

Fact Sheet

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

State Discharge Permit No. 15-MM
NPDES Permit No. MDG49

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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The Clean Water Act (CWA) was originally enacted as the Water Pollution Control Act of 1948 (P.L. 80-845), and amended in 1972 by the Federal Water Pollution Control Act (P.L. 92-500), which established the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. 100-4) 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 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:

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“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 10-MM that became effective for a five-year term on May 1, 2010 and expired April 30, 2015; however, the 10-MM general permit is administratively continued for facilities covered under that permit at the time it expired. Currently, in 2015 over 300 facilities are holding 10-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 15-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, the plants and the mines. Portable batch concrete plants are temporary in nature, constructed and operated during a major construction activity. 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 10MM permit were SIC 1442 “Construction Sand and Gravel” (105 sites), followed by SIC 1422 “Crushed and Broken Limestone” (21 sites) and then followed by other clay, broken or crushed stone categories.

The 15-MM clarifies that facilities involved in re-use of concrete and asphalt are eligible, and these are covered under Subsector L4, under Sector L: Landfills and Land Application Sites because when researching these operations, they were listed under multiple SIC codes, but we found that SIC 4953 (Refuse Systems) was the most representative. This includes a report by Northeast Recycling Council, listing it under this SIC Code. We list this as “Concrete or Asphalt Recycling”, which we describe as facilities that primarily receive and stockpile a mix of dirt, concrete or asphalt and crush concrete or asphalt for re-use. These facilities collect waste debris from demolition, and repurpose it for construction material or other valued uses. They may be operating with a waste disposal permit from our Land Management Administration, and may end up with debris from a work site that has to be sent to a landfill, such as tires, wood or shingles. The Best Management Practices for these facilities consists of sediment and erosion controls and may also require attention to pH from contact with crushed concrete. These practices are unique and not similar to practices used for recycling of cans or bottles, or various metals. We feel that listing it under this category is more effective, and is consistent with the industry in other areas in the US.

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The 15-MM General Permit introduces coverage for hydrodemolition, where the activity is being performed for bridgework or where there is a risk for discharge to surface waters. This is logical because wastewater from hydrodemolition shares common pollutants (high pH and sediment) and requires similar controls to the other activities regulated by the 15-MM.

To facilitate grouping and clarify which facilities are covered, two amendments to Maryland regulations were recently promulgated (COMAR 26.08.04.09 and 26.08.01.01), providing for coverage of the following discharges under the 15-MM General Permit.

- J. General Discharge Permit for Mineral Mines, Quarries, Borrow Pits, and Concrete and Asphalt Plants.
 - (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 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 promulgated regulation change, the Department identifies facilities for coverage under the General Permit based on the Standard Industrial Classification codes (SIC codes) 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), for which the 15-MM permit specifies certain discharge requirements.

Table 2. Covered Primary or Co-Located Industrial Activities

SIC Code or Activity Code	Primary or Co-Located Industrial Activity Represented in the General Permit
	SECTOR D: ASPHALT PAVING AND ROOFING MATERIALS AND LUBRICANTS
2951, 2952	Subsector D1: Asphalt Paving and Roofing Materials
2992, 2999	Miscellaneous Products of Petroleum and Coal
	SECTOR E: GLASS, CLAY, CEMENT, CONCRETE, AND GYPSUM PRODUCTS
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
	SECTOR G: METAL MINING (ORE MINING AND DRESSING)
	[Reserved]
	SECTOR J: MINERAL MINING AND DRESSING

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SIC Code or Activity Code	Primary or Co-Located Industrial Activity Represented in the General Permit
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
	SECTOR L: LANDFILLS AND LAND APPLICATION SITES
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.
	SECTOR AD.c: HYDRODEMOLITION
HD	Operations involved in using water to remove old concrete, rock or cement referred to as hydrodemolition.
	SECTOR AD: NON-CLASSIFIED FACILITIES
AD	Other stormwater discharges to waters of the State designated by the Department as needing a permit (see 40 CFR 122.26.(a)(9)(i)(C) 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 as for a landfill, a location for a natural wood waste facility, or for other creative ideas. 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 15-MM are found in the table below, which is included in Appendix A of the permit.

Table 3. Additional Covered Co-Located Industrial Activities

SIC Code or Activity Code	Additional Co-located Industrial Activities Represented in the General Permit
	SECTOR A: TIMBER PRODUCTS
2411	Subsector A3: Log Storage Areas
2499	Subsector A4: Wood Products Not Elsewhere Classified (Natural Wood Waste)
	SECTOR C: CHEMICALS AND ALLIED PRODUCTS
2874 - 2875	Agricultural Chemicals (Fertilizer, Composting)
	SECTOR F: PRIMARY METALS
3398, 3399	Miscellaneous Primary Metal Products

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SIC Code or Activity Code	Additional Co-located Industrial Activities Represented in the General Permit
	SECTOR P: LAND TRANSPORTATION AND WAREHOUSING
4212-4231 (except 4221-4226)	Motor Freight Transportation and Warehousing Only those facilities which have vehicle maintenance shops (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.

1.2 Coverage Requirements

Operators choosing coverage under the new 15-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 Management Administration, Mining Program, Water Management Administration (WMA) Compliance Program, and WMA Groundwater Discharge Permits Division. The development process included 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 2015, the Department held an informal listening session with permittees concerning the revised permit, and will provide an opportunity for a public hearing in 2016 to answer stakeholder questions and take comments.

2.1. Permit Organization

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The 15-MM General Permit is divided into six parts and six appendices: 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, which is modeled after the MSGP, is designed to clarify 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

Based on revisions to the 2008 MSGP, the 15-MM General Permit has been revised to conform with applicable court decisions related to general permits for stormwater.

One of these cases held that because the terms of the Nutrient Management Plan (NMP) employed by concentrated animal feeding operations (CAFO) imposed restrictions on discharges, those restrictions amounted to effluent limitations that needed to be made part of the permit and subject to public review (*Waterkeeper Alliance, Inc. v. EPA*, 399 F.3d 486 (2nd Cir. 2005)).

In a second case, the Court found that under the MS4 regulations “NOIs were functional equivalents of permits” and “EPA’s failure to make NOIs available to the public or subject to public hearings contravene the express requirements of the Clean Water Act” (*Environmental Defense Center v. EPA*, 344 F.3d 832 at 858 (9th Cir. 2003)).

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 followed EPA’s lead by explicitly establishing effluent limitations in Part III.B and Appendix D of 15-MM permit, and separately, in Part III.C, clarified that the

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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, 15-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 15-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 15-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.¹ 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. .

¹ 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.

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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 EDC (9th Cir. 2003) and Waterkeeper (2nd Cir. 2005) rulings that found a NMP or NOI effectively imposed effluent limitations, making them subject to public participation provisions of the CWA under §402(a)(1), 33 U.S.C. §1342(a)(1)). In accordance with §402 of the Act, EPA made the MSGP available for public comment, and provided an opportunity to request a public hearing prior to issuing the permit. The Department has similarly made the 15-MM permit available for public comment. Interested persons can find pending NOI applications or obtain copies of the registration letter, application, for a permitted facility on the Department's website at <http://mes-mde.mde.state.md.us/WastewaterPermitPortal> 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 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 new, 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

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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 15-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 4. Stormwater-Specific Effluent Limitations Guidelines

Regulated Discharge	Title 40 CFR	15-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 15-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 15-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

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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 publically 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 II 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. 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.² 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

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

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later, in the section of the factsheet regarding changes to the permit. Maryland's Phase II WIP³ 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.

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 changes include:

Inclusion of requirements to implement specific controls. The 10-MM required "The operation shall follow a sediment control plan to prevent the discharge of sediment to surface water.", whereas the 15-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 (http://bit.ly/MDE_Sediment_Erosion_and_Control). "

In addition to required controls, the 15-MM introduces ways to verify their performance. The 10-MM has specific dry weather limits for TSS, but only settleable solids for wet weather. This permit implements 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 12-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.
- 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 15-MM is consistent with the Chesapeake Bay TMDL and the state's plans in the WIP.

2.6.3.2 Total Maximum Daily Loads for Sediment

³ *Maryland's Phase II Watershed Implementation Plan for the Chesapeake Bay TMDL* (October 26, 2012).

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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 Gwynns Falls Watershed, Baltimore City and Baltimore County, Maryland	March 10, 2010

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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
Lake Linganore	of Phosphorus and Sediments to Lake Linganore in the Lower Monocacy Watershed in Frederick County, Maryland	May 13, 2003

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 illustrates waterbodies/watersheds which are currently listed as impaired for pH.

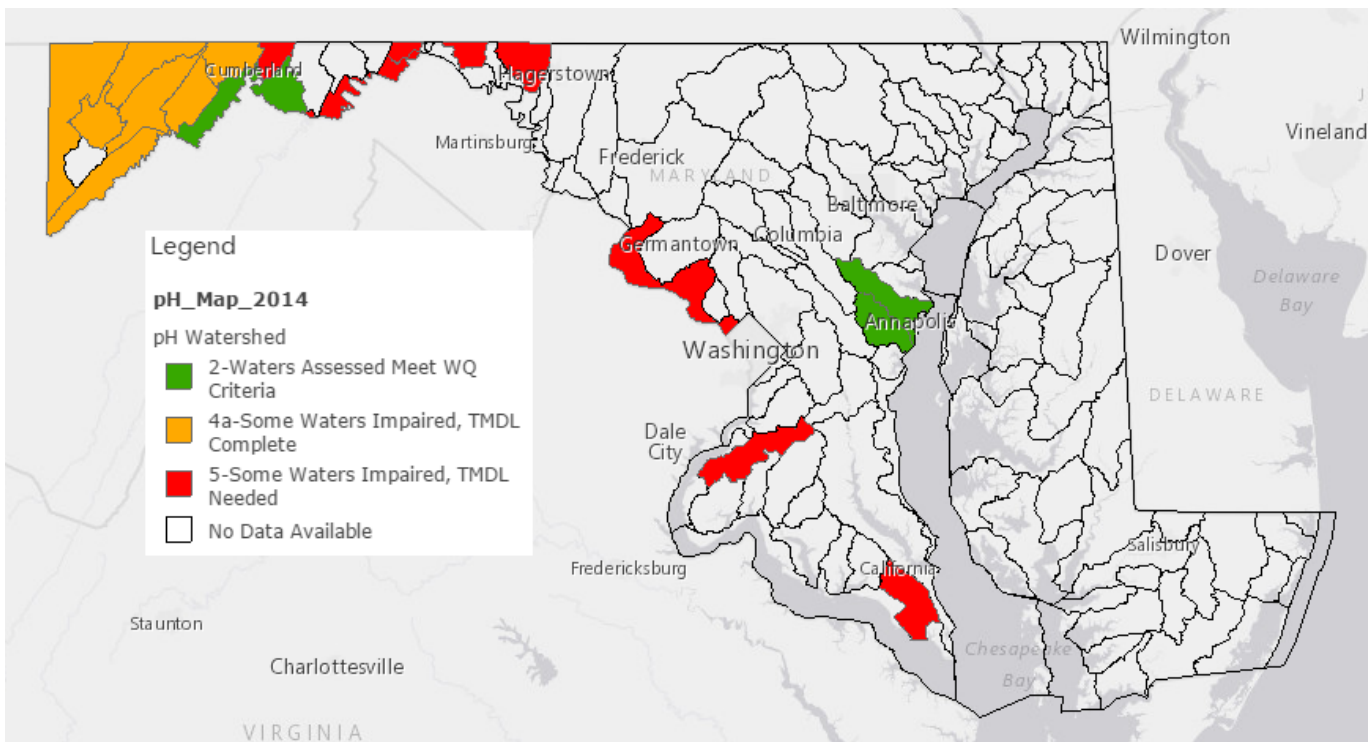


Figure 1 - 2014 pH Assessments in Maryland (2014 Assessment)

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In western Maryland, the TMDL has been completed, as illustrated in the following diagram. 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.

