

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (EPA)
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
PROPOSED MULTI-SECTOR GENERAL PERMIT (MSGP) FACT SHEET
FOR STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY

A NOTE TO REVIEWERS AND COMMENTERS:

EPA proposes the text in this draft Fact Sheet as part of the Proposed 2020 MSGP. In most instances, EPA proposes the draft Fact Sheet text in present tense rather than conditional tense (e.g., "This Part *requires*" versus "This Part *would require*", or "The operator *must*" versus "The operator *would be required to*"). Where EPA proposes specific changes to the permit from the 2015 MSGP, the Fact Sheet text reflects that (e.g., "EPA *proposes* that..."). With the inclusion of this note, reviewers and commenters should read and interpret all text as proposed and not final. EPA is proposing the Fact Sheet in this format so readers can see any proposed language as it might be written in the final permit and to improve editing efficiency during the permit finalization process.

DRAFT

I. Background

Congress passed the Federal Water Pollution Control Act of 1972 (Public Law 92-500, October 18, 1972) (hereinafter the Clean Water Act or CWA), 33 U.S.C. 1251 et seq., with the stated objectives to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Section 101(a), 33 U.S.C. 1251(a). To achieve this goal, the CWA provides that "the discharge of any pollutant by any person shall be unlawful" except in compliance with other provisions of the statute. CWA section 301(a), 33 U.S.C. 1311. The CWA defines "discharge of a pollutant" broadly to include "any addition of any pollutant to navigable waters from any point source." CWA section 502(12), 33 U.S.C. 1362(12). EPA is authorized under CWA section 402(a) to issue a National Pollutant Discharge Elimination System (NPDES) permit for the discharge of any pollutant from a point source. These NPDES permits are issued by EPA or NPDES-authorized state or tribal agencies. Since 1972, EPA and the authorized states have issued NPDES permits to thousands of dischargers, both industrial (e.g., manufacturing, energy and mining facilities) and municipal (e.g., sewage treatment plants). As required under Title III of the CWA, EPA has promulgated Effluent Limitations Guidelines (ELGs) and New Source Performance Standards (NSPS) for many industrial point source categories and these requirements are incorporated into NPDES permits. The Water Quality Act (WQA) of 1987 (Public Law 100-4, February 4, 1987) amended the CWA, adding CWA section 402(p), requiring implementation of a comprehensive program for addressing stormwater discharges. 33 U.S.C. 1342(p).

Section 405 of the WQA of 1987 added section 402(p) of the CWA, which directed the EPA to develop a phased approach to regulate stormwater discharges under the NPDES program. EPA published a final regulation on the first phase of this program on November 16, 1990, establishing permit application requirements for "stormwater discharges associated with industrial activity". See 55 FR 47990. EPA defined the term "stormwater discharge associated with industrial activity" in a comprehensive manner to cover a wide variety of facilities. See 40 CFR 122.26(b)(14). EPA proposes to issue the 2020 Multi-Sector General Permit (MSGP) under this statutory and regulatory authority.

The Regional Administrators of all 10 EPA Regions are today proposing to issue EPA's NPDES MSGP for stormwater discharges associated with industrial activity. The proposed MSGP, when finalized, will replace the 2015 MSGP, which was issued on June 4, 2015 (80 FR 34403), and expires on June 4, 2020. The proposed 2020 MSGP is actually 50 separate general permits covering areas within an individual state, tribal land, or U.S. territory, or federal facilities. These 50 general permits contain provisions that require industrial facilities in 29 different industrial sectors to, among other things, implement control measures and develop site-specific stormwater pollution prevention plans (SWPPPs) to comply with NPDES requirements. In addition, the MSGP includes a thirtieth sector, available for EPA to permit additional industrial activities that the Agency determines require permit coverage for industrial stormwater discharges not included in the other 29 industrial sectors.

II. 2015 MSGP Litigation

After EPA issued the 2015 MSGP in June 2015, several parties, collectively referred to as "petitioners," filed petitions for review of the permit which were consolidated in the United States Court of Appeals for the Second Circuit. Petitioners included Waterkeeper Alliance, Apalachicola Riverkeeper, Galveston Baykeeper, Raritan Baykeeper, Inc. d/b/a NY/NJ Baykeeper, Snake River Waterkeeper, Ecological Rights Foundation, Our Children's Earth Foundation, Puget Soundkeeper Alliance, Lake Pend Oreille Waterkeeper, and Conservation Law Foundation. Federal Water Quality Coalition and Federal Storm Water Association intervened in the case as respondents on August 4, 2015. Before any briefs were filed in the MSGP Litigation, the parties entered into settlement discussions under the auspices of the Second Circuit's Civil Appeals Mediation Program. A Settlement Agreement resulted from these discussions, which all parties signed on August 16, 2016. The Settlement Agreement did not affect the 2015 MSGP, but stipulated several terms that EPA agreed to address in the proposed 2020 MSGP. EPA understands that the terms of the Settlement Agreement, in particular the proposed "Additional Implementation Measures" (AIM)

benchmark exceedance protocol, will increase regulatory certainty from for those who must comply with the permit, as intervenors expressed, while resolving petitioners' concerns that the previous corrective actions for benchmark exceedances were not sufficient to ensure that the permit controlled discharges as sufficient to protect water quality, as is required by the CWA. Industrial stormwater discharges are explicitly required to meet all provisions of CWA §301, including applicable water quality standards (CWA §402(p)(3)(A)). See Part 5 of this Fact Sheet for a detailed discussion of the AIM protocol as agreed upon in the Settlement Agreement.

Below, EPA outlines the key terms from this Settlement Agreement and how and where EPA addressed those terms in the proposed permit.

- The NRC Study. EPA agreed to fund a study conducted by the National Academies of Sciences, Engineering, and Medicine's (NAS) National Research Council (NRC). The study committee was tasked to 1) Suggest improvements to the current MSGP benchmarking monitoring requirements; 2) Evaluate the feasibility of numeric retention standards; and 3) Identify the highest-priority industrial facilities/subsectors for consideration of additional discharge monitoring. The study was released in February 2019 and can be found at the following link: <https://www.nap.edu/catalog/25355/improving-the-epa-multi-sector-general-permit-for-industrial-stormwater-discharges>. In the Settlement Agreement, EPA agreed that, when drafting the proposed MSGP, it will consider all recommendations suggested in the completed NRC Study. In addition, where the completed NRC Study made recommendations regarding the sectors/subsectors, frequency, parameters, and/or parameter levels in the 2015 MSGP's benchmark monitoring provisions, EPA will solicit comment on such recommendations in the proposed MSGP. See Section III below for a detailed outline and discussion of the NRC Study recommendations.
- Comparative Analysis. EPA agreed to review examples of numeric and non-numeric effluent limitations (including complete prohibitions, if any) applicable to the discharge of industrial stormwater that have been set in other jurisdictions and evaluate the bases for those limitations. EPA includes this analysis in the docket for this proposed permit on [regulations.gov](https://www.regulations.gov) (Docket ID#: EPA-HQ-OW-2019-0372).
- Preventing Recontamination of Federal CERCLA Sites. EPA agreed to propose for comment an expansion to all EPA Regions the existing eligibility criterion regarding operators discharging to Federal CERCLA sites that currently applies to operators in Region 10 in the 2015 MSGP. See Part 1.1.7 of the proposed permit.
- Eligibility Criterion regarding Coal Tar Sealcoat. EPA agreed to propose for comment a new eligibility condition for operators who, during their coverage under the next MSGP, will use coal tar sealant to initially seal or to re-seal pavement and thereby discharge polycyclic aromatic hydrocarbons ("PAHs") in stormwater. EPA agreed to propose that those operators are not eligible for coverage under the MSGP and must either eliminate such discharge or apply for an individual permit. See Part 1.1.8 of the proposed permit.
- Permit Authorization Relating to a Pending Enforcement Action. EPA agreed to solicit comment on a provision on the situation where a facility not covered under the 2015 MSGP submits a Notice of Intent (NOI) for permit coverage while there is a related pending stormwater-related enforcement action by EPA, a state, or a citizen (to include both notices of violations ("NOVs") by EPA or the State and notices of intent to bring a citizen suit). In this situation, EPA agreed to solicit comment on holding the facility's NOI for an additional 30 days to allow EPA an opportunity to (a) review the facility's control measures expressed in its SWPPP, (b) identify any additional control measures that EPA deems necessary to control site discharges in order to ensure that discharges meet technology-based and water quality-based effluent limitations, and/or (c) to conduct further inquiry regarding the site's eligibility for general permit coverage. See Part 1.3.3 and Table 1-2 of the proposed permit.

- Additional Implementation Measures (AIM). EPA agreed to include in the benchmark monitoring section of the proposed MSGP "Additional Implementation Measures" (AIM) requirements for operators for responding to benchmark exceedances. EPA includes proposed AIM requirements in Part 5.2 of the proposed permit.
- Part 4.2.4.1 Facilities Required to Monitor for Discharges to impaired waters without an EPA-approved or established TMDL (previously Part 6.2.4.1. in the 2015 MSGP). EPA agreed to propose for comment specific edits regarding monitoring for impaired waters. See Part 4.2.4.1 of the proposed permit.
- Revision of Industrial Stormwater Fact Sheets. EPA agreed to review and revise the MSGP's sector-specific fact sheets associated with the permit. See Appendix Q of the proposed permit.

III. The National Research Council (NRC) National Academies of Sciences (NAS) industrial stormwater study

Per the 2015 MSGP Settlement Agreement, discussed above, EPA agreed to fund a study conducted by the National Academies of Sciences, Engineering, and Medicine's (NAS) National Research Council (NRC). The NAS solicited suggestions for potential study committee members from a wide range of sources before recommending a slate of nominees to the NAS/NRC president. NAS posted the provisional list of committee members for public comment before the committee was finalized. The committee included representatives from both the environmental and regulated communities. NAS had full and final control over the committee selection process. The committee collected information from individuals and stakeholder organizations representing various interests and heard from several state permitting authorities for industrial stormwater.

