecting, among other things, the technological capability of permittees to control pollutants in their discharges. Water quality-based effluent limitations (WQBELs) are required by CWA Section 301(b)(1)(C). Technology and water quality-based numeric limits were discussed earlier in the fact sheet. Both technology-

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<sup>3</sup> *Natural Res. Def. Council, Inc. v. EPA*, 673 F.2d 400, 403 (D.C. Cir. 1982) (noting that “section 502(11) defines ‘effluent limitation’ as ‘any restriction’ on the amounts of pollutants discharged, not just a numerical restriction”; holding that section of CWA authorizing courts of appeals to review promulgation of “any effluent limitation or other limitation” did not confine the court’s review to the EPA’s establishment of numerical limitations on pollutant discharges, but instead authorized review of other limitations under the definition) (emphasis added). In *Natural Res. Def. Council, Inc. v. Costle*, 568 F.2d 1369 (D.C. Cir. 1977), the D.C. Circuit stressed that when numerical effluent limitations are infeasible, EPA may issue permits with conditions designed to reduce the level of effluent discharges to acceptable levels.



based and water quality-based effluent limitations are implemented through NPDES permits. CWA Sections 301(a) and (b).

*The Department's Authority to Include Non-Numeric Technology-Based Limits in NPDES Permits*

The BPJ limits in this permit are in the form of non-numeric requirements. Under EPA's regulations, non-numeric effluent limits are authorized in lieu of numeric limits, where "[n]umeric effluent limitations are infeasible." 40 CFR §122.44(k)(3). As far back as 1977, courts have recognized that there are circumstances when numeric effluent limitations are infeasible and have held that EPA may issue permits with conditions (e.g., BMPs) designed to reduce the level of effluent discharges to acceptable levels. *Natural Res. Def. Council, Inc. v. Costle*, 568 F.2d 1369 (D.C.Cir.1977).

Through the Agency's NPDES permit regulations, EPA interpreted the CWA to allow BMPs to take the place of numeric effluent limitations under certain circumstances. 40 CFR §122.44(k), entitled "Establishing limitations, standards, and other permit conditions (applicable to State NPDES programs ...)," provides that permits may include BMPs to control or abate the discharge of pollutants when: (1) "[a]uthorized under section 402(p) of the CWA for the control of stormwater discharges"; or (2) "[n]umeric effluent limitations are infeasible." 40 CFR §122.44(k).

The EPA has further justified the approach of non-numeric standards by referencing the Sixth Circuit cited to *Natural Res. Def. Council, Inc. v. EPA*, 673 F.2d 400, 403 (D.C.Cir.1982) noting that "section 502(11) [of the CWA] defines 'effluent limitation' as 'any restriction' on the amounts of pollutants discharged, not just a numerical restriction."

EPA, and in turn the Department, have substantial discretion to impose non-quantitative permit requirements pursuant to Section 402(a)(1)), especially when the use of numeric limits is infeasible. See *NRDC v. EPA*, 822 F.2d 104, 122-24 (D.C. Cir. 1987) and 40 CFR §122.44(k)(3).

*EPA's Decision to Include Non-Numeric Technology-Based Effluent Permit Limits*

Numeric effluent limitations are not always feasible for industrial stormwater discharges as such discharges pose challenges not presented by the vast majority of NPDES-regulated discharges. Stormwater discharges can be highly intermittent, are usually characterized by very high flows occurring over relatively short time intervals, and carry a variety of pollutants whose source, nature and extent varies. See 55 FR at 48,038; 53 FR at 49,443. This is in contrast to process discharges from a particular industrial or commercial facility where the effluent is more predictable and can be more effectively analyzed to develop numeric effluent limitations. To develop numeric technology-based effluent limitations, EPA generally obtains efficacy data concerning removals achieved from representative facilities employing the technology viewed as representing the BAT level of control. Even in this situation, there is some variability in performance at facilities properly using the BAT levels of control and EPA is often subject to challenge that it did not sufficiently take into account the variability that occurs even in a well-controlled discharge. In other words, facilities argue that the numeric effluent limits cannot be met even when they are properly operating BAT levels of control.

The variability of effluent and efficacy of appropriate control measures makes setting uniform effluent limits for stormwater extremely difficult. The record for this permit indicates that there is a high level of variability among discharges, in terms of both flow rates and volumes and levels of pollutants, since the volume and quality of stormwater discharges associated with industrial activity depend on a number of factors, including the industrial activities occurring at the facility, the nature of precipitation, and the degree of surface imperviousness. Due to the dissimilarity among the 26 different industrial sectors covered by this permit, and

among the individual facilities within the different industrial sectors, the sources of pollutants in stormwater discharges differ with the type of industry operation and specific facility features. For example, material storage operations may be a significant source of pollutants at some facilities, shipping and receiving areas at others, while runoff from such areas at other facilities may result in insignificant levels of pollutants. Additionally, because it is often not reasonable to use traditional wastewater treatment technologies to control industrial stormwater discharges due to the absence of a steady flow of wastewater, control measures for such discharges tend to focus on pollution prevention and BMPs. In addition, the same set of pollution prevention measures or BMPs typically is not appropriate for all the different types of facilities and discharges covered by this permit. The pollutant removal/reduction efficacies of these pollution prevention and BMP-based control measures are not amenable to the type of comparative analyses conducted for non-stormwater treatment technologies and used to set numeric limits. While EPA continues to study the efficacy of various types of pollution prevention measures and BMPs, EPA at this time does not have a record basis for developing numeric limits that would reasonably represent a well-run application of BMPs. Because the flow and content is so variable, if EPA had tried to base numeric limits on a few sites, it is likely that any number it would develop would not to be technologically available and economically achievable by all well-run facilities.

These factors create a situation where, at this time, it is generally not feasible for the Department or the EPA, to calculate numeric effluent limitations, with the limited exception of certain effluent limitations guidelines that have already been established through national rulemaking. For example, covering exposed areas where feasible and cleaning them regularly where they are not covered may be an effective way of significantly reducing stormwater pollutant discharges, but the degree of pollutant reduction will be highly site-specific and cannot be generally quantified. Therefore, EPA had determined that it is not feasible for the Agency to calculate numeric, technology-based limits for many of the discharges covered under their MSGP permit and, based on the authority of 40 CFR §122.44(k), had chosen to adopt non-numeric effluent limits. The Department agrees with this approach and has followed suit with this permit.

The BAT/BPT/BCT effluent limits in this permit are expressed as specific pollution prevention requirements for minimizing the pollutant levels in the discharge. In the context of this general permit, these requirements represent the best technologically available and economically practicable and achievable controls. EPA has long maintained that the combination of pollution prevention approaches and structural management practices required by these limits are the most environmentally sound way to control the discharge of pollutants in stormwater runoff from industrial facilities to meet the effluent limits. This approach is supported by the results of a comprehensive technical survey<sup>4</sup> EPA completed in 1979. Pollution prevention continues to be the cornerstone of the NPDES stormwater program.

#### *Control Measures Used to Meet the Technology-Based Effluent Limits*

The Department generally does not mandate the specific control measures operators must select, design, install and implement. It is up to the operator to determine what must be done to meet the applicable effluent limits. For example, Part III.B.1.i requires operators to minimize the exposure of raw, final and waste materials to stormwater and runoff. How this is achieved will vary by facility: For some facilities, some or all activities may

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<sup>4</sup> This survey found that two classes of management practices are generally employed at industrial facilities to control the non-routine discharge of pollutants from sources such as stormwater runoff, drainage from raw material storage and waste disposal areas, and discharges from places where spills or leaks have occurred. The first class of management practices includes those that are low in cost, applicable to a broad class of industries and substances, and widely considered essential to a good pollution control program. Some examples of practices in this class are good housekeeping, employee training, and spill response and prevention procedures. The second class includes management practices that provide a second line of defense against the release of pollutants. This class addresses containment, mitigation, and cleanup.

be moved indoors, while for others this will not be feasible. However, even for the latter, many activities may be moved indoors, others may be “covered” by roofing or tarps, while still other activities may be limited to times when exposure to precipitation is not likely. Each of these control measures is acceptable and appropriate in some circumstances. In this respect, the non-numeric effluent limits in this permit are analogous to more traditional numeric effluent limits, which also do not require specific control technologies as long as the limits are met.

Control measures can be actions (including processes, procedures, schedules of activities, prohibitions on practices and other management practices), or structural or installed devices to prevent or reduce water pollution. They can be just about anything that “does the job” of preventing deleterious substances from entering the environment, and of meeting applicable limits. In this permit, industrial facility operators are required to select, design, install, and implement site-specific control measures to meet these limits. Most industrial facilities already have such control measures in place for product loss prevention, accident and fire prevention, worker health and safety or to comply with other environmental regulations. The permit along with this fact sheet provides examples of control measures, but operators must tailor these to their facilities as well as improve upon them as necessary to meet permit limits. The examples emphasize prevention over treatment. However, sometimes more traditional end-of-pipe treatment may be necessary, particularly where a facility might otherwise cause or contribute to a violation of water quality standards.

There are many control measures that could be used to meet the limits in this permit. In addition to the Department’s Design Manual, the following are helpful resources for developing and implementing control measures for a facility:

- Sector-specific Industrial Stormwater Fact Sheet Series
  - <https://mdewwp.page.link/MMGuidance>
- Maryland’s Erosion and Sediment Control Handbook
  - <https://mdewwp.page.link/ESCStds>
- Stormwater Design Manual
  - <https://mdewwp.page.link/MDSWDesign>

### Control Measures (Part III.B.1)

Part III.B.1 requires the operator to select, design, install and implement control measures to meet the technology-based effluent limits listed in Part III.B.1.b. The selection, design and implementation of these other control measures must be in accordance with good engineering practices and manufacturer’s specifications. Regulated stormwater discharges from the facility include stormwater run-on that commingles with stormwater discharges associated with industrial activity at the facility. If operators find their control measures are not reducing pollutant discharges adequately, the control measures must be modified as expeditiously as practicable.

Purpose: Part III.B.1 establishes the requirements for selecting, designing and implementing control measure practices to meet the technology-based effluent limitations in this permit.

As defined in this permit, control measures include best management practices (BMPs), which are used to meet a permit limit, but which are not, themselves, limits. In some permits BMPs are the effluent limits, while in other permits BMPs are measures implemented to meet effluent limits. In this version of the 15-MM, effluent limits are defined in Parts III.B.1.b, Parts III.B.2., and III.B.1.a contain the requirements for selecting control measures (including BMPs) to meet the effluent limits in Part III.B.

The approach to control measures in the permit is consistent with the CWA as well as its implementing regulations at 40 CFR §122.44(k)(4). Section 402(a)(2) of the CWA states: “The administrator shall prescribe conditions for such permits to assure compliance with the requirements in paragraph (1) . . . including conditions on data and information collection, reporting and such other requirements as he deems appropriate.” (Section 402(a)(1) includes effluent limitation requirements.) This statutory provision is reflected in the CWA implementing regulations, which state that control measures can be included in permits when, “[t]he practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA.” 40 CFR §122.44(k)(4). In this permit, and as contemplated by the statute and regulations, requirements that pertain to the selection, design and implementation of control measures are practices necessary to meet limits, but are not limits themselves.

Changes from the 15-MM: As mentioned previously, the main changes in this part have to do with climate adaption.

#### Control Measure Selection and Design Considerations (Part III.B.1.a)

In Part III.B.1.a operators are required to consider certain factors when selecting control measures, including:

- preventing stormwater from coming into contact with polluting materials is generally more effective and less costly than trying to remove pollutants from stormwater;
- using combinations of control measures is more effective than using control measures in isolation for minimizing pollutants;
- assessing the type and quantity of pollutants, including their potential to impact receiving water quality, is critical to determining which control measures will achieve the limits in this permit;
- minimizing impervious areas at your facility and infiltrating runoff onsite (via bioretention cells, green roofs, pervious pavement, etc.) can reduce runoff, and improve groundwater recharge and stream base flows in local streams (although care must be taken to avoid groundwater contamination);
- attenuating flow using open vegetated swales and natural depressions to reduce in-stream impacts of erosive flows;
- conserving and restoring riparian buffers will help protect streams from stormwater runoff and improve water quality; and
- using treatment interceptors (e.g., swirl separators, oil-water separators, sand filters) may be appropriate in some instances to minimize the discharge of pollutants.
- (NEW) 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.

Purpose: III.B.1.a provides permittees with important considerations for the selection of control measures. The source of these considerations was originally the EPA MSGP, and the considerations are considered best in class. These same considerations are included in each of the Department’s stormwater permits.

#### Technology-Based Effluent Limits (BPT/BAT/BCT): Non-Numeric Effluent Limits (Part III.B.1.b).

This permit requires permittees to comply with non-numeric technology-based effluent limits (found in Parts III.B.1.b and Appendix D of the permit) by implementing control measures. The achievement of these non-numeric limits will result in the reduction or elimination of pollutants from the operator’s stormwater discharge. Such limits constitute this permit’s technology-based limits, expressed narratively per 40 CFR §122.44(k), and are developed using best professional judgment (BPJ).

This permit uses the term “control measures” more often than “best management practices” and “BMPs”. This change was adopted to better describe the range of pollutant reduction practices that may be employed, whether they are structural, non-structural or procedural. In addition, the definition of “control measures” in Appendix E of this permit includes both BMPs and “other methods” used to prevent or reduce the discharge of pollutants to receiving waters. The greater breadth of meaning for control measures vis-à-vis BMPs is why this term is used in Part III.B.1, and throughout the permit.

The permit requires the operator to achieve all of the non-numeric effluent limits delineated in Part III.B.1.b. The following is a summary of the permit’s non-numeric technology-based effluent limits:

*Minimize Exposure to Stormwater (Part III.B.1.b.i).* To the extent technologically available and economically practicable and achievable, locate industrial materials and activities inside or protect them with storm-resistant coverings. This is one of the most important control options. Minimizing exposure prevents pollutants from coming into contact with precipitation and can reduce the need for control measures to treat or otherwise reduce pollutants in stormwater runoff. Examples include covering materials or activities with temporary structures (e.g., tarps) when wet weather is expected or moving materials or activities to existing or new permanent structures (e.g., buildings, silos, sheds). Even the simple practice of keeping a dumpster lid closed can be very effective. While the permit requires consideration of exposure minimization, the Department does not recommend significantly increasing impervious surfaces to achieve it. In minimizing exposure, the permittee should pay particular attention to manufacturing, processing, and material storage areas (including loading and unloading, storage, disposal, and cleaning, maintenance, and fueling operations).