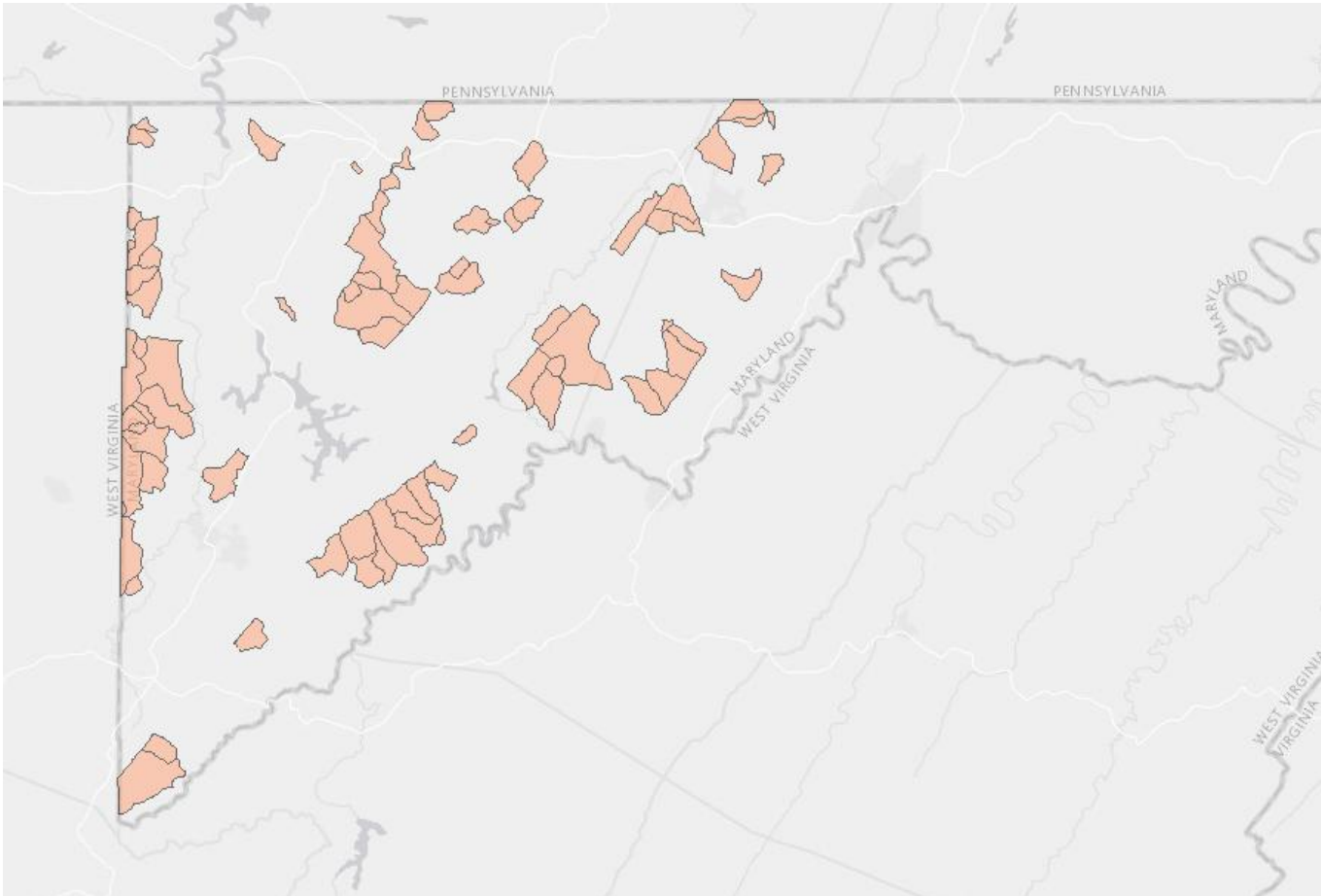


Figure 2 - Established TMDLs with pH surrogates (2014 Assessment).

This renewal permit continues to opt to include effluent limitations for pH, which vary depending on whether the receiving stream is impaired.

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

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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.

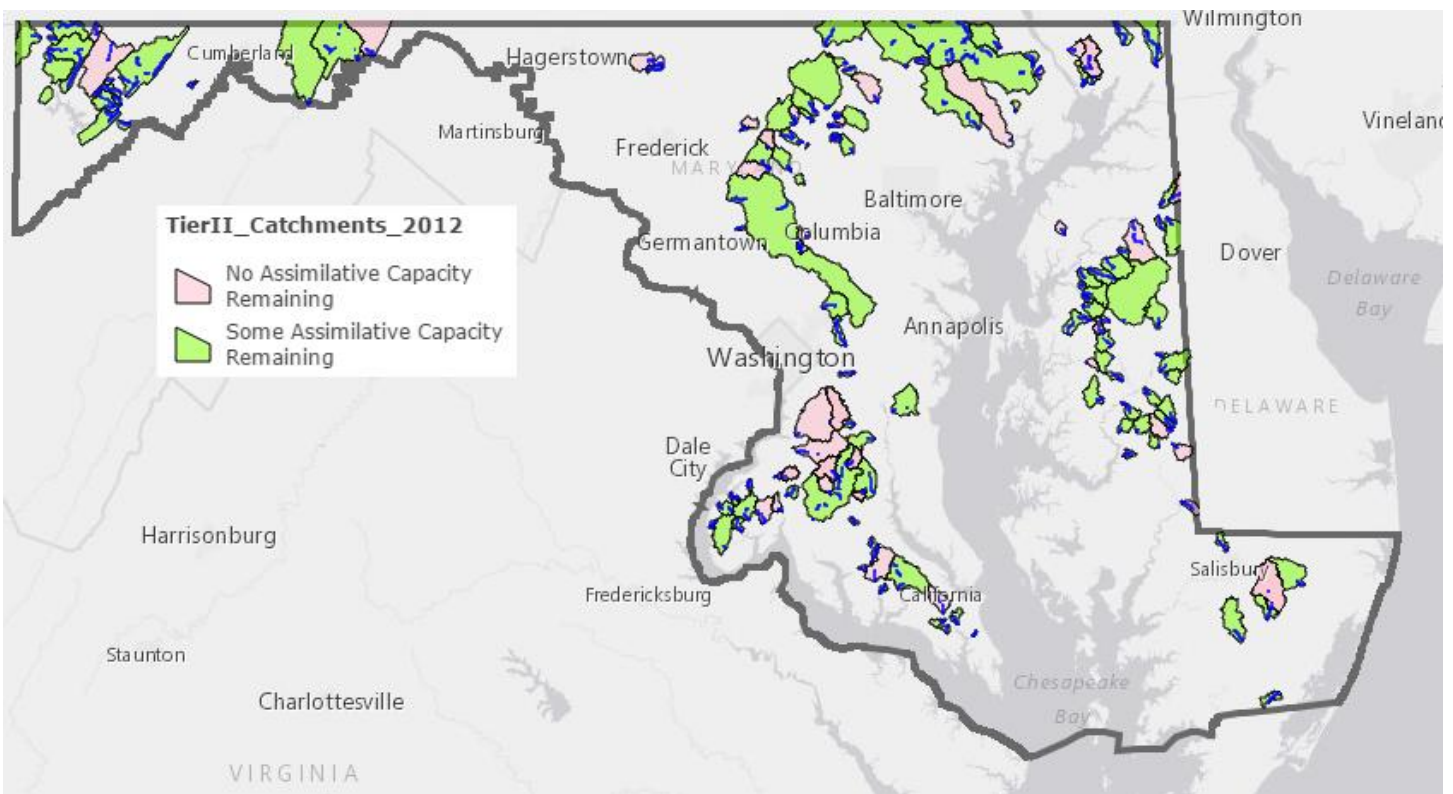


Figure 3 - Tier II Watershed in Maryland (2012 Assessment)

2.6.5 Rationale for Effluent Limits

2.6.5.1 Total Suspended Solids (TSS)

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.

10-MM Limits for TSS (all sampled monthly)

Category of Industry	Monthly Average	Daily Maximum
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

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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
Concrete Plants	30 mg/l	60 mg/l

2.6.5.1.1 Sector J – Mineral Mining Operations

The specific numeric limits in the 10-MM (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 and some of those proposed for this revision 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. The Department’s understanding was that this study was to be the first step in returning solids limits to the ELG, but EPA has never since promulgated revised guidelines. MDE has, however, applied these numbers to the mining permits ever since then.

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 on storm surges. The previous permit attempted to apply these limits for wet weather, and they were challenged and redacted. At this time we are proposing a more established method for evaluating sediments in wet weather which is further described in Benchmark Monitoring. 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.

The Frontier Technical Associates Inc., “Suspended Solids Removal in the Crushed Stone Industry” by Dolores M. Funke and P. Michael Terlecky, prepared March 30, 1982 and revised August 6, 1982 was prepared under Radian Corporation Task 27, EPA Contract 68.01-5163. The report was written due to the National Crushed Stone Association’s assertion that previous proposed limitations were developed from data which had not been submitted for public comment and that the limitations were made more stringent based upon that data. During the course of the study, communication was maintained with industry representatives in order to achieve the

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necessary cooperation for completion of the survey, site visit and sampling requirements of the study, and to fully understand the objections raised by the industry.

Frontier performed an analysis of the industry based upon their size, location and material mined, and compared their analysis with the Bureau of Mines data, to determine a valid sample set for their analysis. Fourteen (14) facilities were selected for site visits. These represented the major rock types, and treatment technologies. Quarry water treatment, wash water treatment and commingled water treatment were represented in the group. Facilities were located in 9 states located in the East, Southeast, and Great Lakes Areas. Two (2) were from Maryland. In addition to site visits, Frontier set out a method of sampling influent and effluent during dry and rainfall conditions.

Frontier's survey determined practices used to treat wastewater for the crushed stone industry. The most frequently applied treatment technologies are settling (single or multiple pond) and recycle or reuse. Quarry water is usually collected in a sump which also serves as a settling basin. Many facilities also retain water in these sumps as a source of wash water, spray water for dust suppression, or cooling water for crushing equipment. The most frequently reported water treatment technology is settling with total recycle. However a small percentage, primarily limestone facilities, discharge wash water following single or multiple pond settling and/or mechanical separation.

Facilities which commingle quarry and wash water most often recycle a part of the water, allowing the potential for discharge either on a regular basis in order to purge the wash water system, and/or for the purpose of allowing intermittent discharge of treated runoff water in cases of substantial precipitation events. A small number also reported using flocculants to enhance settling of quarry, wash or commingled water. In all cases, the treatment technologies were selected for suspended solids removal and control of water present in the systems.

In all, 287 dry weather samples were taken (for TSS) and 239 samples were taken during rainfall. Also 117 samples were taken for dry weather settleable solids evaluation, and 208 samples were taken during rainfall. These samples were considered representative of conditions and constraints present in the industry, as they were not exemplary in that no claim is being made that they represent the best treatment systems available in the industry.

The result of the analysis established achievable average and maximum concentrations of total suspended solids (TSS) under dry weather conditions, and settleable solids concentrations for rainfall conditions. They also broke down several classes of wastewater. The classes were quarry water dewatering, wash water and comingled water.

Under dry weather conditions, the following effluent TSS levels were achieved on the average at the facilities samples (95th percentile):

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Crushed Rock Description	Average Concentration (mg/l)	Maximum Concentration (mg/l)
<i>Carbonate Rocks</i>		
Quarry Water	15	31
Wash & Commingled Water	17	37
<i>Non-Carbonate Rocks</i>		
Quarry Water	30	66
Wash & Commingled Water	77	146

When the previous MM general permit was issued, the Crushed Stone non-carbonate category for dewatering+process (146 max/77 ave) –limits were deemed by the Department to be “too generous” so the permit was based on the 60/45 from other industries, which was determined to be achievable.

As shown in Figure 4, carbonate quarries show a consistent ability to meet the TSS limits. As more facilities registered and began reporting results, TSS data was rather sporadic, ranging from consistently low TSS concentrations in 2010 to intermittent and fluctuating increases between 2012 and 2014. In spite of the minor variations over the course of the 5-year permit cycle, median TSS concentrations continued to meet the currently imposed limits. Additionally, the percentage of reported violations has actually decreased from 7% in 2010 to 6% in 2014. Thus, the limit of 15 mg/L as a monthly average has proven to be reasonable and applicable facilities should face no compliance challenge if such limit was to be maintained.

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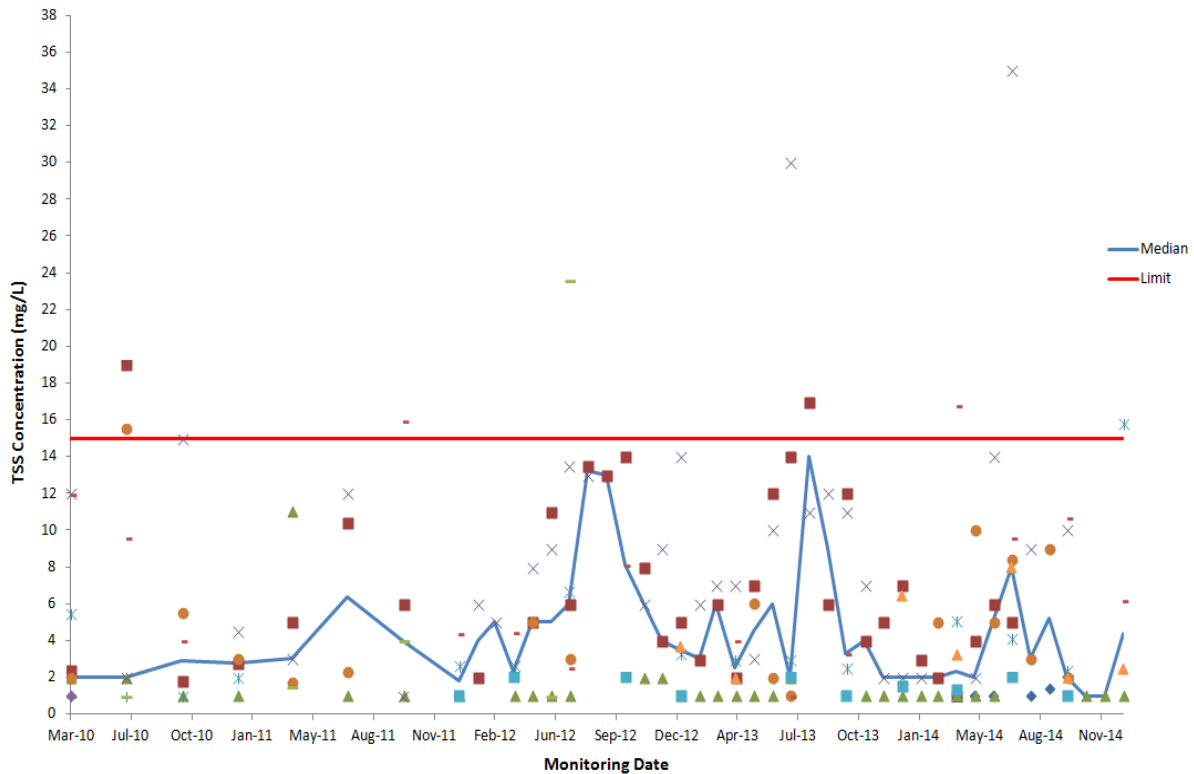


Figure 4 - Monthly Average TSS Concentrations for Discharges from Carbonate Quarries The red line represents the enforced TSS limit (15mg/L), the blue line represents the median TSS concentration reported, and the individual dots represent TSS concentrations reported by each facility.