The study committee was tasked to 1) Suggest improvements to the current MSGP benchmarking monitoring requirements; 2) Evaluate the feasibility of numeric retention standards; and 3) Identify the highest-priority industrial facilities/subsectors for consideration of additional discharge monitoring. NAS released the study in February 2019, which can be found at the following link: <https://www.nap.edu/catalog/25355/improving-the-epa-multi-sector-general-permit-for-industrial-stormwater-discharges>.

In the Settlement Agreement, EPA agreed that, when drafting the proposed MSGP, it will consider all recommendations suggested in the completed NRC Study. In addition, where the completed NRC Study made recommendations regarding the sectors/subsectors, frequency, parameters, and/or parameter levels in the 2015 MSGP's benchmark monitoring provisions, EPA will solicit comment on such recommendations in the proposed MSGP. EPA thoroughly reviewed the NRC Study recommendations and relied on the committee's analysis of the permit to support the proposed permit requirements originating from the Study. Because EPA funded the NRC study, EPA did not conduct additional analyses that would have duplicated any analyses found in the NRC study. Below is a summary of the NRC study recommendations (verbatim from the NRC study executive summary) and how and where EPA addressed each recommendation. Where recommendations were related or linked to each other, EPA addresses them jointly below. Throughout this Fact Sheet, where EPA proposes a new or modified provision, EPA also solicits comment on alternatives to the proposal and/or not going forward with that proposal in the final permit.

NRC Recommendations on Pollutant Monitoring Requirements and Benchmark Thresholds

1. **NRC recommendation:** EPA should require industry-wide monitoring under the MSGP for pH, total suspended solids (TSS), and chemical oxygen demand (COD) as basic indicators of the effectiveness of stormwater control measures (SCMs) employed on site.
 - **EPA response:** EPA proposes to require "universal benchmark monitoring" for pH, TSS, and COD for all facilities. See Part 4.2.1. of the proposed permit and this Fact Sheet.

2. **NRC recommendation:** EPA should implement a process to periodically review and update sector-specific benchmark monitoring requirements that incorporates new scientific information.
 - **EPA response:** As part of the permitting process to propose and finalize the MSGP, EPA reviews and updates sector-specific benchmark monitoring requirements to incorporate new scientific information.
 - As part of the 2015 MSGP Settlement Agreement, EPA revised the MSGP's sector-specific fact sheets associated with the permit. See Appendix Q of the proposed permit and this Fact Sheet.
 - EPA proposes to require specific benchmark monitoring for Sectors I, P, and R. See Parts 8 and 4.2.1.1 of the proposed permit and this Fact Sheet.
 - EPA evaluated options for developing a benchmark for polycyclic aromatic hydrocarbons (PAHs). After conducting the cost analysis for this proposed permit for 3 options, EPA concluded that COD is the most cost-effective option as a surrogate for PAHs, and since COD is already being proposed under the new "universal benchmark monitoring," no additional monitoring for PAHs is being proposed at this time. EPA requests comment on information and data related to specific sectors with petroleum hydrocarbon exposure that can release PAHs, any concentrations of individual PAHs and/or total PAHs at industrial sites, and the correlation of PAHs and COD. EPA may consider additional monitoring for PAHs in the final permit if it receives sufficient information to develop an appropriate benchmark threshold. For a full discussion and detailed analysis of the options and the costs, see Part 4.2.1.2 of the Fact Sheet and Section E.3 of the Cost Impact Analysis in the docket.
3. **NRC recommendation:** EPA should update the MSGP industrial-sector classifications so that requirements for monitoring extend to nonindustrial facilities with activities similar to those currently covered under the MSGP.
 - **EPA response:** Prior to the issuance of the 1995 MSGP an analysis of industrial sources not covered under the stormwater Phase I rule was performed to determine whether any such industries should be covered under the 1999 stormwater Phase II rule (Report to Congress, March 1995, EPA 833-K-94-002). Ultimately, no new industrial sources were included in the stormwater Phase II rulemaking. While EPA recognizes the benefits of the recommendation to cover facilities with activities similar to those already covered by the MSGP, such an expansion would require a separate regulatory action to modify the definition of "stormwater discharges associated with industrial activity" in 40 CFR 122.26(b)(14) and is outside of the scope of this permit. Additionally, in Sector AD, the MSGP covers other stormwater discharges designated by the Director as needing a permit (see 40 CFR 122.26(a)(9)(i)(C) & (D)) or any facility discharging stormwater associated with industrial activity not described by any of Sectors A-AC.
4. **NRC recommendation:** Benchmarks should be based on the latest toxicity criteria designed to protect aquatic ecosystems from adverse impacts from short-term or intermittent exposures, which to date have generally been acute criteria.
 - **EPA response:** EPA proposes to update the benchmark thresholds for cadmium; leave the benchmark threshold for aluminum as it was in the 2015 MSGP; remove benchmark thresholds for magnesium and iron; and requests comment on the benchmark thresholds for selenium, arsenic, and copper. See Parts 4.2.1.2 and 8 of the proposed Fact Sheet.
5. **NRC recommendations:**
 - Additional monitoring data collection on the capacity of stormwater control measures (SCMs) to reduce industrial stormwater pollutants is recommended to inform periodic

reviews of the benchmark thresholds and identify sectors for which new national effluent limits could help address treatment attainability.

- Because of the paucity of rigorous industrial SCM performance data, the development of new numeric effluent limitations (NELs) is not recommended for any specific sector based on existing data, data gaps, and the likelihood of filling them.
 - **EPA response:** EPA acknowledges that a more complete and robust dataset is needed to establish numeric limitations (NELs) for industrial stormwater in a general permit. Numeric limitations are determined only on an industry-by-industry basis (or subsector-by-subsector) and require discharge pollutant levels corresponding to specific control measures. Many samples are needed because of the high variability (i.e., coefficients of variation) for industrial stormwater (which is much greater than for drinking water and wastewater). The benchmark monitoring data that is currently collected in the MSGP is not suitable or sufficient for determining NELs, which are developed through the effluent limitations guidelines (ELG) development process. NRC notes that the MSGP as a general permit is not the appropriate vehicle for collecting the rigorous performance monitoring data which is necessary to develop new NELs based on the capabilities of treatment technology and other on-site stormwater management practices. While EPA recognizes the importance and utility of NELs, the MSGP benchmark monitoring requirements were designed to be as least burdensome as possible on operators while still providing the intended utility: a tool to for determining whether operators could have SWPPP/stormwater control measure deficiencies. Generally, NELs are feasible only where predictably reliable treatment technologies (as opposed to standard pollution prevention SCMs other than product substitution) are employed. Where standard SCMs provide adequate water quality protection, NELs are unnecessary. Some of the requisite components of a stormwater monitoring program that is sufficient to characterize a discharge and to accommodate the development of NELs include the following:
 - Rainfall monitoring in the drainage area (rate and depth, at least at two locations);
 - Flow monitoring at the discharge point (calibrated with known flow or using dye dilution methods);
 - Flow-weighted composite sampling, with sampler modified to accommodate a wide range of rain events;
 - Water quality sonde to obtain high-resolution and continuous measurements of such parameters as turbidity, conductivity, pH, oxidation reduction potential, dissolved oxygen (DO), and temperature (recommended);
 - Preparation of adequate experimental design that quantifies the needed sampling effort to meet the data quality objectives (adequate numbers of samples in all rain categories and seasons); and
 - Selection of constituents that meet monitoring objectives.
- 6. Permitted facilities cannot be compelled to collect additional detailed performance data for common SCMs under typical stormwater conditions, as this would be very complicated to do in context of a permit and possibly expensive for operators in balance with other proposed requirements.

NRC Recommendations on Stormwater Sampling and Data Collection

1. **NRC recommendation:** EPA should update and strengthen industrial stormwater monitoring, sampling, and analysis protocols and training to improve the quality of monitoring data.
 - **EPA response:** EPA has existing guidance on industrial stormwater monitoring and sampling, which can be found at https://www3.epa.gov/npdes/pubs/msgp_monitoring_guide.pdf.

The guidance explains how to conduct visual and analytical monitoring of stormwater discharges and can be used by facilities required to comply with the MSGP's monitoring requirements as well as facilities subject to state-issued industrial stormwater permits. EPA may consider updating this guidance as a separate activity from the permit proposal. Although EPA recognizes the benefits of developing a new comprehensive industrial stormwater training or professional certificate program, establishing such a program would require significant time, resources, and indefinite EPA staff commitment, and is outside the scope of the permit and capabilities of EPA's industrial stormwater program at this time.