*Good Housekeeping (Part III.B.1.b.ii).* Keep all exposed areas that are potential pollutant sources clean. Good housekeeping is an inexpensive way to maintain a clean and orderly facility and keep contaminants out of stormwater discharges. Often the most effective first step towards preventing pollution in stormwater from industrial sites simply involves using common sense to improve the facility’s basic housekeeping methods. Poor housekeeping can result in more stormwater running off a site than necessary and an increased potential for stormwater contamination. A clean and orderly work area reduces the possibility of accidental spills caused by mishandling of chemicals and equipment. Well-maintained material and chemical storage areas will reduce the possibility of stormwater mixing with pollutants.

There are some simple procedures a facility can use to meet the good housekeeping effluent limit, including improved operation and maintenance of industrial machinery and processes, improved materials storage practices, better materials inventory controls, more frequent and regular clean-up schedules, maintaining well organized work areas, and education programs for employees about all of these practices.

Examples of control measures that a permittee may implement to meet the good housekeeping effluent limit include containerizing materials appropriately, storing chemicals neatly and orderly; maintaining packaging in good condition; promptly cleaning up spilled liquids; sweeping, vacuuming or other cleanup of dry chemicals and wastes to prevent them from reaching receiving waters, and using designated storage areas for containers or drums to keep them from protruding where they can be ruptured or spilled. Proper storage techniques can include:

- Providing adequate aisle space to facilitate material transfer and easy access for inspections;
- Storing containers, drums, and bags away from direct traffic routes to prevent accidental spills;
- Stacking containers according to manufacturers’ instructions to avoid damaging the containers from improper weight distribution;

- Storing containers on pallets or similar devices to prevent corrosion of the containers, which can result when containers come in contact with moisture on the ground; and
- Assigning the responsibility of hazardous material inventory to a limited number of people who are trained to handle hazardous materials.

*Maintenance (Part III.B.1.b.iii).* Regularly inspect, test, maintain and repair or replace all industrial equipment and systems to prevent releases of pollutants to stormwater. Maintain all control measures in effective operating condition. Nonstructural control measures must also be diligently maintained (e.g., spill response supplies available, personnel trained).

Most facilities will already have preventive maintenance programs (PMPs) that provide some environmental protection. Preventive maintenance involves regular inspection and testing of equipment and operational systems to uncover conditions such as cracks or slow leaks that could cause breakdowns or failures that result in discharges of pollutants to storm sewers and surface water. To prevent breakdowns and failures operators should adjust, repair or replace equipment.

As part of a typical PMP, operators must include regular inspection and maintenance of stormwater management devices and other equipment and systems. Operators should identify the devices, equipment and systems that will be inspected; provide a schedule for inspections and tests; and address appropriate adjustment, cleaning, repair or replacement of devices, equipment and systems. For stormwater management devices such as catch basins and oil-water separators, PMPs should include the periodic removal of debris to ensure that the devices are operating efficiently. For other equipment and systems, there should be procedures to reveal and correct conditions that could cause breakdowns or failures that may result in the release of pollutants.

The PMP should include a suitable records system for scheduling tests and inspections, recording test results and facilitating corrective action. The program should be developed by qualified plant personnel who evaluate the existing plant and recommend changes as necessary to protect water quality.

*Spill Prevention and Response Procedures (Part Part III.B.1.b.iv).* Minimize the potential for leaks, spills and other releases, which are major sources of stormwater pollution, to be exposed to stormwater. The purpose of this effluent limit is not only to prevent spills and leaks but, in the event one does occur, to limit environmental damage via development of spill prevention and response procedures. Operators should identify potential spill areas and keep an inventory of materials handled, used and disposed of. Based on an assessment of possible spill scenarios, permittees must specify appropriate material handling procedures, storage requirements, containment or diversion equipment, and spill cleanup procedures that will minimize the potential for spills and, in the event of a spill, ensure proper and timely response.

Areas and activities that typically pose a high risk for spills include loading and unloading areas, storage areas, process activities, and waste disposal activities. These activities and areas, and their accompanying drainage points, must be addressed in the procedures. For a spill prevention and response program to be effective, employees should clearly understand the proper procedures and requirements and have the equipment necessary to respond to spills.

The following are suggestions to incorporate into spill prevention and response procedures:

- Install leak detection devices, overflow controls and diversion berms;
- Perform visual inspections and identify signs of wear;

- Perform preventive maintenance on storage tanks, valves, pumps, pipes and other equipment;
- Use filling procedures for tanks and other equipment that minimize spills;
- Use material transfer procedures that reduce the chance of leaks or spills;
- Substitute less toxic materials;
- Ensure that clean-up materials are available where and when needed;
- Ensure appropriate security;
- Notify emergency response agencies where necessary as specified.

In the event of a spill, it is important that the facility have clear, concise, step-by-step instructions for responding to spills. The approach will depend on the specific conditions at the facility such as size, number of employees and the spill potential of the site.

*Erosion and Sediment Controls (Part III.B.1.b.v).* Stabilize and contain runoff from exposed areas to minimize onsite erosion and sediment creation, and the accompanying discharge of pollutants (other pollutants can bind to soil and other particles and be discharged along with the sediment).

There may be exposed areas of industrial sites that, due to construction activities, steep slopes, sandy soils or other factors, are prone to soil erosion. Construction activities typically remove grass and other protective ground covers resulting in the exposure of underlying soil to wind and rain. Similarly, steep slopes or sandy soils may not be able to hold plant life so that soils are exposed. Because the soil surface is unprotected, dirt and sand particles are easily picked up by wind or washed away by rain. This erosion process can be controlled or prevented through the use of certain control measures.

To meet this limit, operators must select, design, install and implement controls to address the on-site exposed areas prone to soil erosion. Erosion control practices such as seeding, mulching and sodding prevent soil from becoming dislodged and should be considered first. Sediment control practices such as silt fences, sediment ponds, and stabilized entrances trap sediment after it has eroded. Sediment control practices, such as flow velocity dissipaters and sediment catchers, should be used to back-up erosion control practices.

*Management of Runoff (Part III.B.1.b.vi).* Operators must divert, infiltrate, reuse, contain or otherwise reduce stormwater runoff to minimize pollutants in the discharge. Employ practices that direct the flow of stormwater away from areas of exposed materials or pollutant sources. Such practices can also be used to divert runoff that contains pollutants to natural areas or other types of treatment locations.

To meet this effluent limit, operators may consider vegetative swales, collection and reuse of stormwater, inlet controls, snow management, infiltration devices, and wet detention/retention basins. If infiltration is a selected control, permittees should pay special attention to the discussion at the end of this section of the fact sheet entitled: Stormwater infiltration control measures that meet the definition of a Class V Injection Well could be subject to the Underground Injection Control (UIC) Regulations.

*Salt Storage Piles or Pile Containing Salt (Part III.B.1.b.vii).* Enclose or cover piles of salt or piles containing salt used for deicing or other industrial purposes. Implement appropriate measures to minimize the exposure of the piles during the adding to or removing from processes.

Options for meeting the salt pile effluent limit include covering the piles or eliminating the discharge from such areas of the facility. Preventing exposure of piles to stormwater or run-on also eliminates the economic loss from materials being dissolved and washed away. A permanent under-roof storage facility is the best way to

protect chemicals from precipitation and runoff, but where this is not possible, salt piles can be located on impermeable bituminous pads and covered with a waterproof cover.

*Sector-Specific Effluent Limits (Part III.B.1.b.viii).* Achieve any additional non-numeric limits stipulated in the relevant sector-specific controls in Appendix D.

*Employee Training (Part III.B.1.b.vix).* Operators 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.

Employee training programs should thoroughly educate members of the Stormwater Pollution Prevention Team (see Part III.C.1) on their roles in implementing the control measures employed to meet the limits in the permit. Training should address the processes and materials on the plant site, good housekeeping practices for preventing discharges, and procedures for responding properly and rapidly to spills or other incidents. The training program should also address other requirements in the permit such as inspections and record-keeping.

Training sessions should be conducted at least annually to assure adequate understanding of the objectives of the control measures and the individual responsibilities of each employee. More frequent training may be necessary at facilities with high employee turnover or where stormwater programs are involved or multi-faceted. Often, training could be a part of routine employee meetings for safety or fire protection. Where appropriate, contractor personnel also must be trained in relevant aspects of stormwater pollution prevention.

Training sessions should review all aspects of the control measures and associated procedures. Facilities should conduct spill or incidence drills on a regular basis which can serve to evaluate the employee's knowledge of the control measures and spill procedures and are a fundamental part of employee training. Such meetings should highlight previous spill events or failures, malfunctioning equipment and new or modified control measures.

*Non-Stormwater Discharges (Part III.B.1.b.x).* Eliminate non-stormwater discharges that are not authorized by an NPDES permit. This limit is intended to reinforce the fact that, with the exception of the allowable non-stormwater discharges listed in Part I.E.3, non-stormwater discharges are ineligible for coverage, pursuant to Part I.C. Operators needing help in finding and eliminating unauthorized discharges may find the following guidance helpful: *Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments*, Chapters 7, 8, 9 at:  
[http://www.epa.gov/npdes/pubs/idde\\_manualwithappendices.pdf](http://www.epa.gov/npdes/pubs/idde_manualwithappendices.pdf)

*Waste, Garbage, and Floatable Debris (Part III.B.1.b.xi).* Operators must ensure that waste, garbage and floatable debris are not discharged to receiving waters.

Trash and floating debris in waterways have become significant pollutants, especially near areas where a large volume of trash can be generated in a concentrated area. Trash can cause physical impairments in waterbodies to aquatic species and birds and is also visual pollution and detracts from the aesthetic qualities of receiving waters.

This effluent limit can be met through the implementation of a variety of control measures. For instance, to prevent garbage from being carried in runoff to receiving waters, there are essentially two methods of control: source control and structural control. Source control includes personnel education, improved infrastructure and cleanup campaigns. Education, such as informing employees about options for recycling and waste disposal and about the consequences of littering, is one of the best ways. Another topic that should be emphasized is



proper trash storage and disposal. Improved infrastructure can include optimizing the location, number, and size of trash receptacles, recycling bins, and cigarette butt receptacles based on expected need. Clean-up campaigns are an effective way to reduce trash. Facilities should determine whether the number and placement of receptacles are adequate and if regular maintenance activities (e.g., sweeping, receptacle servicing) are preventing litter from entering receiving waters. Structural controls include physical filtering structures and continuous deflection separation. Filtering structures concentrate diffuse, floating debris and prevent it from traveling downstream. Some examples are trash racks, mesh nets, bar screens and trash booms. Continuous deflection separation targets trash from storm flows during and after heavy precipitation.

*Dust Generation and Vehicle Tracking of Industrial Materials (Part III.B.1.b.xii).* Operators must minimize generation of dust and off-site tracking of raw, final or waste materials.

Dust control practices can reduce the activities and air movement that cause dust to be generated. Airborne particles pose a dual threat to the environment and human health. Dust carried off-site increases the likelihood of water pollution. Control measures to minimize the generation of dust include:

- **Vegetative Cover.** In areas not expected to handle vehicle traffic, vegetative stabilization of disturbed soil is often desirable. By establishing a vegetative cover, exposed soil is stabilized and wind velocity at ground level can be reduced, thus reducing the potential for dust to become airborne.
- **Mulch.** Mulching can be a quick and effective means of dust control for a recently disturbed area.
- **Wind Breaks.** Wind breaks are barriers (either natural or constructed) that reduce wind velocity through a site which then reduces the possibility of suspended particles. Wind breaks can be trees or shrubs left in place during site clearing or constructed barriers such as a wind fence, snow fence, tarp curtain, hay bale, crate wall or sediment wall.
- **Stone.** Stone can be an effective dust deterrent in areas where vegetation cannot be established.
- **Spray-on Chemical Soil Treatments (Palliatives).** Examples of chemical adhesives include anionic asphalt emulsion, latex emulsion, resin-water emulsions and calcium chloride. Chemical palliatives should be used only on mineral soils. When considering chemical application to suppress dust, determine whether the chemical is biodegradable or water-soluble and what effect its application could have on the surrounding environment, including waterbodies and wildlife.

To reduce vehicle tracking of materials, the operator should keep stored or spilled materials away from all roads within the site. Specific measures such as setting up a wash site or separate pad to clean vehicles prior to their leaving the site may be effective as well.

Purpose: Part III.B.1.b requires all operators to meet certain technology-based effluent limits through the implementation of control measures that minimize pollutants from the discharge.

#### 6.1.2 Water quality-based effluent limitations (Part III.B.2)

This permit specifies that water quality-based effluent limits (WQBELs) to control discharges as necessary to meet applicable water quality standards. The provisions of Part III.B.2 constitute the WQBELs of this permit, and supplement the permit's technology-based effluent limits in Part III.B.1. The following is a list of the permit's WQBELs:

- Control the discharge as necessary to meet applicable water quality standards in the receiving waterbody (See Part III.B.2.a);

- Comply with any additional, more stringent requirements that the Department determines are necessary to meet an applicable wasteload allocation or to further control discharges to impaired waters that do not yet have an EPA approved TMDL (See Part III.B.2.b); and
- Comply with any additional, more stringent requirements that the Department determines are necessary to comply with applicable antidegradation conditions for discharges to Tier 2 waters (see Part III.B.2.c). This language is updated to reflect resources that permittees can utilize for any expansion or work within a Tier II watershed.

Prior to or after initial discharge authorization, the Department may require additional WQBELs on a site-specific basis, or require the permittee to obtain coverage under an individual permit, if information in the NOI, required reports, or from other sources indicates that, after meeting the technology-based limits in Part III.B.1 and the WQBELs in Part III.B.2, the facility is causing or contributing to an exceedance of water quality standards.

Purpose: Part III.B.2 includes limits that are as stringent as necessary to achieve water quality standards, consistent with 40 CFR §122.44(d)(1). The Department expects that facilities that achieve the permit's technology-based limits through the careful selection, design, installation, and implementation of effective control measures are likely to already be controlling their stormwater discharges to a degree that would make additional water quality-based controls unnecessary. However, to ensure that this is the case, the permit contains additional conditions, which, in combination with the BAT/BPT/BCT limits in this permit, the Department expects to be as stringent as necessary to achieve water quality standards.