As shown in Figure 5, meeting the TSS limits seems to be more challenging for non-carbonate quarries than for carbonate quarries. Although minor fluctuations are observed throughout the course of the 5-year permit cycle, the overall median TSS concentration appears to be steady. A significant number of violations have occurred among this category of facilities, exhibited by Figure 6, which graphs a timeline of the number of violations for both monthly and daily TSS concentrations from 2010 to 2014. The graph reveals a trend that indicates a decrease in the number of TSS violations as time progressed for non-carbonate facilities. This suggests that non-carbonate facilities which originally had difficulties meeting the limits are able to effectively adjust their activities to achieve compliance.

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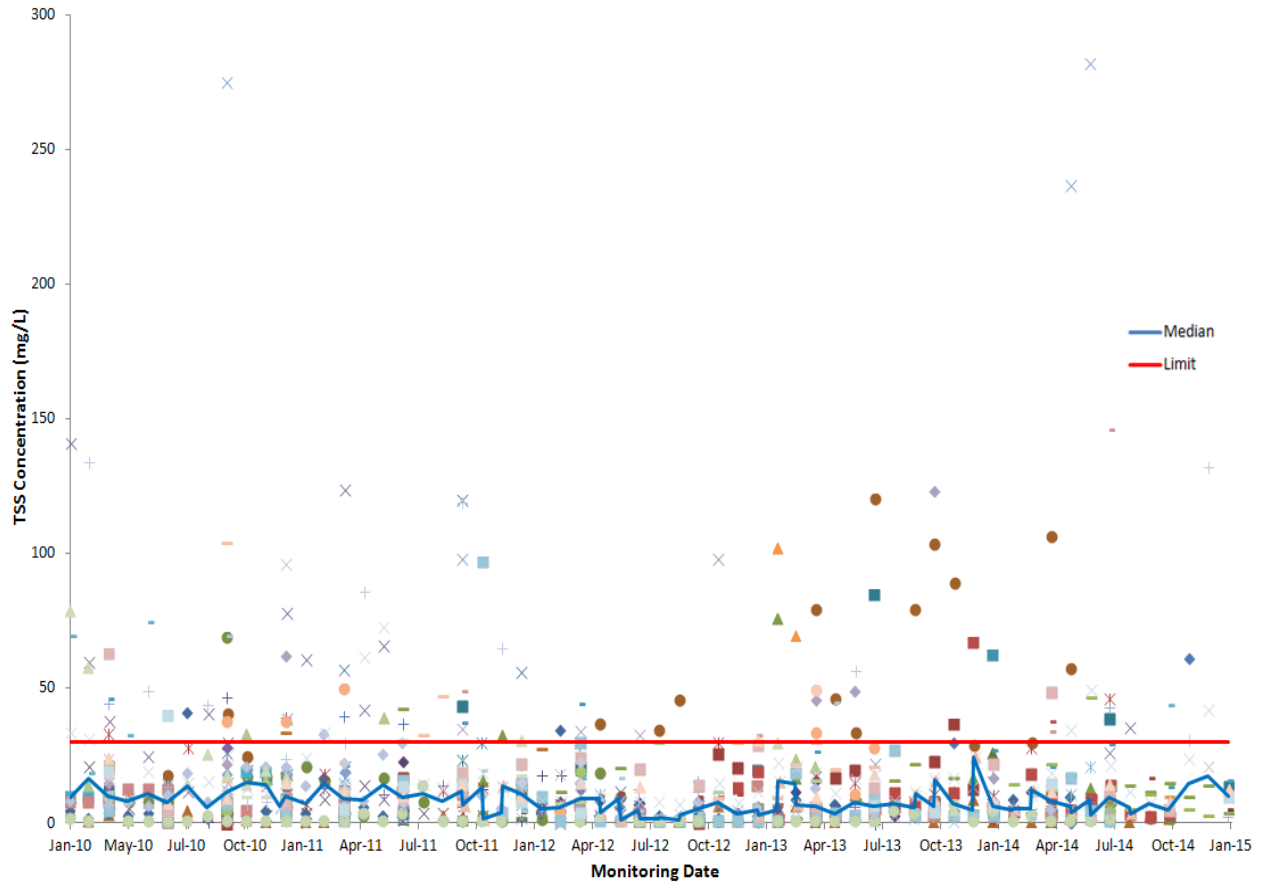


Figure 5 - Monthly Average TSS Concentration for Discharges from Non-Carbonate Quarries. *The red line represents the enforced TSS limit (30 mg/L), the blue line represents the median TSS concentration reported, and the individual dots represent TSS concentrations reported by each facility.*

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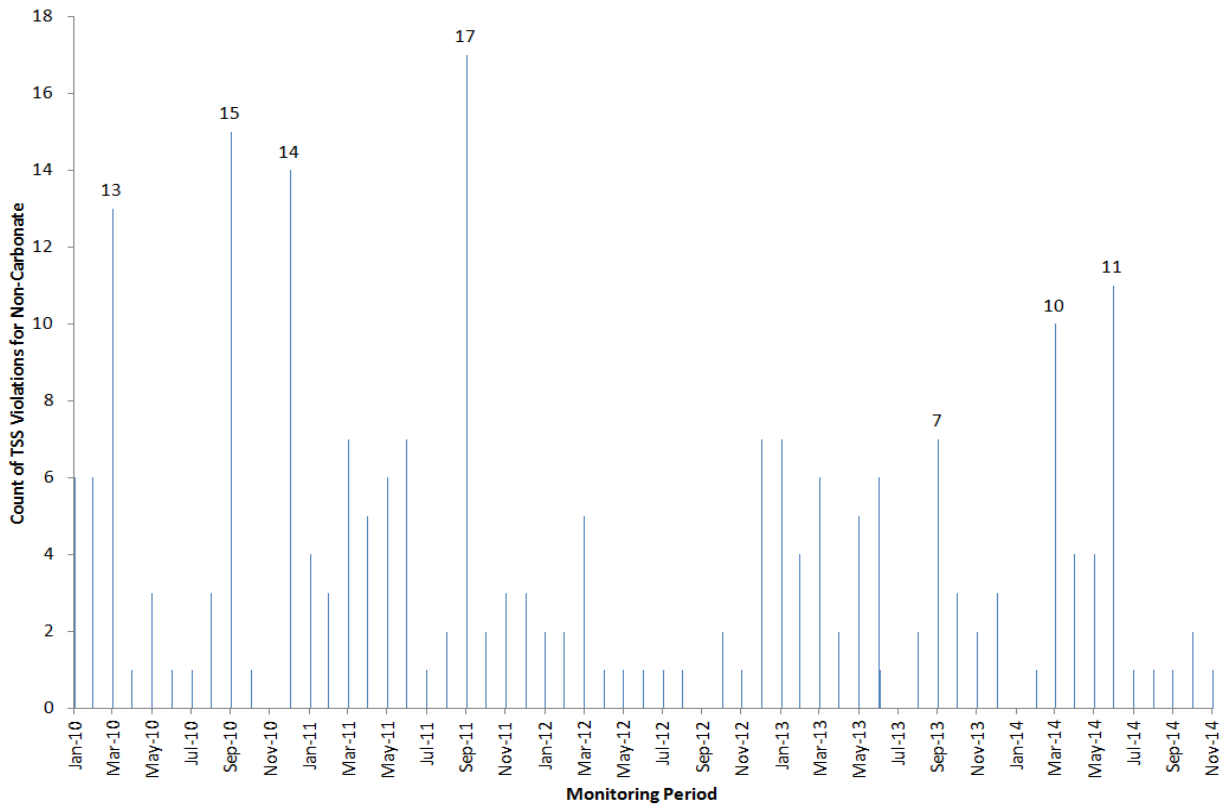


Figure 6 - TSS Violations Count Distribution for Discharges from Non-Carbonate Facilities.

Based on the above analysis, no process water TSS limits changes were made for the mining operations covered. Industrial Sand Mining, which was prohibited by the previous permit, has been added with limits based on the ELG at 40 CFR 436.42. However, the 15-MM prohibits wastewater discharges from industrial sand facilities using HF floatation because the ELG is based on production. Such facilities will be required to obtain an individual permit.

The previous permit established wet weather limits based on settleable solids, since the Frontier Report suggested that would be a valid measure for wet weather. What that failed to acknowledge was that clay fines or other suspended solids impacting clarity would not settle, potentially creating visible plumes in streams at the point of discharge. The proposed wet weather dewatering limits (both for quarries and sand & gravel) are addressed in the 15-MM 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 through the MSGP. We feel this is more restrictive for the pollutants of concern.

2.6.5.1.2 Sector A – Timber Products

The 15-MM permit limits TSS in runoff based on performance using benchmarks established in the MSGP.

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2.6.5.1.3 Sector D – Asphalt Emulsion Facilities

The 15-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 MSGP.

2.6.5.1.4 Sector E – Cement and Concrete Manufacturing 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. TSS limits for washing of concrete moulds, 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. TSS from other asphalt operations in runoff is based on performance using benchmarks established in the MSGP.

2.6.5.1.5 Sector L – Concrete and Asphalt Recycling

The 15-MM permit limits TSS in runoff based on performance using benchmarks established in the MSGP.

Summary of limits and benchmarks for TSS in the 15-MM.

Category of Industry	Daily Maximum	Monthly Average	Sampling Frequency	Limit vs Benchmark
Log Storage and Handling Facilities - SIC 2411 (*N)	100 mg/l	-	1/quarter	Benchmark
Natural Woodwaste Facilities - SIC 2499 (*N)	100 mg/l	-	1/quarter	Benchmark
Asphalt Paving and Roofing Materials - SIC 2951, 2952 (*N)	100 mg/l	-	1/quarter	Benchmark
Asphalt Emulsion Facilities (*N)	23 mg/l	15 mg/l	1/month	Limit
Concrete and Gypsum Product Manufacturers SIC 3271-3275 (*N)	100 mg/l	-	1/quarter	Benchmark
Material Storage Pile Runoff at Cement Manufacturing Facilities (*N)	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 (*N)	100 mg/l	-	1/quarter	Benchmark
Stone and Minerals SIC 1411, 1422-1429, 1481, 1499 (*N)	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

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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
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) (*N)	45 mg/l	25 mg/l	1/month	Limit
Concrete or Asphalt Recycling (*N)	100 mg/l	-	1/quarter	Benchmark

(*N) – Indicates a new established limit or benchmark in the 15-MM, that wasn't in the 10-MM.

2.6.5.2 pH

For mines, in addition to limits on sediment (total suspended solids), this permit limits the pH of process wastewater and mine pit discharges to comply with Federal regulations found in 40 CFR 436.22. The 10-MM required limits from 6.5 to 8.5, and had options that allowed for the operator to monitor in stream if they exceed these values and then use that value to report pH. It also required the permittee to report a pH difference if they didn't meet pH between 6.0 to 9.0.

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One of the water quality concerns relating to discharges from the carbonate facilities is pH, maximum pH to be more precise. Figure 7 shows pH values for facilities over the course of the 5-year permit cycle. The graph indicates most facilities meet the maximum pH limit of 8.5 with infrequent reported violations, which suggests that the currently imposed range for pH (6.5 – 8.5) is reasonable and should be maintained.

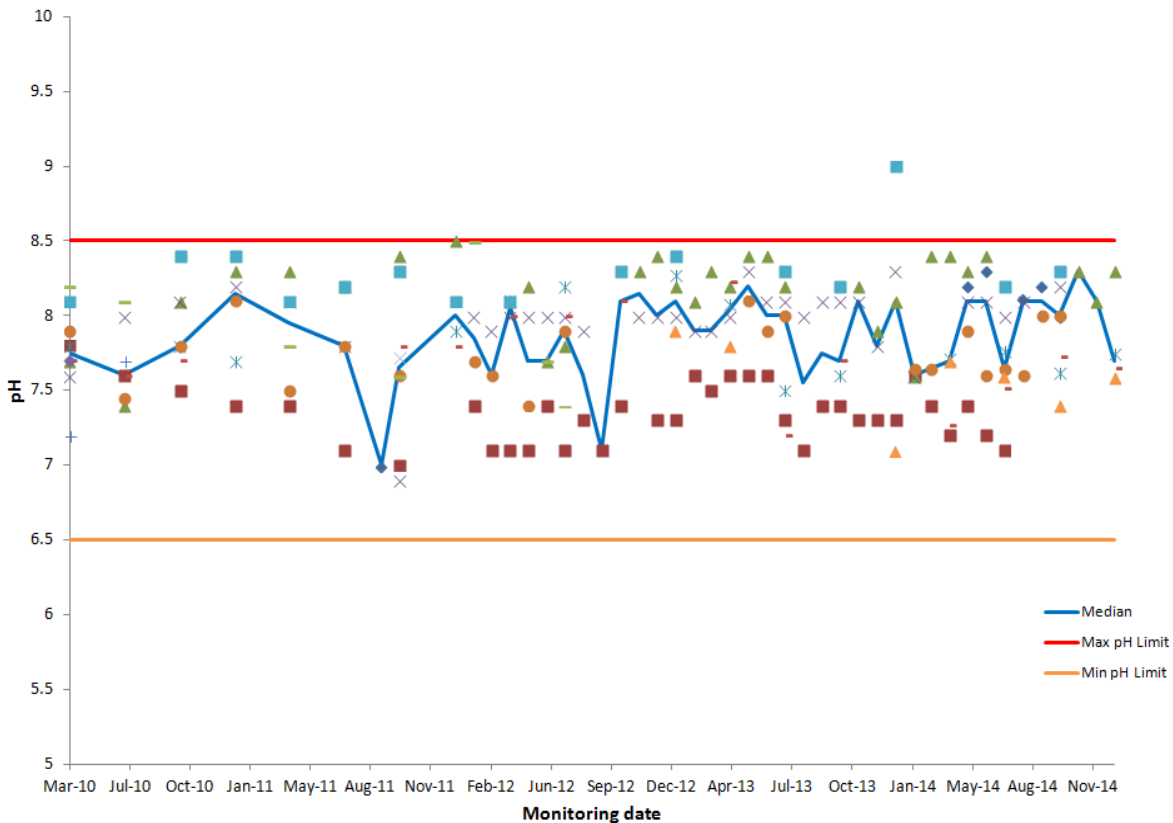


Figure 7. Carbonate pH. The red line represents the enforced maximum pH limit (8.5), the orange line represents the enforced minimum pH limit (6.5), the blue line represents the median pH reported, and the individual dots represent pH values reported by each facility.