2. **NRC recommendation:** EPA should allow and promote the use of composite sampling for benchmark monitoring for all pollutants except those affected by storage time.
 - **EPA response:** EPA proposes an explicit clarification that composite sampling is allowed for benchmark monitoring. See Part 4.1.4 of the proposed permit and this Fact Sheet.
3. **NRC recommendation:** Quarterly stormwater event samples collected over 1 year are inadequate to characterize industrial stormwater discharge or describe industrial SCM performance over the permit term.
 - **EPA response:** As part of proposed "universal benchmark monitoring" for pH, TSS, and COD for all facilities in Part 4.2.1.1, EPA proposes that facilities monitor and report for these three parameters on a quarterly basis for the entire permit term, regardless of any benchmark threshold exceedances, to ensure facilities have current indicators of the effectiveness of their stormwater control measures throughout the permit term. See Part 4.2.1.2 of the proposed permit and this Fact Sheet.
4. **NRC recommendation:** State adoption of national laboratory accreditation programs for the Clean Water Act with a focus on the stormwater matrix and interlaboratory calibration efforts would improve data quality and reduce error.
 - **EPA response:** EPA has existing guidance on laboratory procedures and quality assurance in the NPDES Compliance Inspection Manual (January 2017), which can be found at <https://www.epa.gov/sites/production/files/2017-01/documents/npdesinspect.pdf>. Because this guidance is relatively recent, EPA has no plans to further update it at this time.
5. **NRC recommendation:** To improve stormwater data quality while balancing the burden of monitoring, EPA should expand its tiered approach to monitoring within the MSGP, based on facility risk, complexity, and past performance.
 - **EPA response:**
 - EPA proposes to have the following tiered approach to monitoring: 1) a possible "inspection-only" option in lieu of benchmark monitoring available to low-risk facilities (see Part 4.2.1.1 of the proposed permit and this Fact Sheet and associated request for comment in that Part); 2) require new "universal benchmark monitoring" for pH, TSS, and COD; 3) continue existing benchmark monitoring requirements from the 2015 MSGP; and 4) require continued benchmark monitoring as part of the proposed Additional Implementation Measures (AIM) protocol for repeated benchmark exceedances. See Parts 4.2. and 5.2 in the proposed permit and this Fact Sheet.
 - EPA is also considering an "inspection-only" option as an alternative to benchmark monitoring for low-risk facilities. EPA acknowledges the benefits of an in-person inspection and aims to provide flexibility in the permit, where appropriate. EPA requests comment on whether the permit should include an "inspection-only" option, ways to identify eligible low-risk facilities, what frequency would be appropriate for such an inspection, what the inspection should entail, and what qualifications or certifications an inspector should have. Based on the information received during the comment period for this proposed permit, the Agency may include this option in the final permit.

For a full discussion and detailed analysis of this option and the costs, see Fact Sheet Part 4.2.1.1 and Section E.5 of the Cost Impact Analysis in the docket.

6. **NRC recommendation:** To improve the ability to analyze data nationally and the efficiency and capability of oversight by permitting agencies, EPA should enhance electronic data reporting and develop data management and visualization tools.
 - **EPA response:** EPA recognizes the benefits of improved electronic data reporting and management and continues to work on upgrading its electronic reporting systems and tools with each permit reissuance. EPA will consider implementing improved compliance reminders, checks on missing or unusual data, and the possibility of developing a data visualization tool.

NRC Recommendations on Consideration of Retention Standards in the MSGP

1. NRC recommendations:

- a. Rigorous permitting, (pre)treatment, and monitoring requirements are needed along with careful site characterization and design to ensure groundwater protection in industrial stormwater infiltration systems.
 - b. Site-specific factors and water quality-based effluent limits render national retention standards for industrial stormwater infeasible within the existing regulatory framework of the MSGP.
 - c. EPA should consider incentives to encourage industrial stormwater infiltration or capture and use where appropriate.
 - **EPA response:** EPA acknowledges the importance of protecting groundwater during the use of stormwater infiltration systems. EPA proposes infiltration, where the operator can demonstrate to EPA that it is appropriate and feasible for site-specific conditions, as an alternative or adjunct to structural source controls and/or treatment controls required in proposed Tier 3 Additional Implementation Measures (AIM) responses. See Part 5.2.3.2.b of the proposed permit and this Fact Sheet.
2. **NRC recommendation:** EPA should develop guidance for retention and infiltration of industrial stormwater for protection of groundwater.
 - **EPA response:** For the final permit, EPA may develop guidance for retention and infiltration after it reviews any existing state or other federal guidance.

IV. Summary of Proposed Changes from the 2015 MSGP

The proposed 2020 MSGP includes a number of new or modified requirements, many already discussed in the sections above. The following list summarizes the more significant changes to the MSGP.

1. **Streamlining of Permit** – EPA proposes to streamline and simplify language throughout the permit to present the requirements in a generally more clear and readable manner. Regarding structure of the proposed permit, proposed Part 4 (Monitoring) was previously Part 6 in the 2015 MSGP; proposed Part 5 (Corrective Actions and AIM) was previously Part 4 in the 2015 MSGP; and proposed Part 6 (SWPPP) was previously Part 5 in the 2015 MSGP. In EPA's view, formatting the permit in this new order (Monitoring, followed by Corrective Actions and AIM, then SWPPP requirements) makes more sequential sense as the latter parts often refer back to requirements in previous parts of the permit. This new structure should enhance understanding of and compliance with the permit's requirements. EPA also made a few additional edits to improve permit readability and clarity. EPA revised the wording of many eligibility requirements to be an affirmative expression of the requirement instead of assumed ineligibility unless a condition was met. For example, proposed Part 1.1.6.2 reads "If you discharge to an 'impaired water'...you

must do one of the following:" In comparison, the 2015 MSGP reads "If you are a new discharger or a new source...you are ineligible for coverage under this permit to discharge to an 'impaired water' ... unless you do one of the following:". EPA also numbered proposed permit conditions that were previously in bullet form to make it easier to follow and reference the permit conditions. Finally, the language of the proposed permit was changed from passive to active voice where appropriate (e.g., "Samples must be collected..." now reads "You must collect samples...").

2. **Permit Eligibility and Authorization-Related Changes**

- **Eligibility For Stormwater Discharges to a Federal CERCLA Site** – Currently, the 2015 MSGP requires facilities in EPA Region 10 that discharge stormwater to certain Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or Superfund) sites (as defined in MSGP Appendix A and listed in MSGP Appendix P) to notify the EPA Regional Office in advance and requires the EPA Regional Office to determine whether the facility is eligible for permit coverage. In determining eligibility for coverage, the EPA Regional Office may evaluate whether the facility has included appropriate controls and implementation procedures designed to ensure that the discharge will not interfere with achieving the cleanup goals or lead to recontamination of aquatic media at the CERCLA Site. Such releases can undo cleanups accomplished and can result in new or continuing impairments of designated uses of the receiving waters. In addition, EPA and potentially responsible parties performing cleanups cannot obtain cost recovery for responding to releases of hazardous substances resulting from federally-permitted releases that are in compliance with the permit, so the permitting of industrial stormwater to CERCLA sites creates a barrier to cost recovery. In the proposed MSGP, EPA requests comment on whether this current eligibility criterion should be applied in all EPA Regions for facilities that discharge to Federal CERCLA sites that may be of concern for recontamination from stormwater discharges. EPA is also interested in information that would assist the Agency in identifying such sites. EPA also requests comment on requiring such facilities to notify the EPA Regional Office a minimum of 30 days in advance of submitting the NOI form. See Part 1.1.7 in the proposed permit.
 - **Eligibility Related to Application of Coal-Tar Sealcoat** – EPA proposes in Part 1.1.8 to include an eligibility requirement that would apply to operators who will use coal-tar sealcoat during the term of the 2020 MSGP. To be eligible for coverage under this permit, operators must not have any stormwater discharges from paved surfaces that will be initially sealed or re-sealed with coal-tar sealcoat where industrial activities are located during coverage under the permit. See Part 1.1.8 of the proposed permit.
 - **Discharge Authorization Related to Enforcement Action** – EPA proposes to establish a discharge authorization wait period of 60 calendar days after Notice of Intent (NOI) submission for any operators whose discharges were not previously covered under the 2015 MSGP and who have a pending enforcement action related to stormwater by EPA, a state, or a citizen (to include both notices of violation (NOVs) by the EPA or a state and notices of intent to bring a citizen suit). See Part 1.3.3, Table 1-2 of the proposed permit.
3. **Public Sign of Permit Coverage** – EPA proposes that the 2020 MSGP include a requirement that MSGP operators must post a sign of permit coverage at a safe, publicly accessible location in close proximity to the facility, as other NPDES permittees are required to do. EPA proposes that this notice must also include information that informs the public on how to contact EPA if stormwater pollution is observed in the discharge. See Part 1.3.6 of the proposed permit.
4. **Consideration of Major Storm Control Measure Enhancements** – EPA proposes that operators would be required to consider implementing enhanced measures for facilities located in areas that could be impacted by stormwater discharges from major storm events that cause extreme flooding conditions. The purpose of this proposed requirement is to encourage industrial site operators to consider the risks to their industrial activities and the potential impact of pollutant

discharges caused by stormwater discharges from major storm events that cause extreme flooding conditions. EPA also requests comment on how the permit might identify facilities that are at the highest risk for stormwater impacts from major storms that cause extreme flooding conditions. See Part 2.1.1.8 of the proposed permit.