*Water Quality Standards (Part III.B.2.a).* Each permittee is required to control its discharge as necessary to meet applicable water quality standards. The Department expects that compliance with the other conditions in this permit (e.g., the technology-based limits, restoration of impervious surfaces, corrective actions, etc.) will result in discharges that are controlled as necessary to meet applicable water quality standards. If the permittee becomes aware, or the Department determines, that the discharge causes or contributes to a water quality standards exceedance, corrective actions are required. In addition, at any time the Department may impose additional, more stringent WQBELs on a site-specific basis, or require an individual permit, if information suggests that the discharge is not controlled as necessary to meet applicable water quality standards.

Purpose: The language in Part Part III.B.2.a affirms the permittee's requirement to control its discharges as necessary to meet applicable water quality standards. The Department reserves the authority to require more stringent requirements where necessary to meet applicable standards, or, alternatively, to require the permittee to apply for an individual permit.

In general, EPA and the Department believe that the effluent limits contained in this permit, combined with the other requirements concerning corrective actions, inspections, and monitoring, will control discharges as necessary to meet applicable water quality standards. For example, in waters that are not listed as "impaired," it is reasonable to conclude that permittee discharges are not causing or contributing to an exceedance of water quality standards because no exceedance of water quality standards has been identified. EPA had reviewed the 4,100 facilities covered under their MSGP 2000 and found the majority discharge to waters that are not impaired which confirms their basis for this logic for this type of industrial facility. In the case of impaired waters with an EPA approved TMDL, the permit must be consistent with the assumptions and requirements of any WLAs in the TMDL as required by 40 CFR §122.44(d)(1)(vii)(B). In impaired waters without an EPA approved TMDL, the request for coverage may be denied and coverage under an individual permit may be required. Additionally, regardless of whether a TMDL has been approved or established by

EPA, if a discharge is found to cause or contribute to an excursion above water quality standards, the permittee is required to revise the selection, design, installation, and implementation of the facility's control measures to ensure that the conditions causing the problem are eliminated and will not be repeated. See Part V.A. The Department may require the discharger to get an individual permit in this situation.

Furthermore, prior to receiving authorization for a new discharge to an impaired waterbody, the permit requires the new discharger to meet additional eligibility requirements. See Part I.C.6. Only by certifying to compliance with one of the following eligibility criteria will the new discharger be considered for authorization:

- prevent all exposure to stormwater of the pollutants for which the waterbody is impaired; or
- show that the discharger does not have the pollutant for which the waterbody is impaired present at its facility; or
- provide to the Department prior to authorization, information and data showing that the discharge will meet applicable criteria; or
- provide to the Department prior to authorization, information showing that there are sufficient remaining wasteload allocations in an EPA approved TMDL and that existing dischargers to the waterbody are subject to compliance schedules designed to bring the waterbody into attainment with water quality standards.

By certifying its compliance with one of the Part I.C.6 eligibility criterion, the new discharger will thus be demonstrating that its discharge will not cause or contribute to an excursion above applicable water quality standards

The permit contains additional protections to ensure compliance with water quality standards in its corrective action requirements. For instance, a particularly intense storm event may overwhelm one or more of the control measures employed at the site, leading to a short-term violation of the effluent limits. Alternatively, the operator may discover that a control measure installed in good faith to meet a particular purpose is not functioning as anticipated (e.g., because it is incorrectly sized for the site). The 22-MM requires that permittees adjust their control measures during the permit term to respond to any such unanticipated event or deficiency. In this way, the operator may improve upon the initial selection, design, installation, or implementation of control measures to further ensure that its discharges are controlled as necessary to meet applicable water quality standards.

Activities that may trigger a need for corrective action include:

- Routine facility inspections (Part V.A.1);
- Discharge that exceeds a numeric limit (Appendix D tables);
- Quarterly visual assessments (Part V.A.3);
- Comprehensive site inspections (Part V.A.2), including annual reports summarizing such inspections submitted pursuant to Part V.A.2.b. A copy of the documentation from all inspections and evaluations onsite must be kept with the SWPPP (Part III.C.8.g);
- Required monitoring for benchmarks; or
- Addressing Natural Background Pollutant Levels.

The Department may review a permittee's determination that a benchmark exceedence is based solely on natural background concentrations, and disallow the exception if it finds the documentation inadequate

Purpose: EPA's experience found that natural background levels were the specific cause of several permittee's benchmark exceedences. In these instances, when industrial activity was not contributing to the pollutant

concentrations causing these exceedances, EPA provided permittees an option to discontinue benchmark monitoring. This waiver was only available for benchmark monitoring.

Information suggestive that the control measures are not stringent enough meet the water quality standards.

This language clarifies the Department's expectation that the other conditions in this permit will result in discharges being controlled as necessary to meet applicable standards. However, if through monitoring, inspections, reports, etc., the Department determines that stormwater discharges are not being controlled as necessary to meet water quality standards, the Agency may impose additional requirements or require the permittee to apply for an individual permit.

*Discharges to Water Quality Impaired Waters (Part III.B.2.b).* This provision defines "impaired waters" as those which have been identified by the State pursuant to Section 303(d) of the CWA as not meeting applicable State water quality standards. This may include both waters with EPA approved TMDLs, and those for which a TMDL has not yet been approved or established.

Purpose: To include consistent determination of additional requirements for discharges to "impaired waters" so that the scope of the requirements in Part III.B.2.b can be more readily understood by permittees.

*Existing Discharge to an Impaired Water (Part III.B.2.b).* The Department periodically reviews discharges to impaired waters, either with or without an approved TMDL. Where an operator indicates on its NOI that the discharge is to one of these waters and a TMDL isn't established, the Department can use this information in process of addressing the impaired status of that waterbody. Where an operator indicates on its NOI that the discharge is to one of these waters and a TMDL is established, the Department will review the applicable TMDL to determine as a threshold matter whether the TMDL includes requirements that apply to the individual discharger or its industrial sector. The Department can determine whether any more stringent requirements are necessary to comply with the WLA, whether compliance with the existing permit limits is sufficient, or, alternatively, whether an individual permit application is necessary. If the Department determines that additional requirements are necessary, public comment would be sought on the proposed limits and either incorporated the final limits as site-specific terms in this general permit or issue a specific individual permit.

Purpose: The purpose of Part III.B.2.b is to require compliance with applicable requirements in a TMDL and to clarify for the permittee how they will know when such requirements apply. These provisions are intended to implement the requirements of 40 CFR §122.44(d)(1)(vii)(B), which requires that water quality based effluent limits "are consistent with the assumptions and requirements of any available wasteload allocation for the discharge ... ." Because WLAs for stormwater discharges may be specified in many different formats, the Department believes that it has not always been clear to permittees in the past what they need to do to comply with applicable WLAs. The Department has thus included this Part to ensure that these requirements are properly interpreted and communicated to the permittee in way that can be implemented.

*Tier II Antidegradation Requirements for New or Increased Discharges (Part III.B.2.c).* This provision requires that any new permittee with a discharge, or any existing permittee determined to have an increased discharge<sup>5</sup>, directly to waters designated by the State as Tier II as defined in Appendix E of the permit, for antidegradation purposes must comply with any additional requirements and procedures that the Department determines are necessary to comply with the applicable State or Federal antidegradation requirements. The Department may also notify the permittee that they cannot be covered under the 22-MM due to the unique characteristics of the

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<sup>5</sup> In general, any existing discharger required to notify the Department of an increased discharge consistent with Part VI.B will be considered for the potential to have an increased discharge.

discharge or the receiving waters, in light of the applicable antidegradation policy, and that they must apply for an individual permit. Conversely, if EPA does not notify the permittee that additional antidegradation requirements must be met, the permittee is authorized to discharge under the permit. At this time there are no Maryland waters designated as Tier III, outstanding national resource waters, as defined in 40 CFR §131.12(a)(3), which are not eligible for coverage under the General permit.

Purpose: This provision implements applicable antidegradation requirements. For background, State water quality standards are required to contain an antidegradation policy pursuant to 40 CFR §131.12. In addition, the State is required to identify implementation methods that, at a minimum, provide a level of protection that is consistent with the Federal antidegradation provisions. Waters designated as "Tier II" by the State can generally be described as follows:

Tier II protects "high quality" waters -- water bodies where existing conditions are better than necessary to support CWA §101(a)(2) "fishable/swimmable" uses. The process for making this determination is what is commonly known as "Tier 2 review." The essence of a Tier 2 review is an analysis of alternatives to the discharge. 63 Fed. Reg. 36, 742, 36,784 (col. 1)(July 8, 1998). In no case may water quality be lowered to a level that would interfere with existing or designated uses. 40 CFR §131.12(a)(1), §122.44(d). States have broad discretion in identifying Tier 2 waters. 63 Fed. Reg. at 36,782-83. In addition, States and Tribes may adopt what is known as a "significance threshold." A "significance threshold" is a de minimis level of lowering of water quality below which the effects on water quality do not require Tier II review. *Id.* at 36,783.

The conclusion that compliance with the permit will generally meet the Tier II antidegradation requirements depends on several key aspects of the permit. First, all dischargers subject to this permit are required to meet the stringent technology-based effluent limits set out in Parts III.B.1. These effluent limits, which dischargers must comply with through the implementation of stormwater best management practices (BMPs) chosen in light of best industry practice are equivalent to the best available control technology economically achievable (BAT), best conventional control technology (BCT), and best practicable control technology (BPT) limits for discharges from the type of industrial activities covered by the 15-MM. All permittees are required to comply with these non-numeric effluent limits, set out in Part III.B.1.a.

Through compliance with these limits alone, the Department expects that the discharge of pollutants will be reduced and/or eliminated so that there should not be a lowering of water quality. This conclusion is based in part on the standard by which permittees are required to select, design, install, and implement the control measures to be used to meet these non-numeric effluent limits. Parts III.B and III.B.1 of the permit require the selection, design, installation, and implementation of control measures that are technologically available and economically practicable and achievable in light of best industry practice to reduce and/or eliminate pollutants in the stormwater discharge. Furthermore, once installed and implemented, the permittee is obligated to maintain control measures regularly and to correct deficiencies where sampling or inspection determines that deficiencies exist. Lastly, where the Department determines through its oversight activities (e.g., onsite inspection) that a discharger is not meeting its Part III.B.1.a limits, such a deficiency will constitute a violation of the permit and will require follow-up corrective action pursuant to Part V.A.

Additionally, where the implementation of the technology-based requirements in this permit are not sufficient to protect the applicable receiving water's water quality standards, the permittee is subject to further water quality-based effluent limits (WQBELs). See generally Part III.B.2. Also, the Department may inform the permittee that an individual permit is necessary. Both the technology-based effluent limitation guidelines-based limits and the WQBELs serve as additional layers of protection.

Third, there may very well be individual cases where the Department determines that further controls are necessary or that coverage under the 22-MM is no longer appropriate to protect the Tier II status of the receiving water. For this reason, the Department has included the following language in Part III.B.2.c: “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.” It is anticipated that if the Department decides to either change the terms of coverage or terminate 22-MM coverage for a particular new or increased discharger, that facility may be required to undergo Tier II review.

## **6.2 Stormwater Pollution Prevention Plan (SWPPP) (Part III.C)**

Part III.C of the permit requires the discharger to develop a SWPPP to document the specific control measures dischargers will use to meet the limits contained in Part III.A and Part III.B of the permit, as well as documenting compliance with other permit requirements (e.g., monitoring, recordkeeping, reporting). The SWPPP itself does not contain effluent limits; rather it constitutes a tool to assist both the permittee and inspectors in ensuring and documenting that effluent limits are met. This documentation must be kept up-to-date. Where control measures are modified or replaced, for instance in response to a Part IV.A triggering condition, such changes must be documented in the SWPPP. See Part III.C.8. If permittees fail to develop and maintain an up-to-date SWPPP, they will have violated the permit. This recordkeeping violation is separate and distinct from a violation of any of the other substantive requirements in the permit (e.g., effluent limits, corrective action, inspections, monitoring, reporting, and sector-specific requirements).

To be covered under this permit, the initial SWPPP must be completed prior to submitting an NOI for permit coverage. Doing so helps to ensure that permittees have (1) taken steps to identify all sources of pollutant discharges in stormwater and (2) implemented appropriate control measures to control these discharges in advance of permit coverage. Part III.C of the permit contains most of the required elements to be documented in the SWPPP; however, sector-specific requirements are also included in Appendix D of this permit.

Generally, permittees must document the following: (1) the establishment of a stormwater pollution prevention team; (2) a description of the site; (3) summary of potential pollutant sources; (4) description of control measures; and (5) monitoring and inspection procedures (including schedules).

For permittees covered under a previous 15-MM, their existing SWPPP must be reviewed and modified, as necessary, to comply with the permit.

The SWPPP prepared under this permit must address specific requirements. Separate effluent limitations (Part III.A and III.B) and SWPPP requirements (Part III.C) clarifies the distinction between required controls and planning documents.

Permittees may choose to reference other documents in the SWPPP rather than recreating the same text in the SWPPP; however, when referencing other documents, the permittees are responsible for ensuring their SWPPP and the other documents together contain all the necessary elements for a complete SWPPP. In addition, permittees must ensure that a copy of the referenced document is located on-site.

For example, allowances apply to other program documents such as Spill Prevention, Control and Countermeasure (SPCC) Plans. The Department strongly recommends that, regardless of whether all required SWPPP components are combined into one document, an index be kept which identifies where individual SWPPP components are addressed.

### 6.2.1 Pollution Prevention Team (Part III.C.1)

Developing a SWPPP requires that a qualified individual or team of individuals be identified as responsible for developing and revising the facility's SWPPP. Additionally, this team is responsible for implementing and maintaining the control measures to meet effluent limits, and taking corrective action where necessary. Team members should be chosen for their expertise in the relevant departments at the facility to ensure that all aspects of facility operations are considered in developing the plan. The SWPPP must clearly describe the responsibilities of each team member to ensure that each aspect of the plan is addressed. The Department expects most permittees will have more than one individual on the team, except for small facilities with relatively simple plans and/or staff limitations. The permit requires that team members have ready access to any applicable portions of the SWPPP and the permit.