Comments from the previous permit and, more recently, from the listening session have intimated that pH at sand and gravel sites were a problem. Although minimum pH limits seem to be more controversial for these non-carbonate facilities, 65 maximum pH violations and 39 minimum pH violations are reported as shown in Figure 8. Moreover, the amount of violations is slightly increasing throughout the years especially for the maximum pH.

Meeting pH limits of 6.5 – 8.5 might be unfeasible for certain facilities, so the previous permit suggested that such facilities report the pH difference. While many facilities follow the practice of reporting the pH difference, some do not. Among the 22 facilities reporting pH violations in Figure 8, 12 of them did not report pH difference, 2 reported pH difference but still violated water quality criteria, and 8 achieved compliance by reporting pH difference.

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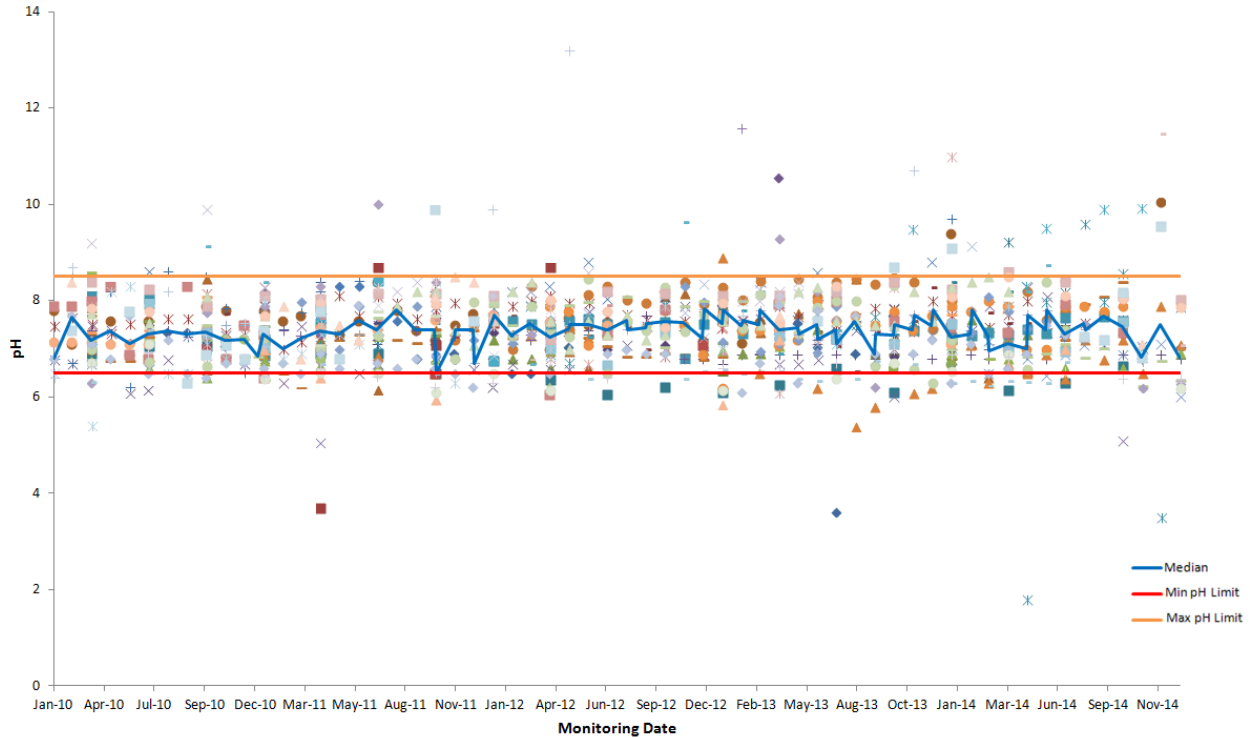


Figure 8. Non-Carbonate pH. The red line represents the enforced minimum pH limit (6.5), the orange line represents the enforced maximum pH limit (8.5), the blue line represents the median pH reported, and the individual dots represent pH values reported by each facility.

A review of the 10-MM reveals that it effectively removed the limit and established any exceedance of 6.5 to 8.5 as an action level to measure ambient conditions. In reviewing the data, and the method, it became obvious that this method essentially allowed the permittee to exceed the 6.5-8.5 pH limit while enforcing the limits established by the ELG (6.0-9.0). Furthermore, the “pH Difference” parameter also created confusion when reviewing discharge monitoring data, as it is difficult to determine which facilities were not in compliance. Additionally, during the renewal of this permit, we received requests to review the limits and re-evaluate them. Based on the review, we determined using best professional judgment that implementing strict technology based limits (6.0-9.0) at the point of discharge would actually be more protective than limits established by the previous permit. When reviewing the anti-backsliding regulations (40 CFR 122.44(l)), this would be allowed given “a less stringent effluent limitation is necessary because events over which the permittee has no control and for which there is no reasonably available remedy”. The method from the 10-MM may be practical or even beneficial in an individual permit; however, a General Permit must include limits and reporting practices that are practical across a variety of facilities and locations, which is not true of the previous method. For example, it is impossible to know if every prospective permittee has ready access to the receiving stream, which is essential to the 10-MM method and represents something over which the permittee has no control. The anti-backsliding regulations also state that we can choose a less stringent method if we determine a technical

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mistake was made. In this case, we are actually suggesting that the method has a technical mistake, whereas the limit on one hand is limiting pH to a narrow range but on the other hand allowing it to exceed that value. As a result, we have re-established the ELG technology based limits for non-carbonate operations. We feel this will provide clarity and simplification regarding how to comply with the permit while still protecting water quality to the same extent as the action level approach of the previous permit. For carbonate operations, though, the more restrictive limits of 6.5 to 8.5 have been proven achievable, so they shall be continued.

New to this permit is a benchmark for Concrete and Asphalt Crushing Operations. Using best professional judgment, the Department has chosen to implement a technology standard of 6.0-9.0, which is widely-used for numerous classes of discharge across several different industries, particularly by ELGs.

The 15-MM also includes wastewater from hydrodemolition for which the Department proposes to limit pH to a 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.

2.6.5.3 Oil and Grease

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 10-MM) without challenge for over 30 years, they are used in other states' permits, and are used in some EPA effluent limitation guidelines. Thus, it shall be continued in the 15-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.

2.6.5.4 Temperature

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

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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.

2.6.5.5 Total Phosphorus

Effluent limitations for total phosphorus have been established in the 15-MM 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 will require an individual discharge permit.

2.6.5.6 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 definition is included as part of the limitation in the 15-MM.

3. SUMMARY OF MAJOR CHANGES IN THE 15-MM PERMIT

The Department has chosen to institute a number of changes in the general permit for mineral mines for this 15-MM iteration. This section outlines the significant updates and includes reasoning for each specific inclusion.

3.1 Reorganization to Align with the Multi-Sector General Permit

Probably the most significant change for the 15-MM permit is the format modification to resemble EPA’s MSGP. Modeling the 15-MM permit on the MSGP allows the Department to reference and utilize much of EPA’s published guidance. Like the MSGP, the 15-MM permit provides general requirements applicable to all facilities requiring coverage as part of the base permit, but also includes a separate section (Appendix D) which defines limits and requirements specific to each individual industrial sector and/or activity. This format allows the 15-MM to detail specific controls for each activity, incorporate a more comprehensive set of requirements, and clarify for owner, operators, and inspectors which terms and conditions are applicable to each facility. For example, a facility which manufactures concrete bricks (SIC Code 3271) is responsible for updating their SWPPP to include requirements found in Part III.C of the base permit as well as controls found in Sector E of Appendix D.

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The revised organization also allowed the Department to add requirements for co-located activities (discussed in Section 1.1 of the fact sheet). Previously, an activity such as composting (SIC Code 2875) would have to be covered under a separate permit because it would be impractical to include requirements for activities which exist at such a small subset of 15-MM facilities. The inclusion of co-located activities increases the likelihood that those areas will be adequately managed and decreases the number of facilities which have to obtain multiple permits. The most recent MSGP (and therefore, the 15-MM) also includes coverage for stormwater associated with construction activities for Sector J, further reducing the need for facilities to register under multiple permits.

3.2 Use of Additives

The 15-MM permit requires notice prior to the use of any chemical additives. Facilities classified under Sector J are allowed use of anionic polymers, flocculants, or other chemicals for the purposes of controlling sediments pursuant to applicable sector guidelines in Appendix D. The use of cationic polymers, sediment control chemicals not fitting the criteria specified in Appendix D, and any chemicals for control of other pollutants is prohibited without prior approval pursuant to Part I.E.5 of the permit.

Language to address use of additives in the 10-MM was challenged after issuing that permit, and subsequently redacted to remove the requirement for biomonitoring of any additives proposed by the operator. The challenge to this requirement argued that it was not reasonable to require the industry to test for toxicity of each additive they proposed to use. Iterations of the mineral mines permit prior to the 10-MM required proof be supplied from information provided by the manufacturer. To avoid backsliding, we have reinstated this requirement. Specifically, to obtain approval for use of an additive pursuant to Part I.E.5 of the permit, the operator must provide the Department's Wastewater Permits Program conclusive data showing that, as used, and at the concentration discharged, the agent is not toxic to aquatic life. The conclusive data must include a list of chemicals composing the additive and aquatic toxicity data. However, it doesn't require that the operator prove the results of the manufacturer's own testing. Since this information is found on the manufacturer's material safety data sheet (SDS), the operator only must read the information and use it to verify to themselves that the additive will not cause toxicity if used as prescribed. Since they are evaluating the toxicity, it will be straight forward to provide proof of their evaluation by presenting a description of how the product will be used and the expected concentration that will exist in the effluent to the Department. This information can be submitted along with the Notice of Intent (NOI), or in a separate letter regarding the use of additives. The Department shall review this information and return a determination, in writing, on if use of the chemical is acceptable based on aquatic toxicity and applicable water quality standards. Any substances not approved by the Department are prohibited. In a listening session with industry, many operators thought this was reasonable. The Department has determined using best professional judgment that this procedure is sufficiently protective of State waters.

In addition, we have added language from EPA's 2012 Construction General Permit (CGP), also adopted in the MSGP, to specifically address the use of polymers during the construction phase of mining activities. The rationale for the language and requirements pertaining to additives is outlined below.

3.2.1 Background

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A number of coagulants and flocculants, including polymers, are available on the market and are in wide use for the control of pollutants not only on construction sites, but also for purposes such as reducing sediment from agricultural fields and reducing pollutants in discharges from wastewater treatment plants among others (74 Fed. Reg. 63008). When EPA was issuing the CGP, they had anticipated that, with the promulgation of a numeric turbidity limit in December 2009, the number of sites that would want to employ treatment chemicals would rise significantly. Although the use of treatment chemicals was not specifically required in the originally promulgated numeric effluent limit (which has since been stayed), the technology basis underlying the numeric limit was “passive treatment”, which itself relied on the addition of polymers to enhance the sediment removal capabilities of standard erosion and sediment controls. Because the exceedance of the effluent limit would have been considered a permit violation, EPA expected that many site operators would elect to use treatment chemicals to ensure a high rate of sediment removal and increase the likelihood of compliance, as compared to strictly relying upon standard sediment and erosion controls.

While contemplating chemical use requirements for the CGP, EPA proposed to prohibit the discharge of a class of chemicals, cationic treatment chemicals, except in conformance with local and state requirements, and requested comment on the way in which these chemicals should be regulated. Cationic treatment chemicals are polymers, flocculants, or other chemicals that contain an overall positive charge. Among other things, they are used to reduce turbidity in stormwater discharges by chemically bonding to the overall negative charge of suspended silts and other soil materials and causing them to bind together and settle out. Common examples of cationic treatment chemicals are chitosan and cationic polyacrylamides (PAMs).