5. **Monitoring Changes**

- **Universal Benchmark Monitoring for all Sectors** – EPA proposes to require all facilities to conduct benchmark monitoring for three indicator parameters of pH, total suspended solids (TSS), and chemical oxygen demand (COD), regardless of sector/subsector, called universal benchmark monitoring, as recommended by the NAS study. This proposed requirement would apply to all sectors/subsectors, including those facilities that previously did not have any chemical-specific benchmark monitoring requirements and those that previously did not have these three specific benchmark parameters under the 2015 MSGP. The NAS study suggested that such universal benchmark monitoring would provide a baseline and comparable understanding of industrial stormwater risk, broader water quality problems, and stormwater control effectiveness across all sectors. See Part 4.2.1 of the proposed permit.
 - **Impaired Waters Monitoring** – Under the current MSGP, operators discharging to impaired waters must monitor once per year for pollutants for which the waterbody is impaired and can discontinue monitoring if these pollutants are not detected or not expected in the discharge. EPA proposes to require operators discharging to impaired waters to monitor only for those pollutants that are both causing impairments and associated with the industrial activity and/or benchmarks. The proposal specifies that, if the monitored pollutant is not detected in your discharge for three consecutive years, or it is detected but you have determined that its presence is caused solely by natural background sources, operators may discontinue monitoring for that pollutant. See Part 4.2.4.1 of the proposed permit.
 - **Updating Benchmark Values** – EPA proposes to update the cadmium benchmark threshold for consistency with updated recommended EPA water quality criteria. EPA also proposes to remove the magnesium and iron benchmarks. Finally, EPA is requesting comment on allowing facilities to conduct site-specific risk analysis for copper exceedances. See Part 4.2.1 of the proposed fact sheet.
 - **Sectors with New Benchmarks** – The 2015 MSGP does not require sector-specific benchmark monitoring for Sector I (Oil and Gas Extraction), Sector P (Land Transportation and Warehousing), or Sector R (Ship and Boat Building and Repair Yards). Based on the NAS study recommendation which identified potential sources of stormwater pollution from these sectors, EPA proposes to add benchmark monitoring requirements for these three sectors. EPA also requests comment on adding benchmark monitoring requirements for polycyclic aromatic hydrocarbons (PAH) for sectors that have petroleum hydrocarbons at their facilities that could be exposed to stormwater. See Part 8 of the proposed permit.
6. **Additional Implementation Measures (AIM)** – EPA proposes revisions to the 2015 MSGP's provisions regarding benchmark monitoring exceedances. The corrective action conditions, subsequent action deadlines, and documentation requirements in proposed Part 5.1 remain unchanged from the 2015 MSGP. In proposed Part 5.2, EPA proposes new tiered "additional implementation measures", or AIM, that are triggered by benchmark monitoring exceedances. The proposed AIM requirements would replace corresponding sections regarding benchmark exceedances in the 2015 MSGP ("Data exceeding benchmarks" in Part 6.2.1.2 in the 2015 MSGP). There are three AIM levels: AIM Tier 1, Tier 2, and Tier 3. Operators would be required to respond to different AIM levels with increasingly robust control measures depending on the nature and magnitude of the benchmark threshold exceedance. EPA proposes to retain exceptions to AIM triggers based on natural background sources or run-on for all AIM levels. EPA also proposes an exception in AIM Tier 2 for a one-time aberrant event, and an exception in AIM Tier 3 for operators who are able to demonstrate that the benchmark exceedance does

not result in any exceedance of applicable water quality standards. See Part 5.2 of the proposed permit.

- 7. **Revisions to Sector-Specific Fact Sheets** – EPA proposes updates to the existing sector-specific fact sheets that include information about stormwater pollution prevention for each sector. These fact sheets are also proposed to be used when implementing Tier 2 AIM. See Part 5.2.2.2 and Appendix Q of the proposed permit.

V. Geographic Coverage of this Permit

The proposed 2020 MSGP will provide coverage for classes of point source discharges that occur in areas not covered by an approved state NPDES program. The areas of geographic coverage of the proposed 2020 MSGP are listed in Appendix C and include the states of Idaho, Massachusetts, New Hampshire, and New Mexico, as well as all Indian country lands and federal operators in selected states. Permit coverage is also provided in Puerto Rico, the District of Columbia, and the Pacific Island territories.

Note: The schedule for the transfer of NPDES Permitting Authority to Idaho for general stormwater permits, including the EPA’s MSGP, is July 1, 2021.

Industrial activities on Indian country lands located in Alabama, Florida, Mississippi, North Carolina, and Virginia, and most Indian country lands in New York were not included in the 2015 MSGP, but are included in the proposed 2020 MSGP.

VI. Categories of Facilities That Can Be Covered Under this Permit

The proposed 2020 MSGP, when finalized, will be available for stormwater discharges from the following 29 sectors of industrial activity (Sector A – Sector AC), as well as any discharge not covered under the 29 sectors (Sector AD) that has been identified by EPA as appropriate for coverage. 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 D in the 2015 MSGP for specific information on each sector. The sectors are listed below:

Sector A – Timber Products	Sector P – Land Transportation
Sector B – Paper and Allied Products Manufacturing	Sector Q – Water Transportation
Sector C – Chemical and Allied Products Manufacturing	Sector R – Ship and Boat Building or Repairing Yards
Sector D – Asphalt Paving and Roofing Materials Manufactures and Lubricant Manufacturers	Sector S – Air Transportation Facilities
Sector E – Glass, Clay, Cement, Concrete, and Gypsum Product Manufacturing	Sector T – Treatment Works
Sector F – Primary Metals	Sector U – Food and Kindred Products

Sector G – Metal Mining (Ore Mining and Dressing)	Sector V – Textile Mills, Apparel, and other Fabric Products Manufacturing
Sector H – Coal Mines and Coal Mining-Related Facilities	Sector W – Furniture and Fixtures
Sector I – Oil and Gas Extraction	Sector X – Printing and Publishing
Sector J – Mineral Mining and Dressing	Sector Y – Rubber, Miscellaneous Plastic Products, and Miscellaneous Manufacturing Industries
Sector K – Hazardous Waste Treatment Storage or Disposal	Sector Z – Leather Tanning and Finishing
Sector L – Landfills and Land Application Sites	Sector AA – Fabricated Metal Products
Sector M – Automobile Salvage Yards	Sector AB – Transportation Equipment, Industrial or Commercial Machinery
Sector N – Scrap Recycling Facilities	Sector AC – Electronic, Electrical, Photographic and Optical Goods
Sector O – Steam Electric Generating Facilities	Sector AD – Reserved for Facilities Not Covered Under Other Sectors and Designated by the Director

VII. Proposed Permit Requirements

Part 1 How to Obtain Coverage Under the MSGP

Part 1.1 Eligibility Conditions

As with previous permits, to be eligible for coverage under the 2020 MSGP, operators of industrial facilities must meet the eligibility provisions described in Part 1.1 of the permit. If they do not meet all the eligibility requirements, operators may not submit a Notice of Intent (NOI) to be covered by the MSGP, and, unless they obtained coverage for those discharges under another permit, those discharges of stormwater associated with industrial activity needing permit coverage will be in violation of the CWA.

Part 1.1.1 Location of Your Facility

This Part specifies that in order to be eligible for permit coverage, the facility must be located in an area where EPA is the permitting authority (see Appendix C).

Part 1.1.2 Your Discharges Are Associated with Industrial Activity

This Part specifies that eligible facilities must have an authorized stormwater discharge or an authorized non-stormwater discharge per Part 1.2 associated with industrial activity from the primary industrial activity (as defined in Appendix A and as listed in Appendix D), or have been notified by EPA that they are eligible for coverage under Sector AD.

Part 1.1.3 Limitations on Coverage

This Part describes the limitations on what is covered under this permit. Any discharges not expressly authorized under the MSGP cannot become authorized or shielded from liability under CWA Section 402(k) by disclosure to EPA, state, or local authorities after issuance of the MSGP via any means, including the NOI to be covered by the permit, the SWPPP, or during an inspection. This is consistent with EPA's long-standing interpretation of the scope of the MSGP.

Part 1.1.3 used to be Part 1.1.4 in the 2015 MSGP. In the 2020 MSGP, EPA focused the "limitations on coverage" section to specific discharges not authorized by the permit. Other eligibility requirements that were previously listed under "limitations on coverage" are now organized under their own headers so it is clearer to the reader what conditions need to be met in order to obtain eligibility. EPA modified the wording of some conditions previously in the 2015 MSGP from the negative to the positive, e.g., instead of using "you are ineligible unless..." EPA changed the phrasing of the condition to "to be eligible, you must...". EPA hopes this will clarify the eligibility conditions of the permit.

Part 1.1.3.1 Discharges Mixed with Non-Stormwater

The MSGP does not authorize stormwater discharges that are mixed with non-stormwater discharges, other than those mixed with authorized non-stormwater discharges listed in Part 1.2.2 and/or those mixed with a discharge authorized by a different NPDES permit and/or a discharge that does not require NPDES authorization. Where a stormwater discharge is commingled with non-stormwater that is not authorized by the MSGP, the operator must obtain authorization under another NPDES permit to discharge the commingled discharge.

Part 1.1.3.2 Stormwater Discharges Associated with Construction Activity

The 2020 MSGP does not apply to stormwater discharges associated with construction activity, defined in 40 CFR 122.26(b)(14)(x) and (b)(15), which acknowledges the distinction between construction and other types of stormwater discharges associated with industrial activity. An exception to this is for construction associated with mining activities, where operators in Sectors G, H and J are able to cover earth-disturbing activities in the MSGP in lieu of obtaining separate coverage under the CGP (EPA included the salient earth disturbance-related requirements for the mining sectors in Part 8). However, for mining-related construction that disturbs less than one acre in size, such discharges are covered by the regular MSGP (i.e., the requirements that are not expressly for earth-disturbances). The mining-related construction exception provides a more streamlined approach for mining operators preferring to be covered by one permit, instead of two.

Part 1.1.3.3 Discharges Already Covered by Another Permit

This provision describes cases where an operator is ineligible for coverage under the MSGP because of coverage under another NPDES permit. The objective is to avoid conflict with the anti-backsliding provisions of the CWA. The cases this applies to include operators currently covered under an individual NPDES permit or an alternative NPDES general permit; discharges covered by an individual NPDES permit or alternative NPDES general permit within the past five years prior to the effective date of the 2020 MSGP, which established site-specific numeric water quality-based limitations developed for the stormwater component of the discharge; or discharges from facilities where any NPDES permit has been or is in the process of being denied, terminated (permit termination does not refer to the routine expiration and reissuance of permits every five years), or revoked by EPA.