Purpose: Identification of a stormwater pollution prevention team ensures that appropriate persons (or positions) are identified as necessary for developing and implementing the plan. Inclusion of the team in the plan provides notice to facility staff and management (i.e., those responsible for signing and certifying the plan) of the responsibilities of certain key staff for following through on compliance with the permit's conditions and limits.

### 6.2.2 Site Description (Part III.C.2)

The SWPPP must describe activities, materials, and physical features of the facility that may contribute significant amounts of pollutants to stormwater runoff or, during periods of dry weather, result in pollutant discharges through the municipal separate storm sewers or stormwater drainage systems that drain the facility. The SWPPP must also contain both a general location map of the site that shows the location of the facility in relationship to receiving waters and other geographical features, and a more detailed site map that contains information on facility/site characteristics that affect stormwater runoff quality and quantity. For areas of the facility that generate stormwater discharges with a reasonable potential to contain significant amounts of pollutants, the map must indicate the probable direction of stormwater flow and the pollutants likely to be in the discharge. Flows with a significant potential to cause soil erosion also must be identified. The site map must also include locations of: existing structural control measures; receiving waters; stormwater conveyances, inlets and outfalls; potential pollutant sources; past significant spills or leaks; stormwater monitoring points; municipal separate storm sewer systems; and locations and sources of run-on to the operator's site (see permit language for complete list of required items). To improve readability of the map, some detailed information may be kept as an attachment to the site map and pictures may be included as deemed appropriate.

Purpose: A detailed site description assists permittees in subsequent efforts to identify and set priorities for the selection, design, and implementation of measures taken to meet effluent limits and in identifying necessary changes in materials, materials management practices, or site features.

### 6.2.3 Summary of Potential Pollutant Sources (Part III.C.3)

This permit requires permittees to identify potential sources of pollutants in stormwater resulting from exposure of industrial activities to stormwater. In addition, permittees must document in their SWPPP any allowable non-stormwater discharges that are released. The permit and the NPDES regulations at 40 CFR §122.26(b)(14)

define “stormwater discharges associated with industrial activities” to include, but not be 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 (as defined at part 401 of this chapter); 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. The term “stormwater discharges associated with industrial activity” 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.

Additionally, the term “material handling activities” is defined in the permit to include storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, final product, by-product or waste product.

Part III.C.3 is only applicable to those parts of the site for which the permittee is covered under this permit. For example, a site that discharges stormwater to an area of the site covered by a different NPDES permit, is not required to identify the specific activities occurring in that area. The Department does expect permittees to clearly identify those areas of the site and describe why they need not be covered under this permit.

When identifying potential pollutant sources at the site, permittees must consider industrial stormwater from the following sources:

#### *6.2.3.1 Activities in the Area (Part III.C.3.a)*

This description must include a list of the industrial activities at the facility, including any co-located industrial activities that may be exposed to stormwater.

#### *6.2.3.2 Pollutants (Part III.C.3.b)*

For each of the industrial activities described above, operators must document the associated pollutants or pollutant constituents (e.g., chemical oxygen demand, total suspended solids). 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 the permittee prepares or amends its SWPPP as well as any additional significant materials that the permittee plans to use during the life of the permit.

EPA defines “significant materials” at 40 CFR §122.26(b)(12) as including but 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; any chemical the permittee is required to report pursuant to Section 313 of Title III or SARA; fertilizers; pesticides; and waste products such as ashes, slag and sludge that have the potential to be released with stormwater discharges.

CERCLA Section 101(14) defines “hazardous substance” to include: (A) any substance designated pursuant to Section 311(b)(2)(A) of the Federal Water Pollution Control Act (also known as the Clean Water Act (CWA)); (B) any element, compound, mixture, solution, or substance designated pursuant to Section 102 of CERCLA; (C) any hazardous waste having the characteristics identified under or listed pursuant to Section 3001 of the Solid Waste Disposal Act (also known as the Resource Conservation and Recovery Act or RCRA); (D) any



toxic pollutant listed under CWA Section 307(a); (E) any hazardous air pollutant listed under Section 112 of the Clean Air Act; and (F) any imminently hazardous chemical substance or mixture with respect to which the Administrator has taken action pursuant to Section 7 of the Toxic Substances Control Act. The list of CERCLA hazardous substances is provided in 40 CFR §302.4.

*Spills and Leaks (Part III.C.3.c)*

The SWPPP must include a list of any significant spills and leaks of pollutants that occurred in the 3 years prior to the date the SWPPP was developed or amended. New owners of existing facilities should, to the extent practicable, identify any significant spills or leaks attributable to past owners. Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of quantities that are reportable under Section 311 of the CWA (see 40 CFR §110.10 and 40 CFR §117.21) or Section 102 of CERCLA (see 40 CFR §302.4). Significant spills may also include releases of materials that are not classified as oil or hazardous substances. The list of significant spills and leaks should include a description of the causes of each spill or leak, the actions taken to respond to each release, and the actions taken to prevent similar spills or leaks in the future. This effort will aid operators in developing spill prevention and response procedures and any additional procedures necessary to fulfill the requirements set forth in Part III.B.1.b.iv of the permit.

As required in Part III.C.8 of this permit, any spills or leaks that occur while covered under this permit must be documented. Documenting spills does not relieve permittees of any reporting requirements established in 40 CFR §110, 40 CFR §117, and 40 CFR §302, or any other statutory requirements relating to spills or other releases of oils or hazardous substances.

*Non-Stormwater Discharges (Part III.C.3.d)*

Each SWPPP must include documentation that all unauthorized discharges have been eliminated. The documentation must include the date of any evaluation, and describe any test or evaluation conducted to detect such discharges, the results of those evaluations. Acceptable test or evaluation techniques include dye testing, television surveillance, visual observation of outfalls or other appropriate locations during dry weather, water balance calculations, and analysis of piping and drainage schematics. A combination of these mechanisms may be necessary to complete a thorough evaluation. In general, smoke tests should not be used for evaluating the discharge of non-stormwater to a municipal separate storm sewer as many sources of non-stormwater typically pass through a trap that may limit the effectiveness of the test. When unauthorized discharges are discovered, the documentation must also include a description of how those discharges were eliminated.

Common unauthorized discharges and common resolutions include: re-routing sanitary wastes (e.g., sinks, drinking fountains, toilets) to sanitary sewer systems; obtaining an appropriate NPDES permit for cooling water or industrial process wastewater discharges; capping or plugging floor drains; and prohibiting practices such as paint brush washing or wash bucket dumping into storm drain inlets.

Where an allowable non-stormwater discharge has been identified, the permittee must document in the SWPPP the location of that discharge and the appropriate control measures implemented to meet limits. In many cases, the same types of controls for contaminated stormwater would suffice, but the nature and volume of potential pollutants in the non-stormwater discharges must be taken into consideration in selecting controls.

*Salt Storage (Part III.C.3.e)*

The SWPPP must identify any storage piles containing salt, including piles that only contain salt as a portion of the mixture in the pile, used for deicing or other commercial or industrial purposes.

*Sampling Data (Part III.C.3.f)*

A summary of all existing data on the quality or quantity of stormwater discharges collected from the facility during the previous permit term must be described in the SWPPP. New dischargers must provide a summary of any available stormwater discharge sampling data they may have, including the methods used to collect the data and the sample collection location. These data may be useful for locating sources and causes of stormwater pollutants.

Purpose: Identification of sources of pollutants in stormwater is critical for selecting source control practices at the site necessary for meeting permit limits. Information provided in this section of the SWPPP will help facility operators identify potential pollutants of concern on-site through a comprehensive assessment of existing conditions and available information.

6.2.4 Description of Control Measures to Meet Effluent Limits (Part III.C.4)

*Control Measures to Meet Technology-Based and Water Quality-Based Effluent Limits (Part III.C.4).* A permittee must describe in its SWPPP the control measures it has implemented at its site to achieve each of the effluent limits in Parts III.B.1, and III.B.2, and to address any stormwater run-on that commingles with discharges covered under this permit. The description of the control measures implemented to meet the effluent limits must include a brief explanation of the measures implemented at the site, including how the Part III.B.1.a selection and design considerations were followed.

Purpose: To demonstrate how the operator specifically plans to meet the applicable Schedules and Procedures – Pertaining to Control Measures Used to Comply with the Effluent Limits in Part III.B (Part III.C.5.a)

The permit identifies specific information that must be documented in the SWPPP. The Department emphasizes that ALL control measures implemented to meet the Part III.B limits must be documented in the SWPPP.

In addition to the description to the on-the-ground control measures implemented to meet the effluent limits, the permit requires certain schedules and procedures to be documented in the SWPPP. The following items are specifically identified in the Part III.C.4 permit language:

*Good Housekeeping (see also Part III.B.1.b.ii or Appendix D).* Include a schedule for pickup and disposal of waste materials, along with the frequency of inspections for leaks and conditions of drums, tanks and containers.

*Maintenance (see also Part III.B.1.b.iii or Appendix D).* Describe the preventive maintenance program, including how the following will be addressed: regular inspections, testing, maintenance, repair of all industrial equipment and systems to avoid situations that may result in leaks, spills, and other releases, and back-up practices in place should a runoff event occur while a control measure is off-line.

*Spill Prevention and Response Procedures (see also Part III.B.1.b.iv or Appendix D).* Describe areas and activities that typically pose a high risk for spills including loading and unloading areas, storage areas, process areas, and waste disposal activities and identify corresponding outfalls. Also, describe appropriate material handling procedures, storage requirements, containment or diversion equipment, and spill cleanup procedures

that will minimize the potential for spills, or in the event of a spill, enable proper and timely response. Describe which employees are to be trained on proper procedures and requirements and which are responsible for ensuring that appropriate equipment is available to respond to spills.

*Erosion and Sediment Control (see also Part III.B.1.b.v or Appendix D).* Describe areas that, due to topography, activities, soils, cover materials, or other factors have a high potential for significant soil erosion. The SWPPP must describe measures that are implemented to limit erosion in these areas.

*Management of Runoff (see also Part III.B.1.b.vi or Appendix D).* Describe the stormwater management practices that divert, infiltrate, reuse, or otherwise manage stormwater runoff that reduce the discharge of pollutants.

*Employee Training (see also Part III.B.1.b.ix or Appendix D).* Describe how personnel are to be trained and their responsibilities. The SWPPP must include a schedule for conducting this training.

#### 6.2.5 Schedules and Procedures (Part III.C.5.b)

This permit requires permittees to document in the SWPPP monitoring and inspection procedures that will be followed. For monitoring activities, the permittee must document in the SWPPP information such as locations where samples are to be collected, person(s) or position(s) responsible for collecting those samples, the frequency of sampling and the parameters to be sampled, applicable control values at each sample location, and procedures that will be followed to gather storm event data.

If an operator chooses to use the substantially identical outfall exception, he/she is required to describe in the SWPPP the locations of each of these outfalls, the general industrial activities conducted in the drainage area of each outfall, the control measures being implemented for each outfall, the exposed materials that are likely to be a significant contributor of pollutants to the stormwater discharge, an estimate of the runoff coefficient of the drainage area, and why the outfalls are expected to discharge substantially identical effluents.

For inspection activities, permittees must document procedures for performing the three types of inspections specified in the permit, namely, routine facility inspections (Part V.A.1), quarterly visual assessments (Part V.A.3), and Comprehensive Site Inspections (Part V.A.2). For each of these types of inspections, the SWPPP must include information such as person(s) or position(s) performing inspections, the inspection schedule, and specific items to be covered by the inspection.

Purpose: The Agency is requiring these documentation provisions to help ensure that appropriate monitoring and inspection procedures consistent with permit requirements are implemented. EPA believes documenting these activities will help to improve facility compliance with the requirements.

#### 6.2.6 Signature Requirements (Part III.C.6)

This permit requires the permittee to sign and date the SWPPP consistent with procedures detailed in Part II.C.2 (standard permit condition for signatory requirements).

Purpose: This requirement is consistent with standard NPDES permit conditions described in 40 CFR §122.22 and is intended to ensure that the permittee understands its responsibility to create and maintain a complete and accurate SWPPP. Permittees are allowed to appoint an authorized representative consistent with the regulations. Therefore, if a facility feels it is more appropriate for a member of the stormwater pollution

prevention plan team to sign the documentation, that option is available under the permit. The signature requirement includes an acknowledgment that there are significant penalties for submitting false information.

#### 6.2.7 Required SWPPP Modifications (Part III.C.7)

This permit requires that the SWPPP be updated whenever any of the triggering conditions for corrective action in Part IV.A occur, or when a review following the triggering conditions in Part IV.B indicates that changes to the permittee's control measures are necessary to meet the effluent limits in this permit. The permit requires that the SWPPP be signed and dated by an authorized representative each time it is modified. Changes to the SWPPP must be made in accordance with Parts IV.C and IV.D.

It is important to note that failure to update the SWPPP in accordance with Part III.C.7 is a recordkeeping violation, not a violation of an effluent limit. For example, if the permittee changes its maintenance procedures, but fails to update its SWPPP to reflect these changes, a recordkeeping violation will result. The permittee must revise its SWPPP to reflect the new maintenance procedures and include documentation of the corrective action to return to full compliance.

Purpose: Part III.C.7 requires that the SWPPP document be modified, and signed and dated by the operator, whenever any of the listed scenarios occur. This requirement ensures that the SWPPP document will be kept up to date.

#### 6.2.8 Documentation Requirements (Part III.C.8)

This permit requires that a copy of the SWPPP be kept at the facility and be immediately available to representatives of the State, or a local stormwater agency (e.g., MS4 operator), as well as representatives of the Services at the time of an on-site inspection or upon request. Part III.C.8 also includes a list of documents, findings, activities, and information that must be kept with the permittee's SWPPP. See permit language for details.

Purpose: The Department requires documentation of various implementation activities, such as reports of routine facility inspections and descriptions of corrective actions, after facilities are authorized to discharge. This documentation is useful both for facility personnel and the Department (and other agencies) inspectors to assess overall performance of the control measures selected to meet the technology-based and water quality-based effluent limits in the permit.