A common theme among the comments was that EPA should take extreme precaution when authorizing the use of these cationic treatment chemicals, especially in light of data suggesting that they are acutely toxic to aquatic species and the fact that chemical use in typical treatment systems at construction sites is far different than in highly engineered systems used for water or wastewater treatment. In response to the comments received, EPA conducted additional research regarding the relative toxicity of cationic chemicals for aquatic species which confirmed that cationic chemicals are acutely toxic to some species. EPA’s research is encapsulated in a memorandum entitled *Literature Survey of Polymer Toxicity for Construction General Permit (CGP) Work Group* (Office of Research & Development, November 2011).

In addition to the public comments and aquatic toxicity research, EPA also considered approaches that state permitting programs have taken to regulate cationic treatment chemicals. While states differ in the way their permits or related standards or guidance documents regulate these chemicals, EPA has found that in states where cationic chemicals are specifically addressed, the use of these chemicals is heavily regulated. In such states, the use of cationic treatment chemicals is either prohibited outright or subject to additional controls compared to other classes of chemicals.

As a result of the above analysis, EPA concluded that use of cationic treatment chemicals at construction sites requires additional safeguards of the type that are generally included in the individual permit process. However, in recognition of the fact that some operators have successfully used cationic treatment chemicals to achieve significant reductions in sediment discharges while maintaining protection of water quality, EPA was open to such operators providing their Regional EPA Office, in advance of submitting their NOI to EPA, an explanation of the controls and safeguards they will employ to ensure that use of such chemicals would not lead to toxic effects to aquatic organisms in the receiving waters.

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EPA emphasizes that the burden is on the operator to develop such controls and present them to the Regional EPA Office for consideration. Submitted information is evaluated to determine if proposed controls are sufficient to ensure that the use of cationic treatment chemicals will not result in a violation of water quality standards. Based on this evaluation, EPA may approve the chemical request, identify additional controls which allow use of the requested chemical upon implementation, or deny the chemical request, which may require the operator to seek coverage under an individual permit.

Sections 3.2.2 through 3.2.8 (below) detail information relevant to EPA's evaluation of requests to use cationic treatment chemicals and explain how this is implemented into the 15-MM.

3.2.2 EPA's Rationale for Requiring Specific Authorization or Individual Permits for Cationic Treatment Chemicals

EPA took several factors into account in coming to the conclusion that the use of cationic treatment chemicals at regulated construction sites would be ineligible for coverage under the CGP (except in the circumstances described above), including:

- EPA's anticipation in the Construction and Development (C&D) rule of specific polymers that may need to be approved on a case-by-case basis,
- acute toxicity of cationic chemicals to aquatic species,
- approaches taken by state NPDES permitting authorities,
- feedback provided in public comments,
- site-specific considerations necessary to determine proper dosage, and
- effects of receiving water turbidity.

Each of these factors are discussed in detail below.

3.2.3 C&D Rule

EPA acknowledged in the preamble of the C&D rule that there may be some treatment chemicals that may require individualized review prior to their use on specific sites. For instance, in the context of discussing the importance of ensuring that polymers are properly used and to consider the appropriateness of using chemicals in areas where there are sensitive species, EPA stated "NPDES permitting authorities may establish controls on dosage and usage, protocols for residual toxicity testing, require prior approval before the use of particular polymers, training requirements for site operators or other measures they deem appropriate" (74 Fed. Reg. 63008). This statement points to the fact that EPA anticipated the need to potentially take additional precautions or require individual permits regarding the use of certain chemicals on a case-by-case basis.

3.2.4 Acute Toxicity

During the development of their final permit, EPA conducted further research into the relative toxicity of chemicals commonly used for treatment of construction stormwater discharges. This research was intended to supplement the aquatic toxicity data collected as part of the C&D rule promulgation, and to address comments received on the proposed CGP relating to toxicity. The research focused on different formulations of chitosan and both cationic and anionic PAMs. In summary, the studies found significant toxicity resulting from use of

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chitosan and cationic PAMs in laboratory conditions, and considerably less toxicity associated with using anionic PAMs. For instance, one study⁴ found that after exposure to 0.75 ppm of acidified chitosan, 12 of 15 cultured rainbow trout died within 24 hours, while 6 of the 15 specimens died after exposure to 0.075 ppm. In the same study, the lowest observed effect to rainbow trout was found at 0.038 ppm.

The lethality in fish species results when the positive charge of the cationic chemical binds to the negative charge of the fish gills. The adhesion of the cationic chemical to the gills interferes with oxygen uptake resulting in suffocation. The Agricultural Research Service (ARS), which has conducted significant research into the use of PAM for use in soil conservation, makes the following conclusions about cationic PAM:

“It is important to emphasize the need to use anionic PAMs in these applications. Neutral PAMs and especially cationic PAMs have been shown to have LC50s low enough for concern to certain aquatic organisms, whereas anionic PAMs have not. Cationics are attracted to the hemoglobin in fish gills. Suffocation occurs when fish are placed in otherwise clean waters that contain low levels of cationic PAM.”⁵

In comparison to cationic chemicals, the use of non-oil based PAM has shown minimal toxicity even at 10 times the normal erosion control concentration, 10 ppm⁶. For more information, refer to EPA’s Office of Research & Development memorandum entitled Survey of Polymer Toxicity for Construction General Permit (CGP) Work Group (November 2011), which is downloadable from the docket for this permit.

3.2.5 State Permitting Programs

Where state permitting programs have specifically addressed cationic treatment chemicals, they have either prohibited their use outright (or advised against their use) or required that they be subject to additional controls compared to other classes of chemicals. The following is a summary of approaches found in various state permitting documents regarding the use of cationic treatment chemicals:

State	Document	Requirement
California	CGP	Provides coverage under the general permit for Active Treatment Systems (ATS) which employ cationic chemicals. Permit requires permittee to conduct jar tests to determine proper chemical and dosage level, to meet a 10 NTU turbidity limit, and to conduct residual testing or toxicity testing in some cases.
Michigan	Technical Guidance for Use of PAM for Soil Erosion Control	Identifies only anionic PAM as being non-toxic.

⁴ Bullock et. al., “Toxicity of Acidified Chitosan for Cultured Rainbow Trout”, *Aquaculture*, Vol. 185 (2000), p. 273-280.

⁵ Sojka, R.E. and R.D. Lentz, “A Brief History of PAM and PAM-Related Issues” *PAM Primer* Published March 18, 1997. <<http://www.ars.usda.gov/Research/docs.htm?docid=18876>>.

⁶ Weston et. al., “Toxicity of Anionic Polyacrylamide Formulations When Used for Erosion Control in Agriculture”, *Journal of Environmental Quality*, Vol. 38 (2009), p. 238-247.

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Mississippi	CGP	Prohibits use of cationic chemicals.
New Hampshire	State regulations (Env-Wq 1506.12(f)(5))	Chemical flocculants required to be anionic.
Virginia	Erosion and Sediment Control Bulletin	Advises against use of cationic chemicals.
Washington	Technology Assessment Protocol – Ecology (TAPE Program)	Use of chemical flocculants required to be reviewed and approved under TAPE program. TAPE authorizes use of chitosan-enhanced sand infiltration, which requires permittees to meet maximum dosage requirements, to conduct regular jar tests to adjust dosage levels, to monitor influent and effluent for pH, turbidity, and flow, and to potentially conduct residual or aquatic testing.
Wisconsin	Construction Site Erosion & Sediment Control Tech. Standards (150)	Prohibits use of cationic chemicals.

EPA believed that the use of cationic chemicals at regulated construction sites, given their aquatic toxicity and the need to take into account site-specific factors to ensure proper use, requires a case-by-case type of permitting approach. It is for these reasons that EPA, as well as the Department, decided to require individual permits or case-by-case authorization for sites that elect to use such chemicals.

3.2.6 Relevant Information to be Considered by the Department for Individual Requests for Authorization to Use Cationic Treatment Chemicals

The Department will need to individually evaluate requests by operators to be authorized under this permit to use cationic treatment chemicals. As a general matter, some of the information that may be pertinent to this evaluation includes, but is not limited to, the following:

- *Soil types present at your site.* A list of the soil types likely to be exposed during construction in the areas of the project that will drain to chemical treatment systems that utilize cationic chemicals. Also, a listing of soil types expected to be found in fill material to be used in these areas, to the extent this information is available prior to construction.
- *Background conditions.* Data that describes background pH and turbidity found in surface waters at the point of discharge from locations on your site that will utilize cationic treatment chemicals. Background levels are based on the levels found in the receiving water during dry weather conditions. Qualifying data for determining background levels of pH and turbidity includes information from a peer-reviewed publication or a local, state, or federal government publication, or the results of samples you collect yourself of ambient pH and turbidity levels in the receiving water during dry weather conditions.

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- *Basis for use of cationic treatment chemical.* An explanation of why the use of cationic treatment chemical is necessary at the site (e.g., necessary to meet a specific water quality criterion for turbidity); and information to support why the particular chemicals chosen are appropriate for use in light of the specific soils present at your site and the background levels of pH and turbidity.
- *Specific chemical information.* The following information related to each of the cationic chemicals that will be used at the site:
 - A listing of all cationic treatment chemicals to be used at your site;
 - Copies of Material Safety Data Sheets (SDS) for each cationic chemical listed in (a), above;
 - Toxicity data for each cationic chemical. This includes data provided by the supplier/provider of the chemical to be used;
 - Jar test results for each cationic chemical; and
 - Manufacturer specifications regarding the use or recommended dosage levels of each cationic chemical.
- *Site plan.* Supplementary information on the SWPPP site map related to your use of cationic treatment chemicals, such as:
 - Locations where cationic treatment chemicals will be applied and stored on site and
 - Distance between these locations, and points of discharge.
- *Schematic drawings.* Schematic drawings showing the design of the chemical treatment systems (e.g., chitosan-enhanced sand infiltration system, passive treatment systems) to be used at the site.
- *Responsible personnel.* A list of personnel who will be responsible for operating the chemical treatment systems, application of the chemicals, and for compliance with any permit requirements specific to the use of cationic treatment chemicals.

We don't anticipate that providing such information to the Department in advance of NOI submission will entail significant burden, since operators would generally need to include such information in their SWPPP or other documentation in any case.

3.2.7 Summary

Now that EPA has stayed the numeric turbidity limit proposed in the CGP, and a recalculated limit has not yet been promulgated, their permit does not include a numeric limit for turbidity. In the absence of a specific turbidity limit, the EPA did not expect there to be a significant increase in the use of treatment chemicals at permitted construction sites. However, the EPA and the Department are aware that, in some areas covered by the CGP, or in Maryland's case the 15-MM permit related to construction of mining activity, operators may determine that visual monitoring requirements necessitate that they consider use of treatment chemicals. Where receiving water turbidity limits are applicable, interest has already been expressed regarding the use of treatment chemicals to comply. Because such permittees covered by their permit are likely to choose to utilize treatment chemicals at their sites, the Department desires to ensure that these chemicals are properly used. The approach discussed in this section is sound and has been adopted for the 15-MM as an alternative to

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requiring individual permits for all cases where treatment chemicals may be necessary to reduce impacts of turbidity on local waters.

In the C&D rule, EPA found that with the right operator training and proper usage, chemicals can be used properly on sites to avoid risk to aquatic species. In that context, the Department's evaluation of passive treatment technologies included consideration of potential environmental risks of relying on chemical addition. The following is an excerpt from the C&D rule's discussion of these issues:

"Knowledge from toxicity studies suggest that polymers are highly variable as to their toxic effects on aquatic organisms (see discussion of toxicity in the Environmental Assessment). ... While EPA recognizes that there is the potential for problems due to improper application of polymers, EPA has determined that when properly used, environmental impacts from polymers or flocculants should not occur through the use of passive treatment systems. The dose ranges where polymers are utilized on construction sites are well below the chronic toxicity levels. The utilization of polymers on construction sites has occurred for a significant period of time and they are currently being used on construction sites throughout the nation. EPA recognizes the merits of ensuring that polymers or other chemical additives, if necessary, are properly used. Permitting authorities should carefully consider the appropriateness of usage of these materials where there are sensitive or protected aquatic organisms in the receiving waters, including threatened or endangered species and their critical habitat. NPDES permitting authorities may establish controls on dosage and usage, protocols for residual toxicity testing, require prior approval before the use of particular polymers, training requirements for site operators or other measures they deem appropriate." (74 Fed. Reg. 63008)

Therefore, while concluding that environmental risks would be minimized by ensuring that these chemical additives are properly used and that the permitting authority should play a lead role in determining what is deemed proper usage as a whole or in individual cases, EPA and MDE also recognized that there may be certain chemicals the use of which may require individualized review.

3.2.8 Common Approach

The EPA CGP and MSGP (the basis for these permit modifications) permits now allow use of certain polymers, while restricting others that are known to have toxic effects. We have noticed a common theme among the comments received during EPA's proposed permit with requirements regarding precautions when authorizing the use of cationic chemicals under the 2012 EPA CGP, as discussed in Section 3.2.1.

The 2012 EPA permits authorize the use of anionic polymers, flocculants, or other treatment chemicals at sites provided operators using specific measures of the permit. The 15-MM follows suit with the language in Part J.4.1.8 of Appendix D. Additionally, sites that plan to use cationic treatment chemicals (as defined in Appendix E) are only eligible for coverage under the permit if site-specific MDE authorization is provided; otherwise, an individual permit is required in order to use such chemicals associated with a discharge of pollutants to waters of state. Authorization must be obtained by notifying the Department in advance and demonstrating that proper controls are in place to protect receiving water quality.