Part 1.1.3.4 Stormwater Discharges Subject to Effluent Limitations Guidelines

This section specifies that only the discharges from facilities subject to the stormwater-specific effluent limitations guidelines in Table 1-1 of the permit are eligible for coverage under this permit. All other stormwater and non-stormwater discharges subject to effluent limitations guidelines must be covered under any applicable alternate NPDES general permit or an individual NPDES permit.

Part 1.1.4 Eligibility related to Endangered and Threatened Species and Critical Habitat Protection

The Endangered Species Act (ESA) of 1973 requires all Federal Agencies to ensure, in consultation with the U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS) (the "Services"), that any federal action carried out by the Agency is not likely to jeopardize the continued existence of any species that is federally-listed as endangered or threatened ("listed"), or result in the adverse modification or destruction of habitat of such species determined to be critical ("critical habitat"). See 16 U.S.C. 1536(a)(2), 50 CFR 402 and 40 CFR 122.49(c).

EPA developed the proposed requirements of Part 1.1.4 in consultation with the Services to ensure that discharges covered under the permit are protective of listed species and their critical habitats. The criteria in Appendix E require the operator to determine, prior to submitting the NOI for permit coverage, that their facility's stormwater discharges, authorized non-stormwater discharges, and stormwater discharge-related activities were either the subject of a separate ESA consultation or an ESA Section 10 permit, or are not likely to adversely affect any listed species or critical habitat under the ESA. To make this determination, operators must follow the steps in Appendix E.

For the 2020 MSGP, EPA proposes to have the list of detailed ESA criteria only in Appendix E of the permit, and remove the criteria list from the permit text and fact sheet. EPA is concerned that operators may just read the list of criteria in the permit and try to determine just from that list which applies to their facility. Directing operators to Appendix E ensures that operators read the important instructions and procedures for how they should determine their ESA eligibility criterion.

EPA proposes to make very minor revisions to the criteria in Appendix E to better ensure that the criteria are adequately protective of listed species and their critical habitats and to improve clarity of the eligibility process. The proposed changes are summarized below.

- **Criterion A (No ESA-listed species and/or critical habitat present in action area)** – no significant changes proposed.
- **Criterion B (Eligibility requirements met by another operator under the 2020 MSGP)** – no significant changes proposed.
- **Criterion C (ESA-listed species and/or designated critical habitat likely to occur, but discharges not likely to adversely affect them)** - EPA is proposing to add two additional scenarios under which Criterion C could apply: 1) to allow the eligibility of a facility that was previously covered under the 2015 MSGP under Criterion C as long as there have been no changes to the action area and no additional ESA-listed species or designated critical habitat within the action area since the operator submitted the certification under the 2015 MSGP; and 2) to allow the eligibility of a facility that was previously covered under the 2015 MSGP under Criterion C and there have been changes to the action area and/or additional ESA-listed species or designated critical habitat listed since the operator submitted certification under the 2015 MSGP. The proposal retains the scenario previously included in the 2015 MSGP to allow a facility without previous MSGP coverage to certify eligibility under criterion C of the 2020 MSGP if it has ESA-listed species or designated critical habitat in the action area following the

procedures of Appendix E and submission of a Criterion C form. See Appendix E for proposed changes.

EPA also proposes minor updates to Criteria C Evaluation Form Section V "Evaluation of Discharge Effects". EPA proposes to add "stormwater discharges may adversely affect the immediate vicinity of the discharge point through streambank erosion and scour" to Hydrological Effects. EPA proposes to add "due to exposures to multiple stressors at the same time" to the description of Toxicity of Pollutants. Finally, EPA proposes to add "I comply with the applicable monitoring requirements and have not had any exceedances" to Criteria C Eligibility Form Section V.B.

- **Criterion D (ESA Section 7 consultation has successfully concluded)** - EPA is proposing to eliminate the option that consultation resulted in a biological opinion that concludes that the action is likely to jeopardize listed species or to result in the destruction or adverse modification of critical habitat, and any recommended reasonable and prudent alternatives or reasonable and prudent measures are being implemented.
- **Criterion E (Issuance of section 10 permit)** - no significant changes proposed.

Part 1.4.5 Eligibility related to Historic Properties Preservation

Coverage under the 2020 MSGP is available only if operators certify that they meet one of the eligibility criteria related to compliance with historic properties protection pursuant to the National Historic Preservation Act (NHPA). These criteria are used to identify whether land disturbances associated with the installation or revision of subsurface stormwater control measures would affect properties listed in, or eligible for listing in, the National Register of Historic Properties; and, if so, to determine the measures that will prevent or mitigate adverse effects to the properties.

EPA does not anticipate any effects on historic properties from the pollutants in the stormwater discharges covered by the 2020 MSGP. However, existing and new operators could undertake activities in connection with the 2020 MSGP that might affect historic properties if they install new or modify control measures that involve subsurface disturbance. The overwhelming majority of sources covered under the 2020 MSGP will be operators that are seeking renewal of previous permit coverage. If these existing dischargers are not planning to construct new stormwater controls or conveyance systems, they have already addressed NHPA issues. In the 2015 MSGP, they were required to certify that they were either not affecting historic properties or they had obtained written agreement from the applicable State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer (THPO), or other tribal representative regarding methods of mitigating potential impacts. EPA is not aware of any adverse effects on historic properties under the 2015 MSGP, nor the need for a written agreement. Therefore, to the extent the 2020 MSGP authorizes renewal of prior coverage without relevant changes in operation, it has no potential to affect historic properties.

Where operators install or modify control measures that involve subsurface disturbance, the area of potential effect (APE) for the activities performed to comply with the permit, for historic preservation purposes, is limited to the location and depth of the earth disturbance associated with the installation or modification of the stormwater control measures. Operators need only consider the APE when doing the historic properties screening procedures to determine their eligibility criteria in Appendix F. This is the only scenario where activities authorized or undertaken in connection with the 2020 MSGP may affect historic properties. Since both new and existing dischargers could undertake such activities, all operators are required to follow the historic property screening procedures to document eligibility. Historic preservation requirements are unchanged from 2015.

Part 1.1.6 Eligibility for “New Dischargers” and “New Sources”¹ (as defined in Appendix A) ONLY:**Part 1.1.6.1 Eligibility for “New Dischargers” and “New Sources” Based on Water Quality Standards**

This provision describes permit eligibility for operators of facilities classified as new sources and/or new dischargers (as defined in Appendix A), pursuant to 40 CFR 122.4(i). Facilities classified as “new source” or “new discharger” are not eligible for coverage under the MSGP for any discharges that EPA determines will not meet an applicable water quality standard. EPA may notify such operators that an individual permit application is necessary in accordance with Part 1.3.7, or, alternatively, EPA may authorize coverage under the MSGP after the operators have implemented measures designed to ensure the discharge meets water quality standards. EPA notes that while Part 1.1.6.1 is designed to specifically implement 40 CFR 122.4(i), other water quality-based requirements apply to new and existing dischargers. Part 2.2 of the permit includes water quality-based effluent limits applicable to all dischargers, which are designed to ensure that discharges from both new and existing operators are controlled as necessary to meet water quality standards.

Part 1.1.6.2 Eligibility for “New Dischargers” and “New Sources” for Water Quality-Impaired Waters

Part 1.1.6.2 of the permit requires any new source or new discharger to demonstrate its ability to comply with 40 CFR 122.4(i) (i.e., prohibiting the issuance of permits to new sources and new dischargers that will not meet water quality standards) prior to coverage under the permit. To satisfy the requirements of 40 CFR 122.4(i), an operator must complete one of the following: (a) prevent all exposure to stormwater of the pollutant(s) for which the waterbody is impaired, and retain documentation with the SWPPP on how this was accomplished; (b) submit technical information or other documentation to the appropriate EPA Regional Office, in advance of submitting an NOI, to support a claim that the pollutant(s) for which the waterbody is impaired is not present at the site ;or (c) prior to submitting the NOI, submit data or other technical documentation to the appropriate EPA Regional Office to support a conclusion that the discharge will meet applicable water quality standards. For discharges to waters without a TMDL, the information must demonstrate that the discharge of the pollutant for which the water is impaired will meet water quality criteria at the point of discharge to the waterbody. For discharges to waters with a TMDL, the information must demonstrate that there are sufficient remaining wasteload allocations in the TMDL to allow the discharge and that existing dischargers to the waterbody are subject to compliance schedules designed to bring the waterbody into attainment with water quality standards (e.g., a reserve allocation for future growth). In order to be eligible under Part 1.1.6.2.c, the operator must receive a determination from the EPA Regional Office that the discharge will meet applicable water quality standards. If the EPA Regional Office fails to respond within 30 days after submission of data, the operator is eligible for coverage.

¹ “New Discharger” means a facility from which there is or may be a discharge, that did not commence the discharge of pollutants at a particular site prior to August 13, 1979, which is not a new source, and which has never received a finally effective NPDES permit for discharges at that site. See 40 CFR 122.2.

“New Source” means any building, structure, facility, or installation from which there is or may be a “discharge of pollutants,” the construction of which commenced: i) after promulgation of standards of performance under section 306 of the CWA which are applicable to such source, or ii) after proposal of standards of performance in accordance with section 306 of the CWA which are applicable to such source, but only if the standards are promulgated in accordance with section 306 within 120 days of their proposal. See 40 CFR 122.2.

Part 1.1.6.3 Eligibility for “New Dischargers” and “New Sources” for Waters with High Water Quality

Part 1.1.6.3 includes the eligibility requirements for new dischargers or new sources discharging to a Tier 2, 2.5, or 3 water. Operators discharging to Tier 2 or Tier 2.5 waters must not lower the water quality of the water. Coverage under the permit is not available to new dischargers or new sources who discharge to a state- or tribe-designated Tier 3 water (outstanding national resource waters or “ONRW”) for antidegradation purposes. Any such discharges must, therefore, apply for coverage under an individual permit.