#### 6.2.9 Facilities Subject to SARA Title III, Section 313 Requirements (Part III.C.9)

This Part is unchanged from the 15-MM. It requires specific documentation of chemicals and pollution prevention methods for chemicals identified in SARA Title III, Section 313. These chemicals represent elevated risk, so it is logical to ensure SWPPPs address them specifically and comprehensively.

### **7. CORRECTIVE ACTIONS AND ADDITIONAL IMPLEMENTATION MEASURES (AIM) (Part IV)**

The Department is proposing new additional implementation measures similar to those being proposed by EPA in the 2020 MSGP and those being implemented in the 20-SW and other stormwater permits being issued in Maryland. They are consistent with a settlement agreement reached by parties and intervenors challenging the former permit. (J. Mot. to Hold Consol. Cases in Abeyance Pending Resp't's Performance Under Settlement Agreement, Waterkeeper Alliance, Inc. v. U.S. EPA, Docket No. 15-2091 (L), 15-2259 (CON), 15-2428 (CON), 15-3315 (CON)). In addition to the proposal related to the settlement agreement, the Department

also proposes updating the corrective actions conditions in Part IV.A.1 and subsequent action deadlines in Part IV.A.2 consistent with EPA's 2015 MSGP and the 20-SW. These conditions are especially important for facilities that have no established benchmarks. Those conditions in Part IV.A.1 include an unauthorized release, an exceedance of numeric effluent limits (if required based on site specific water quality limits applicable under Part III.B.2 or by industry specific requirements in Appendix D), failed or improperly installed SCMs, and visual assessments indicating water quality standards may be exceeded. If any conditions in Part IV.A.1 occurred, Part IV.A.2 requires that the operator implement timely fixes so that the condition triggering the issue is resolved.

The 15-MM also required corrective action to be taken in the event of an exceedance of a benchmark monitoring value. The 15-MM's corrective action condition required the facility to review the SWPPP and adjust SCMs, depending on the facility's assessment, to bring any exceedances below the benchmark threshold.

The additional implementation measures will increase regulatory certainty for those who must comply with the permit while resolving environmental groups' concerns (those expressed to EPA about the MSGP and those expressed to the Department on the 20-SW) that the previous corrective action requirements were not sufficient to ensure that the permit controlled discharges to adequately protect water quality. In the challenge to EPA's 2015 MSGP, petitioners posited that the 2015 MSGP's corrective action requirements for benchmark exceedances were inadequate because they allowed facilities to comply with the permit by making only minimal SCM changes, or no changes, and often these changes did not lower pollutant levels below the benchmark thresholds, indicating poor stormwater control effectiveness. Petitioners also wanted repeated unsuccessful attempts by facilities to reduce pollutant levels below benchmarks to, at some point, be a permit violation. At the same time, some industry stakeholders wanted more certainty and clarity with respect the expectations under the permit. Based on the 2020 MSGP Fact Sheet, "EPA's concurs that more specific responses to benchmark exceedances may be appropriate in certain situations". However, according to the 2020 MSGP Fact Sheet, EPA has always and continues to hold that benchmark thresholds by themselves are not water quality based effluent limits (or any effluent limit) and therefore facilities whose responses to benchmark exceedances comply with the permit's requirements, but do not achieve pollutant levels below the benchmark, cannot be in violation of the permit, because a benchmark exceedance is not definitive proof that a water quality standard has been exceeded. EPA is therefore proposing in the 2020 MSGP a clearer process to improve upon the previous permit's requirements for responding to benchmark exceedances. With similar goals in mind, the Department has in similar fashion modified this portion of the permit.

The proposed improvement to the permit's provisions for responding to benchmark exceedances include a three-stage protocol that gets progressively more prescriptive with the required SCMs, and thus more protective, when quarterly monitoring results exceed or repeatedly exceed benchmark values. There are four stages of response, known in the 22-MM proposal as "Additional Implementation Measures" or "AIM". The AIM concept is so-named to emphasize that benchmark exceedances alone are not permit violations nor do they signify a condition that is in violation of the permit. The 3-level AIM protocol would be triggered after a facility has either a single egregious exceedance of a benchmark value (e.g., greater than 4 times the benchmark), or high levels of quarterly sampling average exceedances. The proposed AIM requirements apply on a parameter specific basis and supplement, as opposed to supplant, the technology-based, water quality-based, and remaining provisions of the permit. Regarding annual averages, their calculation (i.e., the clock) is reset upon triggering and complying with each tier individually above. A difference in the Department's approach is that each escalating level is based strictly on time.

Consistent with the EPA settlement agreement, the AIM requirements would apply on a parameter-specific basis, would not themselves constitute water quality-based effluent limits, and would supplement, as opposed to supplant, the technology-based, water quality-based, and remaining provisions of the permit. Regarding annual averages, their calculation (i.e., the clock) is reset upon triggering and complying with each level individually. And regarding Level 2, an operator may only avail itself of the “aberration” demonstration opportunity one time per parameter per discharge point, which shall include substantially similar discharge points.

Specific details about each AIM level are discussed further below.

### **Part 7.1 Corrective Action (IV.A)**

#### Part 7.1.1 Conditions Requiring SWPPP Review and Revision to Ensure Effluent Limits are Met (IV.A.1)

As discussed above, the Department is proposing that the corrective actions conditions in Part IV.A.1 and subsequent action deadlines in Part IV.A.2 be updated based on 20-SW. If operators find that any of the conditions in Part IV.A.1 of the proposed 22-MM have occurred, they are required to review and revise their SWPPP to eliminate the condition so that the permit’s effluent limits are met and pollutant discharges are minimized. Operators may become aware of these conditions through an inspection, monitoring, or other means, or if the Department informs the operator of the condition(s).

The SWPPP review should focus on sources of pollution, spill and leak procedures, non-stormwater discharges, and the selection, design, installation and implementation of control measures. Part IV.A of the proposed 22-MM specifies the following conditions requiring review and revision to ensure effluent limits are met, which are updated based on the corrective action triggering conditions in the 20-SW:

- An unauthorized release or discharge (e.g., spill, leak, or discharge of non-stormwater not authorized by 22-MM or another NPDES permit) occurring at the facility.
- A discharge that violates a numeric effluent limitation (if required by the Permit).
- Control measures that are not stringent enough for the discharge to meet applicable water quality standards or the non-numeric effluent limits in the permit.
- Where 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 properly operating or maintained.
- Whenever a visual assessment shows evidence of stormwater pollution (e.g., color, odor, floating solids, settled solids, suspended solids, foam).

*Comparison to 15-MM: The third bullet combines installation issues and maintenance issues into a single bullet, and the fourth bullet was modified to be clear that the triggering event is specific to those characteristics in the visual monitoring.*

#### Part 7.1.2 Corrective Action Deadlines (IV.A.2)

The proposed 22-MM includes specific deadlines for taking corrective actions to remedy deficiencies. These proposed deadlines remain largely unchanged from the 15-MM. The time limits in Part IV are those that the Department considers reasonable for making the necessary repairs or modifications and are included specifically so that inadequacies are not allowed to persist indefinitely.

When conditions exist that trigger corrective action, a facility must immediately take (i.e., on the same day the condition was found, or next day if too late in work day) all reasonable steps to minimize or prevent pollutant

discharges until the operator can implement a permanent solution. This concept was also adopted from EPA's MSGP, as a reminder that actions are required not just documentation.

The 22-MM permit's proposed immediate actions are substantially similar to requirements in EPA's 2015 MSGP and new to the Department's permit. The 22-MM clarifies that "all reasonable steps" means responding to the conditions triggering the corrective action (EPA's 2015 MSGP describes "all reasonable steps" to be undertaking initial actions to assess and address the condition causing the corrective action). Additionally, the 22-MM clarifies that when corrective actions are identified too late in the work day, the corrective action must be performed by the following work day morning (EPA's 2015 MSGP specified that corrective action be initiated the following work day). These proposed changes provide greater assurance that corrective actions are implemented expeditiously to minimize pollutant discharges.

The proposed 22-MM requires that the operator take subsequent action to implement a permanent solution no later than 14 calendar days from discovering the corrective action-triggering condition (e.g., by installing a new or modifying an existing control or by completing any needed stormwater control repairs). This proposed requirement has not changed from the 15-MM.

The Department does recognize that there may be circumstances in which immediate action to initiate corrective action may not be possible within the same day a corrective action condition is found. "All reasonable steps" does not necessitate taking action when it is unsafe to do so (e.g., due to inclement weather). The Department also recognizes that there may be circumstances where it is not feasible to complete needed corrective actions within 14 days, and therefore provides that operators may modify the schedule for completing the corrective action so that corrective action is taken as soon as practicable after the 14-day timeframe, and is completed no later than 45 days after discovery of the triggering condition. If the permittee will take longer than 45-days to complete the corrective action, the permit also allows operators to take the minimum additional time necessary to complete the corrective action, provided that the operator notifies the Department's Compliance Program. This is a change to what was required in the 15-MM which contained a 30 day notice to the Department when a control measure is not complete. The language proposed in the 22-MM establishes 45 days as a deadline, and instead of a notification to the Department, requires that the operator to "notify compliance 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". Operators must provide a rationale for an extension of the timeframe, and a corrective action completion date to the Department's Compliance Program, and also include this in their corrective action documentation. The Department recognizes that identifying both the need to take corrective action and the appropriate modifications to the control measures will, in some cases, be an iterative process. Several storm events may be needed to determine how to fully resolve the triggering issue(s). For example, if a visual assessment indicates that the facility is discharging suspended solids in stormwater, an appropriate corrective action may be to immediately clean up any signs of visible sources of the pollutants on the site (e.g., through immediate sweeping or vacuuming of exposed surfaces), and then to review the SWPPP to identify additional potential deficiencies or pollutant sources. If poor housekeeping is suspected to be the cause, permittees may decide to implement a new schedule of increased sweeping or vacuuming within 14 calendar days. However, if a subsequent visual assessment indicates that suspended solids remain a stormwater pollution issue that would be a separate corrective action-triggering event. In such a case, operators would undertake the corrective action review process again in order to assess and correct other deficiencies that are suspected to be the cause, meaning that the corrective action deadlines in Part IV.A.2 would be reset.

The Department emphasizes that these timeframes are not grace periods within which an operator is relieved of any liability for a permit violation that may have triggered the corrective action. If the original inadequacy triggering a corrective action constitutes a permit violation, then that violation is not deferred or erased by the timeframe the Department has allotted for corrective action. In all cases, failing to take corrective action as required in Part IV constitutes a permit violation separate and apart from any violation that the triggering event may have constituted.

#### Part 7.1.3 Effect of Corrective Action (IV.A.3)

The permit states that if the condition triggering the corrective action review is a permit violation (e.g., exceedance of a numeric effluent limitation), correcting it does not remove the original violation. Additionally, failure to take corrective action in accordance with Part IV is a separate permit violation (in addition to any permit violation that may have triggered corrective action). The Department will consider the appropriateness and promptness of corrective action in determining enforcement responses to permit violations. This proposed provision is unchanged from the 15-MM.

#### Part 7.1.4 Substantially Identical Discharge Points (IV.A.4)

If the event triggering corrective action is associated with a discharge point that has been identified as a “substantially identical discharge points” (see Parts V.B.6), permittees must assess the need for corrective action for all related substantially identical discharge points. Any necessary changes to control measures that affect these other discharge points 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.

### **Part 7.2 Additional Implementation Measures (AIM) (IV.B)**

As discussed above, the Department is proposing improvements to the permit’s provisions for responding to benchmark exceedances. The Department is proposing a four-stage protocol that gets progressively more prescriptive with the required SCMs, and thus more protective, when monitoring results exceed or repeatedly exceed benchmark values. The Department also recognizes that for the next proposed 2025 MSGP, EPA will evaluate the benchmark monitoring data submitted under the 2020 MSGP along with data on the AIM triggered by any benchmark exceedances to analyze the effectiveness of the AIM response requirements (i.e., implementing more robust SCMs) on reducing benchmark exceedances. The following is a discussion of each proposed AIM Benchmark Action Level (AIM Level).

#### Part 7.2.1 AIM Level 1 (IV.B.1)

##### Part 7.2.1.1 AIM Level 1 Triggering Events (IV.B.1.a)

AIM Level 1 has two proposed triggering events. The first trigger of AIM Level 1 is based on a quarterly sampling annual average benchmark exceedance. Here, AIM is triggered when a four-sample average exceeds a benchmark value. If the facility takes less than four benchmark samples and the results are such that an exceedance of the four-quarter average is mathematically certain (i.e., if the sum of quarterly sample results to date is more than four times the benchmark value) then the facility has exceeded the benchmark, triggering AIM Level 1. This level is very similar to the 15-MM benchmark and trigger.

The second trigger of AIM Level 1 is based on the same principle as the first trigger, only this time the exceedance that triggers AIM is a single sampling result that is more than four times the benchmark value.



This means that even with three other samples achieving zero values, that single sample would still make the four-sample average exceed the benchmark by up to but less than or equal to two times the benchmark value.

#### Part 7.2.1.2 AIM Level 1 Responses (IV.B.1.b)

There are three proposed responses for any Level 1 trigger. First, the facility would need to immediately review existing control measures, the SWPPP, and other on-site activities to see if any actions or SWPPP revisions are necessary. Examples of portions of the facility's control measures, SWPPP, and other on-site activities it should review include: sources of pollution, spill and leak procedures, non-stormwater discharges, and selection, design, installation, and implementation of your control measures. Secondly, after reviewing the control measures and SWPPP, the facility would install those additional implementation measures, such as a single comprehensive clean-up, a change in subcontractor, a modification or replacement of an existing SCM, and/or increased inspections, to bring the exceedances below the parameter's benchmark threshold in order to suspend the AIM process. However, a facility could determine that, after reviewing the control measures and SWPPP, that nothing further needs to be done to achieve lower pollutant levels. In this case, the facility would be required to document per Part IV.C and include in the annual report why it expected its existing SWPPP and SCMs to bring exceedances below the parameter's benchmark threshold for the next 12-month period. With the variability of stormwater and the small sample set of monitoring results, it may be reasonable for the facility to conclude that the current control measures are performing appropriately and further monitoring will support that the facility's existing controls will achieve the necessary pollutant reductions. This response mirrors the 15-MM corrective action response requirements. The third response to an AIM Level 1 trigger is that quarterly monitoring would continue into the next year. Even if AIM was triggered in the first quarter of the first year of monitoring, the Department proposes that the facility would first comply with AIM Level 1 requirements, continue monitoring for the remaining three quarters, and then continue monitoring into the following year. The Department considers this a trigger to require submitting the comprehensive annual report so that plans contained in there may be accessed by the Department or interested parties.