3.3 NetDMR

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The U.S. Environmental Protection Agency (EPA) promulgated a final rule to modernize Clean Water Act (CWA) reporting for municipalities, industries, and other facilities by converting to an electronic data reporting system (see 40 CFR 127.16). This final rule requires all regulated entities to electronically use existing, available information technology to electronically report data required by the National Pollutant Discharge Elimination System (NPDES) permit program instead of filing written paper reports. For more information on the EPA's NPDES Electronic Reporting Rule, visit www.epa.gov/compliance.

Monitoring data collected in December 2016 and thereafter must be summarized and submitted electronically. Since Maryland hasn't created our own electronic reporting tool, this must be implemented by using NetDMR. NetDMR is a U.S. EPA tool allowing regulated CWA permittees to submit monitoring reports electronically via a secure Internet application. To get access, the applicant can must apply for access to NetDMR at www.epa.gov/netdmr and register for a NetDMR Webinar.

Before they can submit official DMRs using NetDMR they must attend a training Webinar and successfully set-up and submit test monitoring results electronically. If they prefer to attend a training seminar, they must sign up for the Department's limited seating monthly training sessions.

A permittee may be eligible for a temporary waiver by MDE from NPDES electronic reporting requirements if the permittee has no current internet access and is physically located in a geographic area (i.e., zip code) that is identified as under-served for broadband internet access in the most recent National Broadband Map from the Federal Communications Commission (FCC); or if the permittee can demonstrate that such electronic reporting of the monitoring data and reports would pose an unreasonable burden or expense to the NPDES-permitted facility. Waiver requests must be submitted in writing to the Department for written approval at least 120 days prior to the date you will be required to begin using NetDMR. This demonstration shall be valid for up to five (5) years from the date of the Department approval and shall thereupon expire.

So, whereas the 10-MM permit required submission of discharge monitoring reports (DMRs) by mailing hard copies, the 15-MM requires NetDMR to report the quarterly benchmark(s) and dewatering or process water monitoring electronically through NetDMR.

3.4 Hydrodemolition

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 15-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 15-MM will not allow discharges for hydrodemolition wastewaters to surface waters.

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3.5 Benchmark Monitoring

The Department has chosen 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 are identified for each sector in Appendix D of the 15-MM permit.

Background on EPA's benchmarks.

During development of the MSGP, EPA received substantial public comment on the value of benchmark monitoring. EPA responded to those comments, in part, by indicating that "considering the small number of samples required per monitoring year (four), and the vagaries of stormwater discharges, it may be difficult to determine or confirm the existence of a discharge problem." EPA acknowledged that "when viewed as an indicator, analytic levels considerably above benchmark values can serve as a flag to the operator" that his/her control measures "need to be reevaluated and that pollutant loads may need to be reduced." Correspondingly, the Agency indicated that analytic levels below or near benchmarks can confirm to the operator that his/her control measures are doing their intended job. EPA also stated that "there is presently no alternative that provides stakeholders with an equivalent indicator of program effectiveness." (65 Fed. Reg. 64796, October 20, 2000) This response, from the MSGP, continues to represent EPA's thinking regarding the appropriate use of analytical monitoring. Furthermore, EPA strengthened the benchmark monitoring requirements by requiring permittees to document any corrective action review of their control measures that is triggered by benchmark exceedances and to make modifications where these measures are inadequate. The Department adopted this approach by including the corrective action review at the same time the benchmark requirements are added.

EPA also committed to "...using data from the 1995 and 2000 permits to evaluate the effectiveness of management practices on an industry sector basis and to evaluate the need for changes in the monitoring protocols for the next permit." EPA prepared an analysis of benchmark data for this permit, which is available in the docket (see memorandum entitled "Review of Discharge Monitoring Report Data From the 2000 NPDES Industrial Stormwater Permit Program"). EPA determined, based on that analysis, that available analytic monitoring data indicate that many facilities report exceedances of benchmark values. To further EPA's understanding of the links between stormwater pollutant discharges and ambient water quality, and to assess the state of the science of stormwater management, the Agency began using collected data to study those eight to ten industrial sectors that they felt to be of highest priority in terms of pollutant discharges. Their intent was to:

1. Clarify the mechanisms by which pollutants in stormwater discharges affect ambient water quality criteria and define the elements of a protocol to link pollutants in stormwater discharges to ambient water quality criteria;
2. Consider how useful monitoring is for both determining the potential of a discharge to contribute to an exceedance of applicable water quality standards and for determining the adequacy of stormwater control measures;
3. Assess and evaluate the relationship between different levels of stormwater control and in-stream water quality, considering a broad suite of control measures;

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Ultimately the collection of benchmark data would allow the Agency to assess the design of the stormwater permitting program implemented under the Clean Water Act. It is useful to understand the origin of the benchmarks established when considering which would ultimately be used for the Department's permit.

As described above, EPA is requiring benchmark monitoring; however, the Agency did make numerous improvements to this framework to enhance its usefulness over time, in identifying potential water quality concerns and opportunities to improve the effectiveness of the measures taken to meet the effluent limits.

Also, while some provisions have changed over time, EPA did perform a more detailed analysis on the benchmark monitoring provisions. This analysis provided the basis for the following decisions regarding benchmark monitoring requirements:

1. Not requiring TSS monitoring for all sectors
2. Retaining TSS benchmark at 100 mg/L
3. Adopting hardness-dependent benchmarks for certain metals
4. Allowing for consideration of natural background pollutant levels.

A discussion of each of these areas follows.

Not Requiring TSS Monitoring for All Sectors.

Purpose: As noted above, EPA has revised their selection of benchmarks. TSS is one of those changed due to expressed concern about the burden of additional TSS monitoring and questioning its value. Some asserted that it was either redundant with other benchmark parameters, or not applicable to particular facilities. EPA had tasked the National Research Council (NRC) with conducting a study of its stormwater program, with a special focus on benchmark monitoring, its effectiveness, and potential alternative approaches for identifying water quality concerns or verifying the effectiveness of stormwater control measures. EPA chose to not require all industrial sectors to monitor for TSS until both EPA and the public had an opportunity to interpret the results of the NRC study and identified appropriate steps to implement measures consistent with the findings of that report. In their issued permit, EPA had instead chosen to continue the amount of benchmark monitoring that was required in earlier MSGPs, and to enhance its usefulness by adjusting benchmarks where appropriate, and requiring more accountability from facilities in using benchmark results to assess the effectiveness of their stormwater programs and make appropriate changes. EPA expects that implementation of these changes, along with the results of the NRC study, will inform its evaluation as to whether benchmark monitoring should be continued, expanded, or replaced by an alternate method of assessing control measure effectiveness.

Retaining TSS Benchmark at 100 mg/L.

EPA is retaining the TSS benchmark at the level of 100 mg/L consistent with previous permits and as proposed. This decision is based on a number of factors, including recent scientific literature supporting

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this benchmark concentration and EPA's best professional judgment. EPA notes generally that reduction in TSS loading improves aquatic habitat and water quality.

Purpose: EPA has concluded that the 100 mg/l concentration is a reasonable benchmark. Alternative levels suggested by public comments ranged from 10 mg/L to 546 mg/L. In EPA's opinion, a benchmark of 10 mg/L, applied broadly across all the areas covered by this permit, is too burdensome for permittees to meet. Established effluent limits for TSS associated with industrial stormwater have been set at between 20 and 88 mg/L. These limits are generally established on an industry or site-specific basis, in contrast to the TSS benchmark in this permit, which should be set so as to be achievable by a range of facilities over a wide range of industries.

As described above, proper selection, design, installation, and implementation of control measures can reduce TSS concentrations in many cases. For example, good housekeeping practices, such as sweeping or diverting stormwater flows, can reduce TSS concentrations in stormwater. In other cases, TSS can be reduced by control measures such as bioretention, settling mechanisms, and other types of treatment devices. In many cases, reported TSS concentrations in industrial stormwater runoff did not exceed the MSGP benchmark for TSS of 100 mg/L. In an analysis of discharge monitoring report (DMR) data from more than 775 facilities covered by the MSGP, approximately 63 percent of the TSS samples met the benchmark (Tetra Tech, 2006⁷).

Some State monitoring programs have shown that many industrial stormwater permittees are able to meet the TSS benchmark requirements. For example, the San Francisco Bay region requires TSS sampling for all facilities. Approximately 74% of samples met the 100 mg/l benchmark between 2001, and 2002 and 86% of samples met the 100 mg/L benchmark between 2003 and 2004.

In the cases where facilities exceed the 100 mg/L TSS benchmark, the final 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.

Requiring Hardness Data for Certain Metals Benchmarks.

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.

Purpose: During consultation prior to the issuance of MSGP, the public expressed concern that creating a benchmark value based on water quality standards with a hardness value of 100

⁷ Tetra Tech, Inc. 2006. Review of Discharge Monitoring Report Data From the 2000 NPDES Industrial Stormwater Permit Program. Technical Memorandum to Jack Faulk, U.S. Environmental Protection Agency. Tetra Tech, Inc., Clemson, SC, and Fairfax, VA.
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mg/L would not be adequately protective of endangered species in receiving waters where the hardness is below 100 mg/L. Based on this concern, EPA opted to require permittees to collect hardness data to calculate the benchmark. Since many waters have hardness values of 100 mg/L or higher, EPA opted not to lower the hardness value for all dischargers as this would create unnecessarily stringent benchmarks for some dischargers. Rather, and for simplicity, EPA tabulated applicable hardness-dependent benchmarks using 25 mg/L hardness increments. For most metals, the benchmark level for a 0-25 mg/L hardness range is set at the water quality standard based on a hardness of 25 mg/L. (For silver, because of concerns with available analytical tests and detection limits, EPA used a low-end hardness level of 37.5 mg/L for calculating the applicable silver benchmark.) For every other hardness range, the benchmark is based on the mean hardness value (e.g., for a hardness range of 75-100 mg/L, benchmarks are based on a hardness of 87.5 mg/L). For calculating hardness-dependent benchmarks, EPA is limiting the maximum hardness to 250 mg/L to be protective of downstream receiving waters.

This approach addresses the public's concerns with minimal additional burden on permittees. Gathering data for hardness in the receiving stream provides an appropriate way to obtain representative benchmark values that are representative of local conditions and that provide a more meaningful assessment of potential impacts on endangered species.

Updated Benchmark Values

Based on DMR data reported under previous permits, EPA believes that most facilities with effective control measures can meet their targets. Monitoring data suggests that the proposed benchmarks are generally achievable for the industries to which they will apply, although some facilities may need to make improvements to their controls. Facilities which are exceeding applicable benchmarks also have the option demonstrate that exceedances are due to natural background, or that discharges cannot be further minimized if they believe this is the case.

Where there are no established EPA water quality criteria, EPA used other sources of data to determine the appropriate benchmark value. The process that EPA followed in selecting the benchmark values for their permit is as follows:

- Step 1: Use the promulgated acute criterion value;
- Step 2: If no EPA acute criterion exists, use the chronic criterion;
- Step 3: If neither acute nor chronic criteria exist, use data from runoff studies or technology-based standards to establish a benchmark.

For most parameters which EPA established benchmarks on a water quality basis, the freshwater acute water quality criteria were selected. In general, the freshwater acute criteria are less restrictive than chronic water quality criteria. Because of the intermittent nature of wet weather discharges and the high ambient flows that generally result from precipitation events, EPA viewed acute criteria as sufficiently protective and therefore, generally more appropriate than chronic criteria. The approach and

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numerical levels of the benchmarks in the 15-MM have been modeled after those in the MSGP because the Department has determined EPA's rationale is sound and applicable in Maryland.

In some cases (i.e., arsenic and selenium) EPA is using chronic freshwater criteria for setting benchmarks. In these instances, EPA has determined limits need to be more restrictive than the freshwater acute criteria for a variety of reasons such as significant differences between freshwater and acute criteria. Complete rationales are outlined in the factsheet for the 2012 MSGP.

The changes in methods and MDLs for cadmium, copper, cyanide, selenium, and silver are provided in Table 3. (Note: The source of the cost for each method was based on laboratories that specialize in effluent monitoring analysis). Additional supporting data are available in the EPA's docket for their permit.

Table 2. Comparison of MSGP and 15-MM Benchmark Values.		
Pollutant	Benchmark	Included in 15-MM
Ammonia*	2.14 mg/L	No
Biochemical Oxygen Demand (5 day)	30 mg/L	No
Chemical Oxygen Demand	120 mg/L	Yes
Total Suspended Solids	100 mg/L	Yes
Turbidity	50 NTU	No
Nitrate + Nitrite Nitrogen **	0.68 mg/L	Yes
Total Phosphorus	2.0 mg/L	Yes
pH	6.0 – 9.0 s.u.	Yes
Aluminum (T)	0.75 mg/L	Yes
Antimony (T)	0.64 mg/L	No
Arsenic (T)	0.15 mg/L	No
Beryllium (T)	0.13 mg/L	No
Cadmium (T)†	0.0021 mg/L	No
Copper (T)*†	0.014 mg/L	No
Cyanide	0.022 mg/L	No
Iron (T)	1.0 mg/L	Yes
Lead (T)*†	0.082 mg/L	Yes
Magnesium (T)	0.064 mg/L	No
Mercury (T)	0.0014 mg/L	No
Nickel (T)†	0.47 mg/L	No
Selenium (T)*	0.005 mg/L	No
Silver (T)*†	0.0038 mg/L	No
Zinc (T)†	0.12 mg/L	Yes

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(T) Total recoverable

* New criteria are currently under development, but values are based on existing criteria.

** 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.

† 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 15-MM permit to determine the applicable benchmark value for that facility.