The need for such a provision is that state/tribal water quality standards must include an antidegradation policy. In addition, each state/tribe must identify implementation methods for their policy that, at a minimum, provide a level of protection that is consistent with the three-tiered approach of the federal antidegradation regulation. Tier 3 maintains and protects water quality in ONRWs. Waters classified as ONRWs by states and tribes are generally the highest quality waters of the U.S. However, the ONRW classification also offers special protection for waters of exceptional ecological significance, i.e., those that are important, unique, or sensitive ecologically, but do not necessarily have high water quality. Except for certain temporary changes, water quality cannot be lowered in such waters. 40 CFR 131.12(a)(3). Because of their high quality or ecological significance, EPA expects few industrial stormwater discharges into ONRWs will be covered under an NPDES permit. See list of Tier 2, Tier 2.5 and Tier 3 waters in Appendix L.

Part 1.1.7 Eligibility for Stormwater Discharges to Federal CERCLA Sites²

In the 2015 MSGP, facilities in EPA Region 10 and Indian country that discharge stormwater to certain specified sites that have undergone or are undergoing remedial cleanup actions pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or Superfund) are required to notify the EPA Regional Office in advance of submitting the NOI form to EPA. While the 2015 MSGP permit cycle was limited to discharges to certain CERCLA sites in EPA Region 10, the Agency is concerned that CERCLA site recontamination from MSGP authorized discharges may be an issue in all EPA Regions. Therefore, EPA is proposing that the current eligibility criterion should be applied in all EPA Regions for facilities that discharge to Federal CERCLA sites that may be of concern for recontamination from industrial stormwater discharges. EPA evaluated 2015 MSGP NOI data and found that only 12 facilities in Region 10 have been subject to this requirement in the current permit. All facilities were able to get coverage under the MSGP, and only one facility was required to do additional monitoring. Based on this data, EPA estimates that approximately 4% of facilities in each EPA Region, or 103 facilities total, may be required to meet the requirement.

In determining eligibility for coverage, the EPA Regional Office may evaluate whether the facility has included appropriate controls and implementation procedures designed to ensure that the discharge will not interfere with achieving the cleanup goals or lead to recontamination of aquatic media at the CERCLA Site. Such releases can undo cleanups

² References:

Burton, G.A. and Pitt, R.E. (2002) Stormwater Effects Handbook. A Tool for Watershed Managers, Scientists and Engineers. Lewis Publishers, CRC Press, Boca Raton.

Burton, G. A. and R. E. Pitt. 2002. Chapter 5: Sampling effort and collection methods. Pp. 224-338 in Stormwater effects handbook: A toolbox for watershed managers, scientists, and engineers, G. A. Burton and R. E. Pitt, eds. Boca Raton, FL: Lewis Publishers.

Chiou, C.T., and Kile, D.E., 2000. Contaminant sorption by soil and bed sediment--Is there a difference?: U.S. Geological Survey Fact Sheet 087-00, 4 p.

accomplished and can result in new or continuing impairments of designated uses of the receiving waters. In addition, EPA and potentially responsible parties performing cleanups cannot obtain cost recovery for responding to releases of hazardous substances resulting from federally-permitted releases that are operating in compliance, so the permitting of industrial stormwater to CERCLA sites creates a barrier to cost recovery.

Just as in the 2015 MSGP, in the 2020 MSGP a facility is considered to discharge to a federal CERCLA Site if the discharge flows directly into the site through its own conveyance, or a through a conveyance owned by others, such as a municipal separate storm sewer system. This does not include discharges to a tributary that flows into a CERCLA Site. "CERCLA Site" means a facility as defined in Section 101(9) of CERCLA, 42 U.S.C. § 9601(9), that is undergoing a remedial investigation and feasibility study, or for which a Record of Decision for remedial action has been issued in accordance with the National Contingency Plan at 40 CFR 300. This definition includes sites that have been listed on the National Priorities List in accordance with Section 105 of CERCLA, 42 U.S.C. §9605, or that are being addressed using CERCLA authority, including use of an agreement consistent with the Superfund Alternative Approach Guidance. The federal CERCLA sites to which this provision currently applies are listed in Appendix P. Facilities seeking authorization to discharge stormwater to one of these identified CERCLA Sites would be required to first notify the appropriate EPA Regional Office prior to submitting their NOI for permit coverage.

To determine eligibility for coverage under this Part, the EPA Regional Office may evaluate whether the discharger has in place sufficient controls and implementation procedures (e.g., enhanced controls, corrective actions, monitoring requirements, and/or numeric benchmarks or effluent limits) to ensure that the proposed discharge will not recontaminate sediments or other aquatic media being remediated under CERCLA, such that it causes or contributes to an exceedance of a water quality standard. If following authorization to discharge under the 2020 MSGP it is determined that a facility discharges stormwater to a CERCLA Site listed in Appendix P, the facility must notify the appropriate EPA Regional Office. Upon notification, the EPA Regional Office may impose additional monitoring requirements, controls, or other actions to prevent recontamination of the CERCLA Site such that it meets all applicable water quality standard. In order to become eligible, the facility must confirm in writing that it agrees to implement the additional requirements. There are a variety of scenarios under which an MSGP-permitted facility could subsequently determine that it is discharging to an Appendix P CERCLA Site. For example, the facility could become aware of new information regarding the location of its stormwater discharge point or the fate of the stormwater it discharges into a municipal stormwater system. Or the facility could be notified of the fact that it is discharging to an Appendix P CERCLA Site by a potentially responsible party, EPA, or another government agency.

NPDES-permitted stormwater discharges may occur within the bounds of sites that have been remediated or are undergoing remediation under CERCLA. Source sampling and sediment data from some NPDES discharge points have indicated exceedances of sediment cleanup goals established for CERCLA Sites. NPDES permits, particularly general permits, may not control discharges sufficiently to avoid sediment recontamination because effluent limits are written to protect the aquatic ecosystem rather than to prevent sediment impacts or contamination. As a result, after extensive and costly clean-up of federal CERCLA Sites, these sites can be recontaminated by NPDES discharges, and cost recovery is not available where the contamination comes from a federally-permitted release

Contaminated water and sediment can impair the designated uses of a waterbody, which are included in state/tribal water quality standards. Large quantities of soils and sediments are "sinks" for contaminants because of their ability to pick up large amounts of a wide variety of contaminants (sorption). Sorption to soils and sediments is probably the most

influential factor on the transport and fate of organic contaminants in the environment (Chiou and Kile, 2000). Suspended sediment is well known as a major carrier of nutrients and metals (Schueler, 1997).

Aquatic organisms are exposed to contaminants through their contact with both water and sediment, and also through ingestion of food, according to The Stormwater Effects Handbook (Burton and Pitt, 2002). Inorganic and organic chemicals can accumulate in organisms at chronic levels that cause toxicity or death. Sediment-associated contaminants are one of the most common sources of tissue contamination. Such contamination is linked to impacts to other biota higher in the food chain via the "food web transfer", an effect especially quantifiable with mercury and some organochlorines such as PCBs and DDT. This occurs in both freshwater and marine systems and is not limited to the aquatic environment, as it has been observed in terrestrial species, especially birds (Burton and Pitt, 2002).

Non-benthic organisms can also ingest contaminated sediment directly when the sediment at rest at the bottom of a waterbody is mobilized, which occurs when the boundary (or bed) shear stress exerted by the water exceeds the critical shear stress (i.e., the driving forces of particle motion [shear stress] exceed the resisting forces that would make the particles stationary [particle density and size]). Superfund sites generally seek to reduce risk to humans and other aquatic and terrestrial receptors from eating the fish and other aquatic organisms contaminated by pollutants and/or being directly exposed to contaminated water and sediment, which could cause adverse effects to their health and mortality.

Given the above concerns and to avoid contamination/recontamination of the sites and subsequent exceedances of water quality standards, the proposed 2020 MSGP describes the process that facilities discharging to a CERCLA Site identified in Appendix P would be required to follow to obtain or maintain permit coverage. The proposed process remains unchanged from the 2015 MSGP and provides an opportunity for the facility and/or EPA to identify or develop the control measures that prevent contamination/recontamination. Once these measures are in place, the facility should be able to obtain MSGP coverage (or, if coverage was obtained prior to the commencement of the CERCLA remediation or determination of an applicable discharge, to continue operating under the MSGP). Alternatively, the facility or EPA Region may determine that coverage under the MSGP is not appropriate, and individual permit coverage may be sought or required per proposed Part 1.3.7 of the proposed 2020 MSGP. See 40 CFR 122.28(b)(3).

As noted above, this eligibility criterion is currently only applicable to MSGP facilities in EPA Region 10 states and Indian Country during the 2015 MSGP permit term. EPA has extensive information that stormwater discharges are a source of CERCLA Site recontamination in Region 10. EPA Region 10 has seen both the actual recontamination of Superfund Sites from stormwater discharge points and the potential for recontamination from source control information gathered at Superfund Sites not yet cleaned up. Recontamination (exceedances of sediment cleanup standards) has occurred at the Thea Foss Waterway in Tacoma, Washington, which is within the Commencement Bay/Nearshore Tidelands Superfund Site and was cleaned up in 2006. It is known that the source of the recontamination is stormwater from two 96-inch municipal storm drains that drain approximately 5,000 acres of commercial/residential property, state highways, and city roads. Source control information gathered at the Lower Duwamish Waterway Superfund Site and the Portland Harbor Superfund Site indicate there are facilities discharging stormwater containing suspended solids with polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and metals that exceed the preliminary remedial goals for sediment at those sites. Stormwater discharging from the municipal stormwater discharge points at the Thea Foss Waterway are covered by a Washington MS4 permit and

have been since 1995. Many of the facilities discharging stormwater to the Lower Duwamish and Portland Harbor sites are covered by Washington and Oregon industrial stormwater general or MS4 permits. See EPA's 2015 MSGP docket for more information about CERCLA contamination/recontamination in Region 10 from permitted stormwater discharges (Docket ID: EPA-HQ-OW-2012-0803, <https://www.regulations.gov/docket?D=EPA-HQ-OW-2012-0803>). EPA's Region 10 Office also has expertise in determining site-specific measures that are necessary to ensure industrial stormwater discharges covered under the MSGP are not leading to recontamination of aquatic media at CERCLA Sites such that they meet all applicable water quality standard.