#### Part 7.2.1.3 AIM Level 1 Deadlines (IV.B.1.c)

The Department proposes that if any actions or modifications to the control measures are necessary from an AIM Level 1 trigger that the operator would be required to implement those actions or modifications within 14 days. If doing so within 14 days is infeasible, the operator would be required to document per IV.C why it is infeasible and then would be required to implement such actions or modifications within 45 days. The Department is proposing the 14-day deadline for AIM Level 1 responses because achieving benchmark averages under the threshold to avoid further AIM requirements should provide the impetus to make timely changes, if deemed necessary, similar to the EPA proposed 2020 MSGP and 20-SW.

### Part 7.2.2 AIM Level 2 (IV.B.2)

#### Part 7.2.2.1 AIM Level 2 Triggering Events (IV.B.2.a)

The proposed AIM Level 2 triggering events are similar to Level 1, but are in the second year of performing benchmark monitoring under 22-MM.

#### Part 7.2.2.2 AIM Level 2 Responses (IV.B.2.b)

The Level 2 response would require an operator to implement one or more permanent, structural or treatment technology train appropriate for the pollutants of concern. Treatment removes pollutants from effluent rather than the more prevalent stormwater approach of pollution prevention. Structural controls could include building structures to prevent and/or otherwise treat the stormwater being discharged. Treatment and structural controls are regarded as a last resort due to the complexity and cost to the operator and is proposed to be mandated only when earlier attempts to lower pollutants via pollution prevention and other procedural changes fail to do so. The Department believes that very few operators will need to comply with Level 2 after completing Level 1. The Department understands that many operators will meet benchmarks and no longer be subject to the AIM process, but that those who are not able to may need to reach out for help in implementing solutions.

An option proposed under Level 2 is to install infiltration or retention controls as a substitute or adjunct to permanent treatment controls, albeit this option is not always feasible. Larger facilities may already have implemented all potential infiltration practices as part of their restoration practices. However additional infiltration can be considered for credit generation. If the site-specific conditions are conducive to it, an operator can infiltrate stormwater discharges via a retention pond or an underground injection well, or retain the discharge on site using green infrastructure. The intent of this option is simply to not discharge pollutants offsite. There are numerous obstacles to using of this option, such as aquifer impacts, hydrologic connectivity to water bodies, and the type of pollutants of concern. The EPA has stated in the proposed 2020 MSGP that they intend to develop guidance on determining the feasibility of an infiltration/retention approach and how to implement it for industrial stormwater discharges. Once that is available, the Department will consider providing this guidance to permittees as well. The final response to an AIM Level 2 trigger is that quarterly monitoring would continue into the next year. The Department considers this a trigger to require submitting the comprehensive annual report so that plans contained in the report may be accessed by the Department or interested parties.

#### Part 7.2.2.3 AIM Level 2 Deadlines (IV.B.2.c)

The Department is proposing that installation of appropriate treatment control measures would be required to be completed within 30 days of the Level 3 triggering event. If is not feasible within 30 days, the operator may take up to 90 days to install such measures, documenting per Part IV.C why it is infeasible to install the measure within 30 days. The Department Compliance Program may also grant an extension beyond 90 days based on an appropriate demonstration by the operator.

#### Part 7.2.3 AIM Level 3 (IV.B.3)

##### Part 7.2.3.1 AIM Level 3 Triggering Events (IV.B.3.a)

The proposed AIM Level 3 triggering events are similar to Level 1, but are in the third year of performing benchmarks under 22-MM.

##### Part 7.2.3.2 AIM Level 3 Responses (IV.B.3.b)

At this Level in the AIM process, after this amount of time has passed, the operator must consult a professional engineer, stormwater professional, or geologist to prepare an action plan. They may take up to 30 days (up to 90 days if justified as stipulated below in Part IV.B.4.c AIM Level 3 Deadlines) to prepare the action plan for the Department, to include milestone dates, and which may include: installing structural source controls and/or treatment controls or demonstrate why the discharge is not resulting in an exceedance of water quality standards. This exception is also proposed by EPA in their 2020 MSGP when an operator has acquired sufficient data and generates an analysis that demonstrates that their discharges do not and will not result in

any exceedance of a water quality standard. Computer models would likely be used to make such a case, such as SWMM, DR3M and HSPF. Based on the concentration of pollutants, this exception may not be feasible and warrant the permanent control measures proposed to be implemented. Industrial stormwater discharges are explicitly required to meet all provisions of CWA §301, including applicable water quality standards (CWA §402(p)(3)(A)). Thus the permittee is put on notice that if they continue to exceed the benchmark threshold for the same parameter even after installation of structural source controls or treatment controls, the Department may revoke coverage under this permit, unless you are under a consent order or they have obtained an individual permit which considers site specific water quality based limits. As with the other AIM Levels, the operator must continue Quarterly Benchmark Monitoring, however, the monitoring would be in a cycle of repeating Level 3, or installing controls or the alternatives as stated above. They must also attach their updated Comprehensive Annual Report to their DMR.

#### Part 7.2.3.3 AIM Level 4 Deadlines (IV.B.3.c)

The Department is proposing that installation of appropriate treatment control measures would be required to be completed within 30 days of the Level 3 triggering event. If it is not feasible within 30 days, the operator may take up to 90 days to install such measures, documenting per Part IV.C why it is infeasible to install the measure within 30 days. The Department Compliance Program may also grant an extension beyond 90 days based on an appropriate demonstration by the operator.

#### Part 7.2.4 AIM Exceptions (IV.B.4)

The proposed AIM protocol has two proposed exceptions that could allow an operator to be relieved of compliance with AIM requirements at any AIM Level. The first exception is carry-overs from the 15-MM, which is the allowance for natural background levels. The condition was moved from the monitoring section into the AIM section of the permit, similar to the organization EPA uses in the proposed 2020 MSGP. The other exception is adopted from EPA's MSGP for contributions of run-on from a neighboring source which elevates the operator's pollutant levels, which requires the Department approval before the operator can qualify for this exception.

#### Details on AIM Exception due to Natural Background Pollutant Levels

The Department maintains from the 15-MM the option for facilities to justify benchmark exceedances based on local natural background concentrations, with some modifications. Part IV.B.4.a allows for an exception from AIM requirements and further benchmark monitoring when natural background levels are solely responsible for the exceedance of a benchmark threshold, provided that all the following conditions are met and the operator submits an analysis and documentation to the Department's Permit Program:

- The four-quarter average concentration of your benchmark monitoring results minus the concentration of that pollutant in the natural background is less than or equal to the benchmark threshold; and
- You document and maintain with your 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. Natural background pollutants are those substances that are naturally occurring in soils 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 which are not naturally occurring, such as other industrial facilities or roadways.

For example, assume the benchmark monitoring threshold for a parameter is 100 mg/L, the natural background concentration is 80 mg/L, and the facility's four-quarter average concentration for that parameter is 120 mg/L. Because 120 mg/L is an exceedance, the facility would first subtract the background concentration from the benchmark monitoring results to find out the facility's pollutant contributions ( $120 - 80 = 40$  mg/L). The facility would then compare the facility's pollutant contributions to the benchmark threshold to see if natural background levels are solely responsible for the exceedance. Because 40 mg/L is less than the benchmark threshold (100 mg/L), the exceedance would not have occurred without the natural background contribution and therefore the facility may invoke this exception.

Here is another example, but this time the exception cannot apply: Assume the benchmark monitoring threshold for a parameter is 100 mg/L, the natural background concentration is 80 mg/L, and the facility's four-quarter average concentration for that parameter is 220 mg/L (an exceedance). First, subtract the background concentration from the benchmark exceedance to find out the facility's pollutant contributions ( $220 - 80 = 140$  mg/L). The facility would then compare the facility's pollutant contributions to the benchmark threshold to see if natural background levels are solely responsible for the exceedance. Because 140 mg/L is still higher than the benchmark threshold (100 mg/L), the exceedance was caused by the facility's pollutant discharges and the facility must comply with the AIM process.

This is a change from the 15-MM's exception, and consistent with the proposed 2020 MSGP, for natural background concentrations which required there to be no net facility contribution of the pollutant (i.e., the average concentration detected in discharges from all facility discharge points required to be monitored for four separate events minus the average natural concentration of the parameter could not exceed zero). The Department is proposing this change because the newly proposed method of subtracting natural background concentrations from the total benchmark exceedance is a less burdensome threshold for operators to meet and makes more sense as a method to determine the actual contribution of natural background pollutants.

This natural background exception could apply to parameters such as metals derived from natural mineral deposits and nutrients attributable to background soil, vegetation, or wildlife sources. Natural background levels cannot be attributed to run-on from non-natural sources such as other industrial sites or roadways (however, per Part IV.B.4.b, a facility may be eligible to discontinue monitoring for pollutants that occur solely from run-on sources). If background concentrations are not responsible for the benchmark exceedance, the facility will need to comply with the applicable AIM requirements, per Part IV.B. Facilities must use the same sample collection, preservation, and analysis methods for natural background monitoring as required for benchmark monitoring.

If facilities experience average benchmark exceedances for one or more pollutants during coverage under the 22-MM or suspect that they might have benchmark exceedances caused entirely by natural background, they can begin monitoring the natural background pollutant concentrations from a non-human impacted reference site concurrently with required benchmark monitoring and compliance with AIM requirements. After monitoring for four quarters and adequately determining that exceedances are the result of pollutants present in the natural background, facilities may discontinue additional benchmark sampling if all conditions in Part IV.B.4.a are met. The following is a list of the types of information that should be considered to support a rationale for the natural background exception:

- Map showing the reference site location in relation to facility along with available land cover information;
- Reference site and facility site elevation;
- Available geology and soil information for reference and facility sites;
- Photographs showing reference site vegetation;

- Reference site reconnaissance survey data regarding presence of roads, discharge points, or other human-made structures; and
- Records from relevant state or federal agencies indicating no known mining, forestry, or other human activities upstream of the reference site.

The background concentration of a pollutant in discharges from a non-human impacted reference site in the same watershed should be determined by evaluating ambient monitoring data or by using information from a peer-reviewed publication or a local, state, or federal government publication specific to runoff or stormwater in the immediate region. Studies that are in other geographic areas, or are based on clearly different topographies or soils, are not appropriate. When no data are available, and there are no known sources of the pollutant, the background concentration should be assumed to be zero.

In cases where historic monitoring data from a site are used for generating a natural background value, and the site is no longer accessible or able to meet reference site acceptability criteria, then there must be documentation (e.g., historic land use maps) that the site met reference site criteria (indicating absence of human activity) during the time data collection occurred.

The justification for this exception must be kept on-site with the facilities' SWPPP (see Part III.C), and made available to the Department for concurrence. The Department may review the facility's determination that a benchmark exceedance is based solely on natural background concentrations, and disallow the exception if the Department finds the documentation inadequate. Facilities that have previously made a determination that benchmark exceedances are attributable solely to the presence of that pollutant in the natural background may be able to rely on a previous analysis and rationale for waiving compliance with AIM requirements and discontinuing benchmark monitoring under the 22-MM. However, these facilities must conduct four quarters of benchmark monitoring in the first year of permit coverage under the 22-MM and the results must continue to show that the four-quarter average concentration of the benchmark monitoring results minus the concentration of that pollutant in the natural background is less than or equal to the benchmark threshold.. In such circumstances, there is no ongoing burden to comply with AIM requirements or to expend additional resources in justifying the rationale for meeting this exception, and benchmark monitoring can be discontinued for the permit term.

#### Details on AIM Exception due to Run-On

The operator is not required to perform AIM or additional benchmark monitoring for any parameters for which it can demonstrate and obtain the Department's agreement that run-on from a neighboring source (e.g., a source external to the facility) is the cause of the exceedance, provided that all the following conditions are met and the operator submits its analysis and documentation to the Department's Compliance Program for concurrence:

- 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.
- 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.

AIM Exceptions Due to an abnormal event: Added this similar exception from the final 20-SW.

AIM Exceptions Due For Aluminum and Copper benchmark parameters only: Refer to Part 3.9 for further discussion.

### **Part 7.3 Corrective Action and AIM Documentation (IV.C)**

For any event described in Parts IV.A.1, IV.B.1.a, IV.B.2.a, and/or IV.B.3.a, operators must document basic information describing the event that triggers corrective action and their response to that event. As described previously, the permit establishes conditions for both immediate and longer response periods. Operators must maintain a copy of this documentation with their SWPPP as well as summarize this information in the annual report. These documentation requirements are substantially similar to the 15-MM, with the exception of requiring annual reports in cases where benchmarks have been exceeded.

### **8. Site Inspections and Evaluations (Part V.A)**

This permit requires permittees to conduct three types of inspections: routine facility inspections, quarterly visual assessments, and comprehensive site inspections. Each is described in more detail below.

#### **8.1 Routine Facility Inspections (Part V.A.1)**

To clarify inspection requirements for permittees, the Department includes the routine facility inspections in this section along with the other types of site inspections required under this permit (i.e., quarterly visual assessments and comprehensive site inspections).

Permittees are required to conduct routine inspections, at least quarterly, of all areas of the facility where industrial materials or activities are exposed to stormwater, and of all stormwater control measures used to comply with the effluent limits required by the 22-MM. Qualified personnel must conduct the routine facility inspections with at least one member of the Pollution Prevention Team participating. Because some equipment, processes, and procedures may require more frequent inspections, the relevant inspection schedules must be documented in the SWPPP. For example, inspection of outdoor areas associated with regular industrial activity may require more frequent inspections to ensure that the site is swept, garbage picked up, drips and spills cleaned, etc. on a regular basis. The permit elaborates on the specific information to be documented for each routine inspection. Most importantly, this documentation must include when the inspection took place, who conducted the inspection, and any indication that controls may not be adequate or are not functioning properly. The findings of these routine inspections must be maintained on-site with the SWPPP.

Some industry sectors have more specific routine inspection requirements, which are described in more detail in Appendix D of the permit for the relevant sectors.