Sources:

1. "National Recommended Water Quality Criteria." Acute Aquatic Life Freshwater (EPA-822-F-04-010 2006-CMC)
2. "EPA Recommended Ambient Water Quality Criteria for Beryllium." LOEL Acute Freshwater (EPA-440-5-80-024 October 1980)
3. "National Recommended Water Quality Criteria." Chronic Aquatic Life Freshwater (EPA-822-F-04-010 2006-CCC)
4. Secondary Treatment Regulations (40 CFR 133)
5. Factor of 4 times BOD5 (5 day biochemical oxygen demand) concentration - North Carolina Benchmark
6. North Carolina stormwater Benchmark derived from NC Water Quality Standards
7. National Urban Runoff Program (NURP) median concentration
8. Minimum Level (ML) based upon highest Method Detection Limit (MDL) times a factor of 3.18
9. Combination of simplified variations on Stormwater Effects Handbook, Burton and Pitt, 2001 and water quality standards in Idaho, in conjunction with review of DMR data.
10. "National Ambient Water Quality Criteria." Acute Aquatic Life Freshwater. This is an earlier version of the criteria document that has subsequently been updated. (See source #1)
11. "National Ambient Water Quality Criteria." Chronic Aquatic Life Freshwater. This is an earlier version of the criteria document that has subsequently been updated. (See source #3)
12. "National Ambient Water Quality Criteria." Human Health For the Consumption of Organism Only (EPA-822-F-01-010 2006)

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13. Consistent with many state numeric Water Quality Criteria. This Benchmark was agreed to in negotiations for the 1998 modification to the 1995 MSGP (63 FR 42534).

14. "Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses." USEPA Office of Water (PB85-227049 January 1985).

Addressing Natural Background Pollutant Levels.

EPA has included in the MSGP, as has the Department in 15-MM, an option for permittees to justify benchmark exceedances based on local natural background concentrations. EPA recognized that there may be circumstances where benchmark values reasonably may not be achieved. For example, high natural background levels of iron in soils or groundwater could cause exceedances of a benchmark value.

Part V.B.3.c of the permit allows for an exception from evaluation of control measures and further benchmark monitoring when natural background levels are solely responsible for the exceedance of a benchmark value. This can be determined if (1) natural background pollutant concentrations are greater than the corresponding benchmark value, and (2) there is no net facility contribution of the pollutant (i.e., average concentration detected in runoff from all facility outfalls required to be monitored under the 15-MM for 4 separate events minus the average natural concentration of the parameter for 4 separate events does not exceed zero). For example, if a facility determines that the natural background concentration of TSS from an undisturbed watershed is 200 mg/L, they can claim an exemption from further benchmark monitoring if the average of their four benchmark samples is equal to or lower than 200 mg/L. In this example, if the average of their four benchmark samples is greater than 200 mg/L, the facility could not claim this exception.

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. If background concentrations are not responsible for the benchmark exceedance, the facility will need to review its control measures and take further action where necessary as required in Part III.B.2 of this permit. Facilities must use the same sample collection, preservation, and analysis methods for natural background monitoring as required for benchmark monitoring.

After monitoring for 4 quarters and adequately determining that exceedances are the result of pollutants present in the natural background, permittees must notify the Department of these findings to claim the natural background exception. The exception allows the permittee to avoid the requirement for further evaluation of the effectiveness of control measures and to discontinue further benchmark sampling after the first year of permit coverage. To do this, the permittee must document the basis for concluding that benchmark exceedances are attributable solely to natural background pollutant levels. This explanation must include any data previously collected by the facility staff or others that describe the

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levels of natural background pollutants in the facility's receiving waters. The permittee must notify the Department when submitting its monitoring data that it is claiming the exception for natural background pollutant levels and provide a summary of the natural background conditions that justifies the exception. The full justification for this exception must be kept on-site with the facility's additional documentation (see Part III.C.8), and made available to the Department on request.

The following information, describing the rationale for claiming the natural background exception, must be documented and kept onsite with the facility's SWPPP:

- Map showing the reference site location in relation to facility along with available land cover information
- Reference site and test site elevation
- Available geology and soil information for reference and test sites
- Photographs showing site vegetation
- Site reconnaissance survey data regarding presence of roads, outfalls, or other human-made structures
- Records from relevant state or federal agencies indicating no known mining, forestry, or other human activities upstream of the proposed reference site

The background concentration of a pollutant in runoff from a non-human impacted reference site in the same watershed should be determined by evaluation of 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 eligible. 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 did meet reference site criteria (indicating absence of human activity) during the time data collection occurred.

The Department may review a permittee's determination that a benchmark exceedance 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 exceedances. 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.

3.6 Corrective Actions

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Based on the MSGP, 15-MM strengthens the corrective actions required, including establishing two tiers of actions based on the condition identified. The provisions in Part IV specify the types of conditions which trigger corrective action requirements at a site, actions required to eliminate such conditions or determine their cause, and deadlines for completing corrective action(s). The permit also clarifies that not conducting a required corrective action is a permit violation in and of itself, in addition to any underlying violation(s) that may have triggered the initial requirement for corrective action. (Note: Not all conditions triggering corrective action review are permit violations, but even where the triggering event is not itself a permit violation, failing to conduct required corrective action is.) A summary of all corrective actions initiated and/or completed each year must be documented in the annual comprehensive site inspection report and kept with the SWPPP.

3.7 Annual Report

The 15-MM requires permittees to evaluate stormwater runoff from their facility in an annual report that includes findings from their annual comprehensive site inspection report, and if applicable, a second report detailing any conditions triggering corrective action, and the status of the actions taken. The most current report is to be kept with the SWPPP. Results from the annual comprehensive site inspection and information gained by documenting any corrective action are intended to provide a basis for the permittee to gauge and improve their own performance.

3.8 Requirements for Vehicle Washing

The 10-MM permit provided numeric limits for “washing mixer trucks, moulds, buildings and equipment and of excess feed water”. 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 made no mention of any prohibitions, and relied on the oil and grease concentration to be sufficient to limit any potential pollutants. The Department is in the process of issuing a general permit specifically for groundwater discharge of vehicle wash water. In consultation with our groundwater permitting group, we considered potential impacts of equipment/vehicle washing and compared the 10-MM approach to the new general permit, which exposed several concerns. At a minimum, the permit needs to improve by specifying some prohibitions, implementing required controls, and expressing the means by which compliance may be determined. For example, the 10-MM stated “Discharges of vehicle wash water to ground water must be observed for oil and grease” but failed to say what must be done if oil and grease was observed or how to record that they were compliant.

We reviewed a few of the recent renewals for groundwater discharges that were covered under an individual permit and this brought to mind why some amount of limitations should be put in place for these operations.

Examples reviewed were as follows:

1. A utility and road construction facility where the washing takes place in an area outside of maintenance shop. Wash water from the cleaning flows into a shallow, open, lined wash pit. The wastewater that collects there flows through an absorbent sock, into an overflow pipe, and to an oil/water separator. From there, the treated wastewater flows through a test port and into a drainfield consisting of a single, underground pipe perforated at various points. There were a number of VOC exceedances (specifically

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PCE & vinyl chloride) that were noticed during a previous stormwater inspection of which the operator was unaware.

2. A transportation company engaged in hauling natural liquid latex. Exteriors of the tanker trucks are washed as needed. Wash water flows to floor drains on either side of the wash bay. Most of the wash water flows to the west side of the wash bay, where it enters the floor drains and is collected into the treatment system described above. For the renewal of this permit, permittee was asked to sample the wastewater for VOCs as a new requirement. Their first analysis came back with a methylene chloride (dichloromethane) concentration of 1150 µg/L, which grossly exceeds its MCL of 5 µg/L. Subsequent analyses showed the presence of methylene chloride, though in much lower concentrations. Since this chemical is prohibited for use in a cleaning product, we worked with the permittee to determine the source. The solvent they were using to clean the discharge fittings contained methylene chloride. They have since found a new solvent that contains no prohibited chemicals and has been approved by the Department for use.

Rationale for this change. The Department does permit vehicle washing for the very reason that it represents a potential for environmental harm. In the examples, the use of solvents introduces pollutants to ground water. However, our 10-MM directs the operator to observe only for oil and grease and fails to say what to do if there is oil and grease. Although the surface water numeric limits were not changed, certain prohibitions were added and best management practices required specific to vehicle washing in order to protect waters of the State.

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. These are prohibited by reference in the 10-MM by indicating that “vehicle wash water from steam cleaning or cleaning with detergents” was ineligible. However the 15-MM clarifies this prohibition by including language which 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.”

Additional 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.

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. 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 that require permit coverage could be in violation of the CWA.

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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. Section 1.1 of this fact sheet covers this in some detail. The permit refers to a list of industries in Appendix A of the permit. The 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)

For this permit, the Department has modified the eligibility requirements for many of the criteria in this section to match the MSGP. The rationale for these changes and for limitations on coverage under this permit is described below.

4.3.1 Stormwater Discharges Associated with Construction Activity.

This permit does apply to stormwater discharges associated with construction activity, defined in 40 CFR 122.26(b)(14)(x) and (b)(15) in limited cases, for mining activities.

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.

4.3.3 Discharges Mixed with Non-Stormwater.

The 15-MM does not authorize stormwater discharges that are mixed with non-stormwater other than those non-stormwater discharges listed in Part I.E.3. The 10-MM didn't provide this clarification, so this clarification is new.

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) (prohibiting the issuance of permits to new dischargers that will cause or contribute to the violation of water quality standards) prior to coverage under the permit. To satisfy the requirements of 40 CFR 122.4(i), an operator must (a) eliminate all exposure to stormwater of the pollutant(s) for which the waterbody is impaired, and document no exposure and retain such documentation with the SWPPP; or (b) demonstrate that the pollutant for which the waterbody is impaired is not present at the site, and retain documentation of this finding with the SWPPP; or (c) submit data to the Department documenting that the pollutant discharge will not cause or contribute to an excursion of water quality standards because the discharge will meet in-stream water quality standards at the point of discharge or because there are sufficient remaining wasteload allocations in an approved TMDL and the discharge is controlled at least as stringently as similar discharges subject to that TMDL.

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Purpose: This part, which applies to new dischargers and not to existing dischargers, is designed to comply with 40 CFR 122.4(i) requirements that address new discharges to waterbodies not meeting in-stream water quality standards.

Comparison to 10-MM: This language is new, however it is similar to the requirement in Part I.D of that permit.

4.4 Prohibited Stormwater Discharges (Part I.D)

This is new and addresses situations where an exceedance has occurred, but the operator is following the permit condition requiring a corrective action. If you are covered under this permit you are in violation for these cases, and are required to take corrective action to address the issues.

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;
- Part I.E.2 clarifies that certain operations can be required to get coverage when identified by the Department; and
- Part I.E.3 clarifies which non-stormwater discharges are allowed to co-mingle with stormwater and are therefore authorized under this permit.

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 fire fighting 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, 15-MM stormwater requirements. To receive this exemption the permittee must submit form MDE/WMA/PER.067 found on <http://www/mde/state/md/us/>. 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

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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 10-MM: This is a new exclusion and since the permit provides groundwater coverage as well, is not applicable to Sector J.

4.7 Alternative Permit Coverage (Part I.G)

Purpose: 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 want to clarify that facilities shouldn't require two general permits for the same discharge, such as the 12-SW and 15-MM.

Comparison to 10-MM: Slight change to the language to clarify that a single general permit is the goal.

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.

Purpose: Where the Department fails to issue a final general permit prior to the expiration of a previous general permit, the Department has the authority to administratively extend the permit for permittees authorized to discharge under the prior general permit.

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 10-MM, as well as new facilities seeking coverage.

Comparison to 10-MM: Significant change to clarify that in order to be covered you must have stormwater practices in place, not just a SWPPP.

5.2 Deadlines for Coverage (Part II.B)

5.2.1 For permittees who are covered under the General Permit number 10-MM:

The permittee will be given 6 months after the effective date of this permit to submit a new NOI, fee, and SWPPP to the Department in order to obtain coverage. Failure to do so will result in termination of coverage under General Permit 10-MM and will be subject to enforcement by the Department for discharging without a permit.

5.2.2 For new sources:

These must submit NOI with enough time for the Department to process their request and grant coverage. In this case the Department is specifying 60 days prior to commencing the discharge.

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5.2.3 For new permittees without an existing permit:

They must submit an NOI, fee, and SWPPP to the Department to obtain coverage, however discharges prior to obtaining that are not retroactively covered.

Purpose: This part informs the permittee that if they fail to submit a required NOI in a timely manner or if they discharge prior to obtaining authorization the Department may take enforcement action.

5.3 Required Signatures (Part II.C)

No significant change.

5.4 Failure to Notify (Part II.D)

No significant change.

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 mining program. All other facilities are inspected by Water Management.

5.6 Changes in Permit Coverage (Part II.F)

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

This is modified language from the 10-MM. Whereas the 10-MM focused on changes to billing and use of the NOI, this change for the 15-MM focuses on whether the new outfall is considered a new source and allows for flexibility in how this may be sent as a notification. If the change were to effect billing, then the Department would request changes be dealt with on a new NOI to modify the coverage under the registration.

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

Part II.F.2 indicates when and how permittees should use the paper form to 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.

Purpose: The language has been modified, but the condition is now consistent with our other general permits.

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 10-MM, but was moved from a special condition to this section for additional notification.

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. Where EPA has not yet issued an effluent limitation guideline, EPA has determined, and the

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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 permits⁸. The 15-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 15-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).