To identify which CERCLA Sites in Region 10 this Part applies in the 2015 MSGP, EPA started with the Tier 1 and 2 sediment sites, then overlaid them with areas of federal CWA authority in Region 10. The sediment site tiering system is based on national EPA Office of Solid Waste and Emergency Response (OSWER) guidance on managing sediment cleanups, which establishes the tiering system for sediment sites that will have enhanced input and oversight by EPA. These sites contain a large amount of contaminated sediment, are expensive to remediate, and often impact significant numbers of humans and other ecological receptors. Tier 1 sediment sites are the largest contaminated sediment sites the CERCLA program is addressing. The Tier 2 sediment sites are in the evaluation process and are anticipated to meet the Tier 1 site criteria. The size of these sites makes it more likely that there will be multiple sources of contamination, including NPDES permitted discharge points. EPA Region 10 is actively engaged in the clean-up process at these sites and anticipates that when cleanup efforts are complete, these sites could have a higher probability of recontamination from NPDES permitted discharge points.

Request for Comment 1: Currently, the above eligibility criterion in the 2015 MSGP only applies to facilities in EPA Region 10. EPA requests comment on whether this current eligibility criterion should be applied in all EPA Regions for facilities that discharge to Federal CERCLA sites that may be of concern for recontamination from industrial stormwater discharges. EPA is also interested in information that would assist the Agency in identifying such sites. EPA also requests comment on requiring such facilities to notify the EPA Regional Office a minimum of 30 days in advance of submitting the Notice of Intent (NOI) form.

Part 1.1.8 Eligibility for Facilities using Coal-Tar Sealcoat

Background on Proposed Eligibility Criterion

This Part includes a new eligibility criterion related to the use of coal-tar sealcoat under the MSGP. Operators who, during coverage under the permit, use coal-tar sealcoat to initially seal or to re-seal their paved surfaces where industrial activities are located and thereby discharge polycyclic aromatic hydrocarbons (PAHs) in stormwater, would be eligible for coverage under the 2020 MSGP only if they eliminate such discharge(s). This would reduce the amount of PAHs in industrial stormwater discharges. Alternatively, operators who wish to pave their surfaces where industrial activities are located with coal-tar sealcoat would be able to apply for an individual permit.

Polycyclic Aromatic Hydrocarbons

Polycyclic aromatic hydrocarbons (PAHs) are a group of chemicals that are persistent in the environment. PAHs have both natural and man-made sources. Natural sources include wildfires, volcanic eruptions, and degradation of materials within sediments and fossil fuels. Man-made sources include the incomplete burning of organic materials like coal, oil, gas, wood, and garbage, vehicle exhaust, asphalt, coal-tar sealcoat, and creosote (ATSDR, 2011; EPA, 2009; CDC, 2009). According to the U.S. Department of Health and Human Services, coal tars and coal-tar pitches are known to be human carcinogens based on

studies in humans and 15 PAHs are listed as “reasonably anticipated to be human carcinogens” (2014).

PAHs (sometimes called polynuclear aromatic hydrocarbons) are listed on EPA’s Toxic Pollutants list at 40 CFR 401.15. The Toxic Pollutant List was developed in 1976 and subsequently added to the CWA by Congress in 1977. The list was intended to be used by EPA and states as a starting point to ensure that Effluent Guidelines regulations, water quality criteria and standards, and NPDES permit requirements addressed the problems of toxics in waterways.

The Toxic Pollutants list consisted of broad categories of pollutants rather than specific, individual pollutants. Therefore, EPA developed the Priority Pollutant List in 1977 to make implementation of the Toxic Pollutant List more practical for water testing and regulatory purposes. The list of 126 Priority Pollutants can be found at Appendix A to 40 CFR Part 423. Of the hundreds of known PAHs, EPA has designated sixteen as Priority Pollutants: naphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene, anthracene, fluoranthene, pyrene, benzo[a]anthracene, chrysene, benzo[b]fluoranthene, benzo[k]fluoranthene, benzo[a]pyrene, benzo[g,h,i]perylene, indeno[1,2,3-c,d]pyrene, and dibenz[a,h]anthracene.

Many PAHs can have impacts on humans and the environment. Several PAHs have been shown to be extremely toxic to and bioaccumulate in fish and aquatic invertebrates, and are known or probable human carcinogens (EPA Integrated Risk Information System (IRIS), 2014; NRC, 2019; Scoggins, McClintock, Gosselink, and Bryer, 2007; U.S. Department of Health and Human Services, 2014).

One study in coastal South Carolina performed ecological and human health screening assessments of sediment data from two other studies (Weinstein et al, 2010). The authors calculated ratios using the mean individual PAH levels in the pond sediments to the published preliminary remediation goals (PRG) for that individual PAH (PRG-HQ). Values less than 1 were considered health protective of human exposures. The authors found that four commercial ponds, one low density residential pond, and one golf course pond had PRG-HQ values greater than one for several carcinogenic PAHs and suggested that further study was warranted.

PAHs and Coal-tar Sealcoat

Coal-tar sealcoat is a type of sealant used to maintain and protect driveway and parking lot asphalt pavement. Coal-tar sealcoat typically contains 20 to 35% coal tar pitch which is made up of 50% or more PAHs by weight (Mahler, Van Metre, Bashara, Wilson, and Johns, 2005).

Coal-tar sealcoat, like other pavement, is exposed to the elements and undergoes weathering and abrasion that can cause dust and particles containing PAHs to break off. Dust and particles containing PAHs can then be picked up by stormwater discharges and transported to stormwater control measures or directly to receiving waters where it can accumulate in sediments and soils. Manufacturers recommend reapplying the sealants every two to three years due to wear/abrasion ([Link](#)).

Studies have observed sub-lethal effects of coal-tar sealcoats particles in sediments for both amphibians (Bommarito, T., Sparling, D.W., and Halbrook, R.S., 2010 ; Bryer and Willingham, 2006) and benthic macroinvertebrates (Scoggins et al., 2007). Studying cell lines from specific organisms can help to identify effects of treatments such as cell-level genetic abnormalities and damage under controlled conditions. A study examined non-transformed rainbow trout Waterloo1 (RTS-W1) fish liver cell line that was exposed to runoff collected up to 36 days after coal tar sealcoat application. This study found the runoff to

be genotoxic, meaning that damage to cell-leveled genetic material was caused by exposure and significant genotoxicity occurred with a 1:100 dilution of runoff (Kienzler et al., 2015).

As referenced in Van Metre, Mahler, and Wilson (2009), anecdotal reports indicate that use of coal-tar sealcoat is higher east of the Continental Divide than west of the Continental Divide, where use of asphalt-based sealcoat is higher. A geographical trend in the use of coal-tar sealcoat would be consistent with the fact that integrated steel and coke processing industries (of which coal tar pitch is a by-product) were historically located east of the Continental Divide for resource and economic reasons during the 19th and 20th centuries. More prevalent use of coal-tar sealant in the east and limited use in the west may also explain why watershed studies from the east and west coasts show disparate PAH loading concentrations from coal-tar sealant.

On the east coast, the New York Academy of Sciences completed a report in 2007 on pollution prevention and management strategies for PAHs in the New York/New Jersey Harbor (Valle, Panero, and Shor). Surfaces sealed with refined coal tar-based sealants are listed as 1 of 11 major sources that each contribute more than 2 percent of the total PAHs released to air, water, or land. Using yields calculated in Mahler et al. (2005) and estimates of the amount of sealed surface area in the watershed, the authors estimated that between 900 and 5800 kg of particulate-bound PAHs were released per year from surfaces sealed with coal-tar sealants in New York/New Jersey Harbor. The study also acknowledges that these estimates are likely on the low end given that "certain weather conditions, not captured in the estimated yields, will induce degradation of the sealant, and that volatilization of PAHs is not captured by this approach."

West of the continental divide, the Washington State Department of Ecology conducted a watershed-wide analysis in the Puget Sound to estimate toxic pollutant loadings through major pathways such as surface water runoff and to provide data on pollutant concentrations in surface runoff from different land cover types, including commercial/industrial. This analysis found that combustion emissions and releases from creosote-treated wood account for most of the PAH release in the Puget Sound basin. Coal-tar sealant accounted for less than 1 percent of PAH releases as compared to other sources, ranging from 0.9 to 1.7 tons per year, or approximately 816 to 1,542 kg/year (Ecology and King County, 2011).