At least once each calendar year, the routine facility inspection must be conducted during a period when a stormwater discharge is occurring. As permittees are already required to perform visual monitoring, and benchmark monitoring during storm events, the Department does not believe this imposes significant additional burden on permittees. However, the Department does see this as a potentially important tool for the permittee to be able to better identify sources of pollutants discharged in stormwater runoff from the facility and to actively observe the effectiveness of control measures.

Purpose: Routine inspections help ensure that stormwater control measures are adequate and are operated and maintained properly.

#### **8.2 Comprehensive Site Compliance Evaluation (Part V.A.2)**

This permit requires that permittees conduct comprehensive site inspections at least once a year for the entire permit term, even if the permit were to be administratively extended.

Comprehensive site inspections may be conducted simultaneously with other site inspections (such as with the routine facility inspection described in permit section V.A.1), provided the scope is sufficient to address the minimum requirements of the comprehensive site inspection. Qualified personnel must conduct inspections, and the inspection team must include at least one member of the Pollution Prevention Team. Qualified personnel are those who possess the knowledge and skills to assess conditions and activities that could impact stormwater quality at the facility, and who can also evaluate the effectiveness of controls selected. Permittees may hire outside contractors to perform these inspections; however, signature and certification of inspection reports must be by a duly authorized representative of the facility, as defined in Part I.C.2.

Note that the comprehensive site inspections are not the same as routine facility inspections. Routine facility inspections (Part V.A.1) are required more frequently and are meant to be less formal evaluations of the facility's exposed industrial activities so that permittees have a mechanism for ensuring that problems are not developing. Comprehensive site inspections, as the term implies, include a much more in-depth review of the site and all operations, as they relate to stormwater management and the requirements of this permit.

The comprehensive site inspection must cover all areas of the facility affected by the requirements in the permit including areas where industrial materials or activities are exposed to stormwater, stormwater control measures used to comply with the effluent limits, and areas where any leaks, spills, or other accidental discharge may have occurred in the last 3 years. EPA developed an Annual Report Form for the MSGP, which may be used by the permittee. However the Department relies on a flexible approach for the permittee to issue in the format that works best for them.

The permit identifies the specific activities that may occur at the facility that are to be inspected. Also, the comprehensive site inspection must include observation of stormwater control measures used to meet permit requirements to assess the adequacy of these control measures, including any measures in need of maintenance, repair, or replacement or where additional controls are needed.

The results of each comprehensive site inspection must be documented in a report signed and certified by an authorized company official in accordance with Part I.C.2 of the permit and kept with the SWPPP. In addition to documenting findings of the assessment and observations described above, the report must also include basic inspection information (e.g., inspectors, date, and NPDES permit number), must certify if the facility is in compliance with the permit, and must describe any corrective action initiated or completed during the reporting period or required as a result of the inspection.

**Purpose:** This provision requires a permittee to conduct an on-site inspection to ensure its facility is in compliance with all relevant requirements in the 15-MM. The comprehensive site inspection is intended to be more thorough and detailed than the routine inspections conducted at least quarterly. The Department does require that control measures be assessed during stormwater discharge for at least one of the routine inspections, but not necessarily during this comprehensive review. The Department is requiring creation of an annual report to gather information from permitted facility to identify potential water quality concerns and to assess compliance with permit provisions. Prior to inclusion of this requirement, permittees (i.e., those with no benchmark) have little required documentation, other than an updated SWPPP. If the Department's inspector shows up on-site, there is now a basis to assess compliance with the permit. As mentioned in Part 3.1 of this Fact Sheet, regarding changes to the annual reporting requirements, operators within certain EJ areas must submit the Annual Report annually with the DMRs, so that they are available to the public.

### **8.3 Quarterly Visual Assessment of Stormwater Discharges (Part V.A.3)**

This permit includes this requirement from the MSGP, to conduct quarterly visual examinations of stormwater discharges. All industrial sectors covered by this permit are required to conduct these examinations. This permit requires that grab samples of stormwater discharges be taken and examined visually for the presence of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of stormwater pollution. No analytical tests are required to be performed on these samples. The grab samples must be taken within the first 30 minutes or as soon as practicable after the occurrence of an actual discharge from your site (including documentation of why sampling was not practicable within the first 30 minutes). The trigger for visual monitoring is simply that the precipitation event causes an actual discharge to occur, and conditions specific to the monitoring of snowmelt. Specifically, in areas subject to snow, the 15-MM now requires that at least one of the quarterly samples be collected from snowmelt. For practical purposes, the permit does not require that these snowmelt samples be collected within the first 30 minutes of discharge as is the case for samples collected during rain events.

Permittees must document the results of their visual assessments in a report that includes the sample location, date and time, personnel collecting the sample and performing visual assessments, results of the observations, and probable sources of any observed stormwater contamination. The visual examination reports must be maintained onsite with the SWPPP. A reporting form with some guidance is provided in Appendix B.

When conducting a stormwater visual examination, the pollution prevention team, or individual team member, should attempt to relate the results of the examination to potential sources of stormwater contamination on the site. For example, should an oil sheen be observed, facility personnel (preferably members of the pollution prevention team) should conduct an inspection of the area of the site draining to the examined discharge to look for obvious sources of spilled oil, leaks, etc. If a source can be located, then this information would allow the facility operator to immediately conduct a clean-up of the pollutant source, and/or to revise control measures to minimize the contaminant source.

The permit includes exceptions to these requirements in order to account for circumstances during which conducting quarterly visual assessments may not be infeasible, namely during adverse (e.g., dangerous) weather conditions. Where these types of conditions prevent a facility from performing these assessments quarterly, permittees have the ability to modify their assessment schedule such that the four assessments are conducted over the course of the year during periods when discharges, be it from rain or snow, actually occur and can be safely observed.

Operators with two or more essentially identical outfalls may also elect to conduct a visual assessment at just one of these outfalls each quarter, but must perform their quarterly assessments on a rotating basis to ensure that each substantially identical outfall is periodically observed throughout the period of permit coverage. If stormwater contamination is identified through visual monitoring performed at a substantially identical outfall, the operator must assess and modify his/her control measures as appropriate for each outfall represented by the monitored outfall. This approach ensures that operators will assess discharges from the entire site over the term of the permit, and will address any identified problems at all substantially identical outfalls where the problem may be occurring.

Purpose: These assessments provide a useful and inexpensive means for permittees to evaluate the effectiveness of their control measures. Although the visual examination cannot assess the chemical properties of the stormwater discharged from the site, the examination will provide meaningful results upon which the permittee may act quickly.

#### **8.4 Inactive and Unstaffed Sites Exceptions to Routine Facility Inspections (Part V.A.5)**



There will be facilities where there is no staff onsite, and where the facility is inactive, which will want to maintain coverage. These may be done during these periods by invoking this exception. This provides the conditions and requirements during this period of time.

## **8.5 Required Numeric Monitoring (Part V.B)**

### 8.5.1 Applicability of Monitoring (Part V.B.1)

Which activities are required to perform monitoring is specified in Appendix D for the specific SIC Codes and activity at the facility.

### 8.5.2 Monitoring Schedule (Part V.B.2)

Facilities required to conduct benchmark monitoring must do so in each of the first 4 quarters of permit coverage, starting once access to NetDMR is provided. This renewal does not introduce an early out as discussed in Part 3.10 Reduction of Benchmark Monitoring of this fact sheet.

Following the first 12 months (4 quarterly or otherwise consecutive monitoring events) of monitoring, if the average of the 4 monitoring values for any parameter does not exceed the benchmark, or the first 2 quarterly benchmark tests are found to be below a certain threshold (10% the benchmark), the permittee has fulfilled the benchmark monitoring requirements for that parameter for the duration of the permit term for that pollutant.

However, if the average of the 4 quarters of monitoring values exceeds any benchmark for a parameter, the permittee must evaluate his/her control measures to determine if modifications are necessary to meet the effluent limits in the permit. If so, the facility must either:

- Make the necessary modifications and monitor the pollutant for 4 additional quarters. Quarterly sampling must be continued until the discharger has completed 4 quarters of monitoring of that pollutant for which the average does not exceed the benchmark; or
- Make a determination that no further pollutant reductions are technologically available and economically practicable and achievable in light of best industry practice to meet the permit's technology-based effluent limits, or necessary to meet the permit's water quality-based effluent limits. If the permittee makes this determination, the accompanying rationale must be included in the post-SWPPP documentation. No further corrective action is required, but the permittee must monitor annually for the pollutant for the remainder of the permit term and notify the Department in the first monitoring report of the permittee's determination.

If the permittee determines after 4 quarters of monitoring that a benchmark was exceeded solely as a result of natural background levels, the permittee may document this determination and discontinue further benchmark monitoring.

For averaging purposes, any parameter determined to be less than the method detection limit (MDL) can be assumed to be zero. For sample results that fall between the MDL and the quantitation level (i.e., detected but not quantifiable with certainty), use a value halfway between zero and the quantitation level. In any case, reports provided to the Department must provide either the detected value, notice that the concentration is below the method detection level, or notice that the pollutant is present but not quantifiable (and the quantitation level).

Purpose: The Department is requiring quarterly monitoring over the course of a year, with the average of the 4 samples of any parameter to be compared with benchmark values for that pollutant. Based on an evaluation of discharge monitoring data collected under the MSGP, EPA believed that it is most appropriate to commence monitoring soon after obtaining authorization to discharge, rather than in the second year of permit coverage. Thus the Department will be motivated to provide access to NetDMR as quickly as possible.

#### 8.5.3 Required Responses to Benchmark Monitoring Results (Part V.B.3)

Benchmarks are not effluent limits, and exceedances of benchmarks are not permit violations. Rather, exceedance of a benchmark is an indicator to the operator that there may be a problem with his/her control measures, or the discharge may be adversely affecting water quality. Dischargers are thus required to evaluate their control measures when benchmarks are exceeded to determine if further minimization of the pollutant of concern is possible. If so, corrective action must be undertaken, and additional monitoring of the benchmark parameter must be conducted to allow the facility to assess the effectiveness of the revised control measures. If the operator determines that no further minimization is possible, this must be documented and benchmark monitoring continued on an annual basis. This will provide the Department with additional data to support its re-evaluation of benchmarks for the next permit cycle. The Department may choose to inspect such facilities to assess the validity of the operator's determination that no further pollutant minimization is possible.

#### 8.5.4 Electronic Reporting of Discharge Monitoring Reports (Part V.B.4)

As described in previous section of this fact sheet, NetDMR is being required by this permit and the requirements are spelt out in Part V.A.4.

#### 8.5.5 Inactive and Unstaffed Sites Exceptions to Routine Facility Inspections (Part V.B.5)

There will be facilities where there is no staff onsite, and where the facility is inactive, which will want to maintain coverage. These may done during these periods by invoking this exception. This provides the conditions and requirements during this period of time.

#### 8.5.6 Substantially Identical Outfalls

Consistent with the 15-MM and 20-SW permits, if outfalls are deemed "substantially identical," monitoring is only required at one outfall during each monitoring period. However, the sampling must be rotated to a different substantially identical outfall for subsequent monitoring periods. This is logical as these outfalls have been determined to contain discharges which are subject to similar conditions. Rotating sampling will help ensure that the outfalls are indeed similar. Should an exceedance occur at one of the substantially identical outfalls, corrective actions shall be necessary at all outfalls, as the declaration of outfalls as substantially identical assumes similar contributions to and controls at each.

#### 8.5.7 Discharges to Groundwater and Flow Monitoring (Part V.B.7 and Part V.B.8)

Both of these conditions are substantially unchanged from the 15-MM permit. Discharges to groundwater are not subject to limits which have been derived for the protection of surface water, so it is logical to waive such limits if the permittee can certify discharges are to groundwater only. Flow estimation language is present in nearly all Maryland NPDES permits to allow for estimation of flows if measured flow is impractical. The permittee must submit methodology for estimating the flow so that the Department can verify it is reasonable.

In a majority of circumstances, knowing the exact flow volume is not necessary, as limits have not been derived based on flow..

## **9. Monitoring Procedures (Part V.C)**

This permit requires certain permittees to sample and analyze their wastewater and/or stormwater discharges as a way to assess the effectiveness of control measures in meeting the effluent limitations. Analytical monitoring is a means by which to measure the concentration of a pollutant in a stormwater discharge. Analytical results are quantitative and therefore can be used to compare discharge results and to quantify the effectiveness of stormwater control measures, including identifying pollutants that are not being successfully controlled. Part V.C of the permit identifies procedures for collecting samples and identifies where to sample, when to sample, and what to sample.

### **9.1 Monitored Outfalls (Part V.C.1)**

The monitoring requirements in the permit apply to each outfall discharging stormwater associated with industrial activity, unless the permittee qualifies for the substantially identical outfalls exemption as described in this section. To be considered substantially identical, outfalls must have generally similar industrial activities, control measures, exposed materials that may significantly contribute pollutants to stormwater, and runoff coefficients of their drainage areas. When a permittee believes its facility has two or more outfalls that qualify as substantially identical, the permittee may monitor one of these outfalls and report that the quantitative data also apply to the other substantially identical outfalls. The permittee must also document the location of each of the outfalls and explain why the outfalls are expected to discharge substantially identical effluent, addressing each of the factors to be considered in this determination (industrial activities, control measures, exposed materials and runoff coefficients). Operators do not need advance the Department approval for this determination, however, the Department may subsequently determine that outfalls are not substantially identical and require sampling of additional outfalls.

**Purpose:** This substantially identical outfall provision provides facilities that have multiple stormwater outfalls with a means to reduce the number of outfalls that must be sampled and analyzed while still providing monitoring data that are indicative of discharges from each outfall. This may result in a substantial reduction of the resources required for a facility to comply with analytical monitoring requirements.

### **9.2 Commingled Discharges (Part V.C.2)**

If stormwater discharges associated with industrial activity commingle with discharges not authorized by this permit (e.g., unregulated stormwater or other permitted wastewater), then permittees must sample the stormwater discharge before it mixes with the other discharges when practicable.

**Purpose:** The commingled discharge provision is intended to ensure that monitoring results are representative of discharges covered under this permit and not indicative of other discharges from the site. EPA acknowledges that in certain instances, such as when authorized discharges are commingled with other waste streams prior to on-site treatment, sampling only authorized waste streams may be inappropriate or infeasible.