⁸ *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.

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Comparison to 10-MM: The 10-MM did use the term “minimize”, but without a definition. “The primary objective of the plan is to identify ongoing or potential sources of stormwater pollution and to select Best Management Practices (BMPs) which will minimize pollutants in storm water runoff.” The 15-MM provides a definition of “minimize”. The current 15-MM reflects changes to the MSGP intended to clarify, rather than change, the meaning of “minimize” as used in 10-MM. The non-numeric effluent limits themselves also provide greater specificity as to what is required to minimize pollutant discharges. The revisions made to the permit language were intended to clarify the requirements. The Department included what EPA defined as the term “minimize” to establish greater consistency throughout the effluent limit section. The permit uses the phrase “technologically and economically practicable and achievable”. The final permit also uses the term “best industry practice.” Together, EPA believes, and the Department agrees, that these changes emphasize the need to consider the best available control measures that are economically and technologically practicable and achievable when selecting stormwater controls to meet the permit limits.

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-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 C.F.R. §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 C.F.R. § 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).

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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

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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 survey⁹ 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 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.

⁹ 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.

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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, (www.epa.gov/npdes/stormwater/msgp);

National Menu of Stormwater BMPs (www.epa.gov/npdes/stormwater/menuofbmps);

National Management Measures to Control Nonpoint Source Pollution from Urban Areas (www.epa.gov/owow/nps/urbanmm/index.html); and

Stormwater Management for Industrial Activities: Developing Pollution Prevention Plans and Best Management Practices (http://cfpub2.epa.gov/npdes/pkeyword.cfm?keywords=industrial+activities&program_id=0).

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.

Changes from the 10-MM: This Part was changed to provide the controls in the permit, rather than rely on the external guide on how to write a SWPPP, to select the proper controls. This clarifies the requirements for selecting, designing and implementing controls. Similar to the EPA's MSGP, the Department is not requiring documentation of why certain control options provided were not selected. The requirement to document any deviation from the manufacturer's specifications for a pollutant control device is a new requirement in this permit, although the use of such manufactured devices is expected to be comparatively rare.

As stated above in the discussion of the "distinction between effluent limits and SWPPP requirements," the Department has followed EPA example in reorganizing this permit to clarify for the permittee and the public what constitutes limits versus what constitutes other permit conditions (e.g., planning and documentation requirements). The Department made this change so that permittees and the public recognize the difference between "control measures", which are used to meet the effluent limits, but do not constitute the limits, and the effluent limits themselves.

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

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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.

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.

Purpose: III.B.1.a provides permittees with important considerations for the selection of control measures.

Comparison to 10-MM: This permit expands upon the general considerations for selecting and designing control measures included in the 10-MM. Additional considerations were added to reflect the advances and expectations of stormwater programs nationwide. In addition, the Department utilized the EPA's

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modified provision to make the consideration of these factors mandatory to better emphasize the importance of proper selection and design of control measures for the particular site. The Department recognizes that not all of these considerations will be applicable to every site nor will they always affect the choice of control measures. However, operators must still document that these factors were considered when developing their control measures.

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.

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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.

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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 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).

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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

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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

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.

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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 2.1. 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

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- 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).

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

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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 criterion 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 15-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

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

Comparison to 10-MM: The provisions of the 10-MM were vague. “The permittee shall amend the plan whenever there is a change in design, construction, operation, or maintenance which creates a potential for the discharge of pollutants to the waters of the State or if the stormwater pollution prevention plan proves to be ineffective in achieving the general objectives of controlling pollutants in stormwater discharges associated with industrial activity.” Adoption of the language in the MSGP provides more comprehensive guidance for permittees in consideration water quality protection.

This new 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 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.

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Tier 2 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 discharge¹⁰, directly to waters designated by the State as Tier 2 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 15-MM due to the unique characteristics of the 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 waters designated as Tier 3, outstanding national resource waters, as defined in 40 CFR 131.12(a)(3), which are not eligible for coverage under the MSGP permit. This permit doesn't address Tier 3.

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 2" by the State can generally be described as follows:

Tier 2 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 2 review. *Id.* at 36,783.

Comparison to 10-MM: This acknowledgement is new to the State's permit. Tier 2 approach used in this permit relies on an expectation that the effluent limits and permit conditions in the 15-MM will be sufficient to protect the quality of Tier 2 waters. This is possible by supporting the EPA's determination that compliance with the MSGP generally will be sufficient to satisfy Tier 2 antidegradation requirements because the controls will not result in a lowering of water quality, making individualized Tier 2 review unnecessary. Alternatively, the controls in the permit are sufficiently stringent that they satisfy the requirement at the heart of Tier 2 review, that the discharge is necessary to accommodate important economic and social development in the area where the discharge is located. However, in cases where information submitted with the NOI, or available from other sources, indicates that further Tier 2 review and/or conditions are necessary, the Department would conduct this review and require any appropriate additional controls.

The conclusion that compliance with the permit will generally meet the Tier 2 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

¹⁰ 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.

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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. EPA bases this conclusion 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 MSGP is no longer appropriate to protect the Tier 2 status of the receiving water. For this reason, the Department has included the following language in Part III.B.2.c: "EPA 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 15-MM coverage for a particular new or increased discharger, that facility may be required to undergo Tier 2 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

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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. In the 10-MM, the Department had combined the SWPPP documentation requirements and effluent limitations into one section leading to confusion over what was a documentation requirement and what was an effluent limitation. EPA believes, and the Department agrees, that separating the effluent limitations (Part III.A and III.B) and the SWPPP requirements (Part III.C) clarifies the distinction between them.

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.

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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 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.

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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., biochemical oxygen demand, 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 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

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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)

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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

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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

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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.

Recordkeeping (Part III.C.8)

Part III.C.8 of this permit describes recordkeeping requirements associated with activities covered under this permit. These include the original SWPPP and any modifications, so as to provide a traceable historical record of the SWPPP and its evolution, additional documentation, all reports and certifications required by the permit, monitoring data, and records of all data used to complete the NOI to be covered by this permit. Permittees must retain copies of these documents for a period of at least 5 years from the date that the permittee's coverage under this permit expires or is terminated.

Purpose: This permit requires permittees to maintain certain records to help them assess performance of control measures and as a way to document compliance with permit conditions. These requirements are consistent with Federal regulations at 40 CFR 122.41(j), but have been tailored to more closely reflect requirements of the 15-MM.

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.

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Purpose: EPA 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)

No Change.

7. Corrective Actions (Part IV)

Part IV explains that any failure to comply with the conditions of this permit constitutes a violation of the CWA. Where requirements and schedules for taking corrective actions are included, the time intervals are not grace periods, but are schedules considered reasonable for making repairs and improvements. For provisions specifying a time period to remedy noncompliance, the initial failure, such as a violation of a numeric or non-numeric effluent limit, constitutes a violation of the 15-MM and the CWA, and subsequent failure to remedy such deficiencies within the specified time periods constitutes an independent, additional violation of this permit and CWA. However, where corrective action is triggered by an event, which does not itself constitute permit noncompliance, such as an exceedance of an applicable benchmark, there is no permit violation provided the permittee takes the required corrective action within the deadlines in Part IV.C.

7.1 Conditions Requiring Review and Revision to Eliminate Problem (Part IV.A).

Permittees are required to review and revise the selection, design, installation, and implementation of their control measures in response to any of the following conditions:

an unauthorized release or discharge occurs at the facility;

a discharge violates a numeric effluent limit;

the permittee becomes aware, or the Department determines, that control measures are not stringent enough for the discharge to meet applicable water quality standards;

an inspection or evaluation of your facility by a Department official determines that modifications are necessary to meet the non-numeric effluent limits; or

a routine facility inspection, quarterly visual assessment, or comprehensive site inspection finds that control measures are not being properly operated and maintained.

The corrective action must ensure that any of the above conditions are eliminated and will not be repeated in the future.

Purpose: Part IV.A specifies conditions that, should they occur, trigger the need to review and modify existing control measures to resolve any deficiencies.

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Comparison to 10-MM: The inclusion of this section from the EPA's MSGP provides better clarity as to what is expected of permittees covered by this permit. This improves upon the 10-MM's process for correcting deficiencies by providing greater specificity on the types of conditions that trigger the need for corrective actions and the required responses.

7.2 Conditions Requiring Review to Determine if Modifications Are Necessary (Part IV.B)

Permittees are required to review the selection, design, installation, and implementation of their control measures to determine if modifications are necessary to meet effluent limits in Part III.B if any of the following conditions occur:

construction or a change in design, operation or maintenance at the permittee's facility significantly changes the nature of pollutants discharged in stormwater from the facility, or increases the quantity of pollutants discharged; or

the average of quarterly sampling results exceeds an applicable benchmark.

If less than four benchmark samples have been taken, but the results are such that an exceedence by the quarterly average is mathematically certain (i.e., if the sum of quarterly sample results to date is more than four times the benchmark level) this is considered a benchmark exceedence, triggering this review.

Purpose: Part IV.B specifies conditions that, should they occur, require further review to determine whether revision of control measures is necessary.

7.3 Corrective Action Deadlines (Part IV.C)

The permit includes specific deadlines for permittees to take corrective actions. Part IV.C requires that within 24 hours following identification or discovery of any of the conditions listed in Parts IV.A or IV.B, the permittee must document such discovery. Exceedence of a numeric limit requires immediate notification to the Department (this was in the 10-MM). Subsequently, within 14 days of the discovery, the permittee must document corrective actions taken or to be taken to eliminate the condition and any additional review necessary to further investigate the condition. If the permittee determines that changes are necessary following the review, any modifications to the control measures must be made before the next storm event if possible, or as soon as practicable following that storm event.

Purpose: This provision stipulates time limits for implementing corrective actions to remedy the Part IV.A or IV.B conditions. The time limits are those that Department considered reasonable, as did EPA in the MSGP, for documenting that a problem has been identified and then conducting the required analysis and making any necessary repairs or modifications. These timeframes are included to ensure that deficiencies are corrected expeditiously. Failure to take the required corrective action within the stipulated time limit constitutes an independent permit violation. The Department does not expect the initial documentation to be detailed but merely to acknowledge the date of the finding and a general discussion of the findings of the review that necessitates corrective action. More detailed documentation, as described below, continues to be required within 14 days of the discovery.

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7.4 Corrective Action Report (Part IV.D)

For any event described in Parts IV.A or IV.B of the permit, permittees must document basic information describing the event and the permittees' response to that event. As described above, the permit establishes conditions for both 24-hour and 14-day response periods. EPA had developed a Corrective Action Form for use by permittees of the MSGP to clarify expectations for documentation of conditions triggering a response and the details of the response taken. Although permittees can make use of the format if they wish, the Department decided to allow for full flexibility by the permittee as long as they were acknowledging and addressing the problem. For triggering events in Part IV.B, where the permittee determines that revision to control measures is not necessary, the permittee should still document the review and the basis for this determination. As described elsewhere in the permit, permittees are required to maintain a copy of this documentation with their SWPPP as well as include this information in an annual report.

7.5 Effect of Corrective Action (Part IV.E)

The permit clarifies that if the condition triggering the corrective action review is a permit violation (e.g., exceedance of an effluent limit), correcting it does not remove the original violation. Additionally, failure to take corrective action in accordance with Part IV is a separate, additional permit violation. The Department will consider the appropriateness and promptness of corrective action in determining enforcement responses to permit violations.

Purpose: Part IV.E clarifies the Department's intention with regard to the effects of taking appropriate corrective actions on the underlying violation.

7.6 Substantially Identical Outfalls (Part IV.F)

The permit provides for use of substantially identical outfalls. This condition puts the permittee on notice that if there is an issue with one outfall, then the others must be investigated too.

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 15-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

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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.

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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.

Annual Report from Comprehensive Site Compliance Evaluation (Part V.A.2)

The permit requires all permittees to prepare an annual report that contains the results of the required comprehensive site inspection and a discussion of corrective actions required and/or taken at any time since the previous comprehensive site inspection or, for the first comprehensive inspection required under this permit, since permit authorization. These annual reports must be kept on-site.

Purpose: 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.

8.3 Quarterly Visual Assessment of Stormwater Discharges (Part 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.

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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.

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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.

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, 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.

Benchmarks are not effluent limits, and exceedances of benchmarks are not permit violations. Rather, exceedence of a benchmark is an indicator to the operator that there may be a problem with his/her control

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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.

8.5.3 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.

8.5.4 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.

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

These conditions are consistent with the 10-MM.

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

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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

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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

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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)

Setting expectation on how data is to be recorded.

9.9. Records Retention (Part V.E)

Policy on how long records need to be maintained on-site.

10. Standard Permit Conditions (Part VI)

These were re-organized. Standard Permit Conditions are now consistent with our other permits.

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

Signature page and noted authority to issue General Permits.

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.

Calculating Hardness in Receiving Waters for Hardness-Dependent Metals (Appendix C)

Appendix C describes the alternatives for establishing the hardness level for an operator's receiving water.

Sector Specific Requirements (Appendix D)

Appendix D of the permit contains the specific requirements for the various industry sectors. The Appendix A contains a cross reference of SIC codes per industry and the Sectors as broken out in Appendix D (i.e. SIC code 2421 for General Sawmills and Planing Mills falls under Sector A – Timber Products). These requirements and breakdown of Sectors is consistent with the MSGP.

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

14. Notice of Intent (maintained as a separate document)

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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 2 waterbody.

15. Notice of Termination (maintained as separate document)

Found on MDE's website.