### **9.3 Measurable Storm Events (Part V.C.3)**

This permit specifies the characteristics of a measurable storm event as an event that results in a discharge from the permitted facility. Samples must be collected from the discharge resulting from a storm event that occurs at least 72 hours (3 days) after a previous measurable storm event. The 72-hour (3-day) requirement may be waived by the permittee where the permittee documents that less than a 72-hour (3-day) interval is representative for local storm events during the season when sampling is being conducted. This permit adds a provision that allows for sampling of snowmelt in addition to stormwater runoff. The 72-hour (3-day) requirement does not apply to snowmelt as the actual discharge is not clearly tied to a specific snow event (i.e., may be the accumulation from multiple events). The permit also specifies the type of documentation required to show consistency with this requirement.

**Purpose:** The measurable storm event provision in the permit requires only that a storm event results in a discharge from the permitted facility, and that it follows a period of greater than or equal to 72-hours (3-days) when no stormwater discharge occurred. The 72-hour (3-day) period is included in an attempt to eliminate monitoring discharges soon after a previous storm event washed away residual pollutants. By defining a storm event as one that results in discharge, rather than prescribing a minimum magnitude, it affords the permittee flexibility to sample during any storm event that produces a discharge, rather than having to ensure that minimum magnitude is reached. The purpose of be consistent with the EPA on what the measurable event is to capture and characterize actual stormwater discharge. The provision also provides flexibility to address snowmelt discharges when they occur, rather than based on when the storm producing the snowfall occurred.

The Department used EPA's MSGP provision for monitoring snowmelt since there may be occasions when facilities covered under this permit may have extended periods of freezing temperatures and snow events that do not meet the Department's definition of measurable storm events. The referenced EPA definition is a measurable storm event for snowmelt to be an event which at some point in time produces a measurable discharge at the site, though not necessarily during the storm event itself. The permit also clarifies that monitoring such discharges is acceptable.

#### **9.4 Sample Type (Part V.C.4)**

The permit specifies that a minimum of one grab sample must be taken from the measurable storm event being monitored. The grab sample must be taken during the first 30 minutes of the discharge, except for snowmelt monitoring which has no 30 minute requirement. If more than one grab sample or a composite sample is collected, only those samples collected during the first 30 minutes of discharge are to be used for performing any necessary analyses. If the collection of a grab sample during the first 30 minutes is impractical, a grab sample can be taken during the first hour of the discharge, but the permittee must document and keep with the SWPPP an explanation of why a grab sample during the first 30 minutes was impractical.

The Department is requiring a sample during the first 30 minutes to account for any first flush effects that may result from a precipitation event. The highest pollutant concentrations generally occur during these first flush events. The first 30 minutes of the discharge is also the time when receiving stream flows are the lowest during wet weather events and thereby presents the greatest potential pollutant impacts to aquatic species.

**Purpose:** This permit identifies the type of samples and when these samples are to be collected. This will allow facilities to make accurate comparisons of monitoring results to the corresponding benchmark or effluent limitations to determine whether additional action may be needed to reduce concentrations of pollutants detected in stormwater discharges. Grab samples of discharges resulting from snowmelt that have been exposed to industrial activities, materials storage, or materials handling areas are to be collected from each outfall for characterization, but they do not have to be collected within 30 minutes of discharge since (1) runoff

typically does not occur during a snow event (2) collecting a snowmelt sample within 30 minutes of commencement of discharge is impractical, and (3) the “first flush” effects of snowmelt are not as well defined.

### **9.5 Adverse Weather Conditions (Part V.C.5)**

When adverse weather conditions make sampling dangerous, storm event monitoring may be postponed until the next runoff event. This provision applies to serious weather conditions such as: lightning, flash flooding, and high winds. This provision should not be used as an excuse for not conducting sampling under conditions associated with more typical storm events. Adverse weather conditions do not exempt the permittee from having to file a benchmark monitoring report in accordance with the corresponding reporting period. In many cases, sampling during a subsequent non-hazardous storm event may still be possible during the reporting period. Where this is not possible, operators are still required to report the inability to monitor indicating the basis for not sampling during the reporting period. This provision applies to all monitoring requirements of this permit.

### **9.6 Representative Sampling**

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.

### **9.7 Monitoring Periods (Part V.C.7)**

Certain monitoring must be conducted quarterly (e.g., benchmark monitoring). For such monitoring, the Department is defining the calendar quarters during which monitoring must occur and also describing when the first monitoring quarter is to commence based on the date of permit coverage. This section specifies that the monitoring requirements commence during the first full calendar quarter following six months after the publication date of this permit, or following the date of your authorization to discharge, whichever date comes later.

### **9.8 Data Recording Requirements (Part V.C.8)**

This condition is substantially unchanged from the 15-MM and is standard language which sets expectation on how data is to be recorded.

### **9.9. Records Retention (Part V.E)**

This condition is substantially unchanged from the 15-MM and is standard language which reflects the Department’s policy on how long records need to be maintained on-site.

## **10. Standard Permit Conditions (Part VI)**

These conditions contain language which is standard across the Department’s general permits. They have been re-organized and updated as appropriate to be consistent with other recently-issued general permits.

## **11. Authority to Issue General NPDES Permits (Part VII)**

Signature page and noted authority to issue General Permits. Self-explanatory.

## **12. Appendices**

### **Industry Sectors (Appendix A)**

A detailed listing of SICs covered by this permit are provided in Appendix A, and are categorized by Sectors of Industry. These sectors are referred to in Appendix D with specific requirements for that industry.

### **Quarterly Visual Monitoring Form (Appendix B)**

Dischargers are strongly encouraged in Part V.I to use the Annual Reporting Form provided in Appendix B. This form asks for general information on the facility, summary findings from the comprehensive site inspection, and a description of corrective actions taken and the status of follow-up repairs, maintenance activities, or new BMP installations.

Purpose: To establish a consistent reporting form for permittees to provide guidance in understanding the characteristics required to be monitored by the permit and to use for the annual report.

### **[Reserved] - (Appendix C)**

Appendix C described the alternatives for establishing the hardness level for an operator's receiving water. The conversion tables are only applicable to a select benchmark table and thus were moved to the table for those benchmarks eliminating pages from the permit. This allows permittees to account for hardness-dependent criteria (as specified in COMAR 26.08.02.03-2D). Methodology is consistent with the 20-SW permit.

### **Sector Specific Requirements (Appendix D)**

Appendix D of the permit contains the specific controls and limits for the various industry sectors. The sectors are determined by using the Appendix A and cross referencing the SIC codes (i.e. SIC code 2421 for General Sawmills and Planing Mills falls under Sector A – Timber Products). This structure was implemented in the 15-MM permit, and will continue with this permit. The sectors include:

- Sector A – Timber Products
- Sector C – Chemical & Allied Products Manufacturing, and Refining - includes composting
- Sector D – Asphalt Paving and Roofing Materials and Lubricant Manufacturing
- Sector E – Glass, Clay, Cement, Concrete, and Gypsum Products
- Sector F – Primary Metals
- Sector J – Non-Metallic Mineral Mining and Dressing
- Sector L – Landfills and Land Application Sites – includes crushed concrete and asphalt
- Sector P – Land Transportation and Warehousing
- Sector AD.c – Hydrodemolition Operations

The specific controls for each of these sectors were adapted from EPA's MSGP permit. An example of specific controls for timber products: *"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.” By selecting controls from the MSGP and incorporating them into this and other MDE issued industrial stormwater permits, the requirements are consistent across the state. For instance, controls for composting sites are the same if they are at a mining site under this permit or at a standalone operation under the Industrial Stormwater Permit (12-SW or 20-SW). What is unique to this permit are the numeric limits for various process waters. The rationale behind the specific selection of the limits is discussed earlier in this fact sheet. Additional background on process water requirements is included below.

### **Sector A - Timber Products**

In addition to non-numeric limits in this sector, the permit contains benchmarks for TSS and COD. This sector also includes numeric limits for pH and Debris, which are based on ELGs. More information on these limits is in the rationale section of this Fact Sheet.

### **Sector C – Chemical & Allied Products Manufacturing, and Refining - includes composting**

In addition to non-numeric limits in this sector, the permit contains benchmarks for nitrate plus nitrite nitrogen, total lead, total iron, total zinc, and phosphorus. This sector also includes numeric limits as specific subsector of fertilizer manufacturing for phosphorus and fluoride, which are based on ELGs. More information on these limits is in the rationale section of this Fact Sheet.

### **Sector D – Asphalt Paving and Roofing Materials and Lubricant Manufacturing**

In addition to non-numeric limits in this sector, the permit contains benchmarks for TSS. This sector also includes numeric limits as specific subsector of asphalt emulsion facilities for TSS, pH and oil & grease, which are based on ELGs. More information on these limits is in the rationale section of this Fact Sheet.

### **Sector E – Glass, Clay, Cement, Concrete, and Gypsum Products**

In addition to non-numeric limits in this sector, the permit contains benchmarks for total aluminum and TSS. This sector also includes numeric limits as specific subsector of material storage pile runoff at cement manufacturing facilities for TSS and pH, which are based on ELGs. Requirements for concrete washout from concrete mixer trucks, moulds, or equipment include technology based non-numeric limits in addition to numeric limits for pH, TSS and oil & grease, which have been continued from previous permits. The permit also includes washwater for vehicle wash water and these are discussed below. More information on these limits is in the rationale section of this Fact Sheet.

### **Requirements for Vehicle Washing**

The permit continues that limits and controls required under the 15-MM for vehicle washing. The limits were intended to address potential impacts to surface waters. Wash water coverage was not provided to the other industry sectors however, even though it is a common need for the facilities, especially mining operations. The permit specifies specific prohibitions, required controls, and the means by which compliance may be determined

*Vehicle Wash Prohibitions.* A common issue with vehicle washing is that the work is performed in locations where certain fluids with a potential for pollution exist. The 22-MM specifically prohibits “automotive fluids

(i.e. waste oil, fuels, grease, antifreeze such as ethylene glycol, organic solvents, or paint) or washwater from engine or under-carriage cleaning. Additionally, the use of soaps to wash vehicles is prohibited if it results in a surface water discharge.”

*Technology-Based Effluent Limits.* You must design, select and implement an appropriate wastewater treatment system to meet the limits of this permit. The system must include the following components.

- Perform the washing in a dedicated area, potentially with signage.
- Inspection and Maintenance required minimizing pollution.
- Documentation that indicates you are in compliance.
- A control to allow inspection prior to discharging and if required a method to dispose offsite if required.

### **Sector F – Primary Metals**

This sector contains only non-numeric limits.

### **Sector G – marked [Reserved].**

This sector is reserved for any metal mining, if it were to be added in the future.

### **Sector J – Non-Metallic Mineral Mining and Dressing**

In addition to non-numeric limits in this sector, the permit contains benchmarks for TSS. This sector also includes numeric limits as specific subsector of dewatering and/or process water discharges at crushed or broken limestone mining facilities, dewatering crushed stone mining facilities, and dewatering discharges at construction sand and gravel mining facilities for TSS, pH and temperature. This sector also includes numeric limits for dewatering discharges for TSS and pH at industrial sand mining facilities, however doesn't include coverage at industrial sand and gravel that use hydrofluoric acid flotation (HF). The permit also includes the specific requirements for washing of vehicles as described under Sector E. Lastly mining requirements for termination provided in this section. More information on these limits is in the rationale section of this Fact Sheet.

### **Sector L – Landfills and Land Application Sites – includes crushed concrete and asphalt**

In addition to non-numeric limits in this sector, the permit contains benchmarks for TSS and pH. More information on the benchmarks is found in the rationale section of this Fact Sheet.

### **Sector P – Land Transportation and Warehousing**

This sector contains only non-numeric limits. It also indicates the vehicle washwater at maintenance facilities requires either an individual or other NPDES permit.

### **Sector AD.c – Hydrodemolition Operations**

The Department has determined that the discharge of wastewater resulting from hydrodemolition activities requires a permit and if discharged to groundwater only may be regulated by the 22-MM.

"Hydrodemolition" means a concrete removal technique which utilizes high-pressure water to remove deteriorated and sound concrete as well as asphalt and grout. The main concerns with this washwater are



elevated levels of TSS and high pH. The treatment of TSS is possible at a temporary on-site treatment, however the adjustment of pH can be problematic. The adjustment creates salts that can impact freshwater streams. In searching for the best solution for this type of short term discharge, we looked at model permits from EPA and in neighboring states. Using best professional judgment, we determined that the best approach for Maryland is similar to in Ohio's general permit which provides coverage for discharge of wastewater from hydrodemolition via groundwater infiltration. Ultimately, the Department determined that discharges would be subject to numerical limitations on pH only and narrative requirements to ensure proper treatment and disposal. The 22-MM will not allow discharges for hydrodemolition wastewaters to surface waters.

**Appendix E of the permit is a collection of definitions used in the permit.**

Definitions from the 15-MM have been reviewed and compared with more recent Department-issued permits. Updates to the specific language as well as new definitions have been added where necessary. Definitions are generally standard amongst NPDES permits and regulations.

**13. Notice of Intent (maintained as a separate document)**

The NOI form has been updated and expanded from previous versions. If you operate multiple facilities you must submit an NOI for each noncontiguous site. Permittees must provide the following types of information on the NOI form: your name, address, email address, and telephone number; the facility location, including address and latitude and longitude; any preexisting NPDES permit number; the receiving water body(s) for each outfall/discharge; the primary and any subsequent Standard Industrial Classification (SIC) codes subject to this permit; and information for your SWPPP primary contact.

Purpose: The NOI form provides the Department with the information necessary to determine an industrial operator's eligibility to discharge under this permit, to record requirements for restoration of impervious surfaces and enables the Department to better match up permittees with their respective monitoring requirements and to prioritize oversight activities.

The Department asks clarifying questions about the receiving water including whether the water is impaired, the name of the impaired water, the pollutants for which the water is impaired. For new or increased dischargers, the Department may further verify if the receiving water is considered a Tier II waterbody.

**14. Notice of Termination (maintained as separate document)**

The Notice of Termination documents is used across many of the Department's general permit. The format and information required may evolve slightly over time, but the form will obtain all information required by the permit and NPDES regulations for the Department to evaluate the request. The updated form can be found on MDE's website at <https://mdewwp.page.link/GPNOT>.