Studies on Stormwater, PAHs, and Coal-tar Sealcoat

Primary Data Collection

Researchers often collect stormwater and other water and soil samples in the field and perform bench scale studies in the laboratory to assess the type and contribution of pollutants to the environment. These primary data studies have evaluated the contribution of PAHs from coal-tar sealcoat. Several studies have found that PAHs can be significantly elevated in stormwater discharged from coal-tar sealed parking lots and other areas compared to stormwater from areas that do not use coal-tar sealants. Specifically, an EPA simulation study of stormwater included both bench-scale panels and full-scale test plots, which included three test plots with different or no surface treatments: coal tar emulsion sealant, asphalt emulsion sealant, and unsealed. The results of this study indicated that coal-tar sealcoat releases 100 to 1,000 times more PAHs than other types of surfaces (Rowe and O'Conner 2011). A separate study collected simulated runoff in Austin, Texas from 13 urban parking lots. Six parking lots were sealed with coal-tar sealcoat, three parking lots were sealed with asphalt-based sealcoat, two parking lots were unsealed asphalt pavement, and two parking lots were unsealed concrete pavement. This study found that the amount of PAHs in stormwater was 65 times higher from coal-tar sealed parking lots

compared to stormwater from unsealed parking lots. The study also found that concentrations for total dissolved PAH were about an order of magnitude greater in samples from the 3 coal-tar-sealed test plots than concentrations in samples from the 2 asphalt-sealed test plot, which in turn were about an order of magnitude greater than those from the unsealed test plot (Mahler et al., 2005).

Several studies have evaluated the concentration of PAHs in either stormwater runoff or receiving stream sediments in relation to when the coal-tar sealcoats were applied. One of these studies indicated that the concentrations of PAHs in stormwater runoff are highest following the application of coal-tar sealcoat and decrease as continued weathering of the sealcoat occurs (Rowe and O'Connor 2011). Two other studies analyzed PAHs in sediment samples collected before Austin (Texas) banned the use of coal-tar sealants and after the ban took effect. The first, studying the impacts two years after the ban took effect, found no significant difference before and after the ban (DeMott et al. 2010), but the second, studying the impacts six to eight years after the ban, observed decreases of PAHs in the sediment (Van Metre and Mahler 2014).

Modeling Studies

Scientists have also used various analyses related to source apportionment to determine the relative contributions of various sources of PAHs. Many source apportionment studies have confirmed the results of primary data studies that where coal-tar sealcoat is used, PAHs are present at elevated levels. A study looked at PAHs in 40 urban lakes across the U.S. using a contaminant mass-balance receptor model based on discussed assumptions in the study and found that on average, coal-tar sealcoat is the largest source of PAHs (Van Metre and Mahler, 2010). Norris and Henry (2019) also analyzed previously collected sediment data from both the Lady Bird Lake and the 40 Lakes studies (Van Metre and Mahler, 2010; Van Metre and Mahler, 2014). They used these data to apportion sources of PAHs using the Unmix Optimum (Unmix O) receptor model. The results of both the Unmix O and chi-square approach found that coal-tar sealant contributes to lake sediments and over 80% of PAHs contained in lake samples from the eastern and central region of the United States were from coal-tar sealants (Norris and Henry, 2019). This study is consistent with results in Van Metre and Mahler (2010) and Van Metre and Mahler (2014) that coal-tar sealcoat contributes PAHs into the environment and that coal-tar sealcoat's contribution to sediments decreased after Austin banned the use of coal-tar sealcoat in 2006. The Norris and Henry (2019) study alone was not integral to EPA's inclusion of the eligibility requirement on the use of coal-tar sealcoat. In addition, PAH discharges from coal-tar sealcoat may accumulate in the sediment of stormwater ponds. Dredging of accumulated sediments in stormwater ponds is a key maintenance activity and disposal of dredged PAH-contaminated sediment may be expensive (Mahler et al., 2012).

Although, many modeling studies have shown that PAHs from coal-tar sealant are present in stormwater at elevated levels, there has been some acknowledgement that the variability of PAH concentrations in different sources is a challenge for all source apportionment models because these models assume PAH source compositions are relatively constant, even though source composition can change between the source and where the concentration measurement is taken (the receptor) (Norris and Henry, 2019). A recent letter to the editor has raised questions on the validity of the source profiles used in some source apportionment studies (Reilly and Edwards, 2019) while another noted the challenges with PAH source apportionment to coal-tar sealcoat given the variety of PAH sources in the environment (Zou, Wang, and Christensen, 2015). A review of existing literature on the potential effects of runoff coal-tar sealcoat on aquatic organisms concluded that although "an abundance of literature has shown that PAHs cause mutagenicity, genotoxicity, and development toxicity," other research studying the

particular effects of coal-tar sealcoat in runoff in controlled laboratory tests may overestimate potential adverse effects in the field (Driscoll et al, 2019).

Product Alternatives

EPA has identified alternatives (i.e., similar product use and cost) to coal-tar sealcoat including asphalt emulsion sealants and acrylic sealants. These alternatives achieve similar performance but contain fewer PAHs and their use is expected to result in a lesser amount of PAHs discharged in industrial stormwater. For example, asphalt sealant has negligible PAH levels and is considered significantly less harmful to water quality and the environment than coal-tar based sealant (USGS, 2019). Given the comparable costs among products, EPA assumes that most facilities who intend to use coal-tar sealcoat will be able to find a product alternative at negligible cost difference yet with similar performance. See Section B.1 of the Cost Analysis for this proposed permit in the docket. Other product substitute examples like pervious concrete, permeable asphalt and paver systems do not require sealants and allow stormwater to infiltrate, resulting in decreased discharge, but may not be appropriate for use with all industrial activities.

Coverage Under an Individual Permit

The MSGP, as a general NPDES permit, covers similar operations and similar types of discharges that can be sufficiently controlled with standard requirements and stormwater control measures that are applied across an array of facilities. An individual permit is warranted when, among other reasons, there is an elevated pollutant potential and site-specific stormwater control measures are necessary to protect water quality. Based on the documented toxicity of PAHs in coal-tar sealcoat and the listing of many PAHs as Priority Pollutants, as discussed above, discharges from facilities who intend to use coal-tar sealcoat to pave their surfaces where industrial activities are located are more appropriately permitted under an individual permit, where the permitting authority can thoroughly understand the pollutant potential of the discharge and tailor permit requirements to the more toxic nature of the discharge.

This is the first type of product-specific eligibility criterion EPA has proposed in the MSGP, but is akin to EPA's Construction General Permit (CGP) eligibility criterion related to the use of cationic treatment chemicals at construction sites. Public comments on the proposed 2012 CGP indicated that EPA should take extreme precaution when authorizing the use of cationic treatment chemicals, especially in light of data suggesting that they are acutely toxic to aquatic species. For the CGP, EPA concluded that the evidence of toxicity required additional safeguards that are generally included in the individual permit process. EPA applies the same logic to the proposed MSGP eligibility criterion related to the use of coal-tar sealcoat based on the above discussion.

Request for Comment 2: EPA requests comment on the following:

- Whether the permit should include an eligibility criterion related to the application of coal-tar sealcoat to paved areas where industrial activities are located.
- Any studies that provide data on the level of PAHs from coal-tar sealed pavements, the sources of measured PAHs in the aquatic environment, the levels of PAHs in fish and seafood, and associated chemical and biological impacts that may occur via stormwater discharges.
- Whether or to what extent requiring facilities to implement specific stormwater control measures under the MSGP to control and treat PAH-laden discharges from surfaces paved with coal-tar sealcoat is an appropriate alternative to the proposed eligibility criterion, and if so, what those control measures should be.

References:

- Agency for Toxic Substances and Disease Registry. 2011. Toxic Substances Portal - Polycyclic Aromatic Hydrocarbons (PAHs). <https://www.atsdr.cdc.gov/substances/toxsubstance.asp?toxid=25>
- Bommarito, T., Sparling, D.W., Halbrook, R.S. 2010. Toxicity of coal-tar and asphalt sealants in eastern newts, *Natophthalmus viridescens*. *Chemosphere* 81, 187-193.
- Bryer, P., Elliott, J.N., Willingham, E. 2006. The effects of coal tar based pavement sealer on amphibian development and metamorphosis. *Ecotoxicology* 15, 241-247.
- CDC. 2009. Polycyclic Aromatic Hydrocarbons (PAHs). http://www.epa.gov/sites/production/files/2014-03/documents/pahs_factsheet_cdc_2013.pdf.
- DeMott, R.P.; Gauthier, T.D.; Wiersema, J.M.; and Crenson, G. 2010. Polycyclic Aromatic Hydrocarbons (PAHs) in Austin Sediments After a Ban on Pavement Sealers. *Environmental Forensics*. DOI: 10.1080/15275922.2010.526520.
- Driscoll, S. K., Kulacki, K. and Marzooghi, S. 2019. A Review of the Literature on Potential Effects of Runoff from Refined Coal-Tar-Based Sealant Coating on Aquatic Organisms. *Integr Environ Assess Manag*. doi:10.1002/ieam.4210
- Ecology and King County. 2011. Control of Toxic Chemicals in Puget Sound: Assessment of Selected Toxic Chemicals in the Puget Sound Basin, 2007-2011. Ecology Publication No. 11-03-055. <https://fortress.wa.gov/ecy/publications/documents/1103055.pdf>
- EPA. 2014. EPA's Integrated Risk Information System (IRIS). <http://www.epa.gov/IRIS/>.
- EPA. 2009. Brownfields Profile Glossary. http://ofmpub.epa.gov/sor_internet/registry/termreg/searchandretrieve/glossariesandkeywordlists/search.do?details=&glossaryName=Brownfields%20Profile%20Glossary#.
- Kienzler, A., Mahler, Barbara J., Van Metre, P.C., Schweigert, N., Devaux, A., and Bony, S. 2015. Exposure to runoff from coal-tar-sealed pavement induces genotoxicity and impairment of DNA repair capacity in the RTL-W1 fish liver cell line. *Science of the Total Environment*. 520, 73-80. DOI: 10.1016/j.scitotenv.2015.03.005.
- Mahler, B.J.; Van Metre, P.C.; Bashara, T.J.; Wilson, J.T.; Johns, D.A. 2005. Parking lot sealcoat: An unrecognized source of urban PAHs. *Environ. Sci. Technol.* DOI:10.1021/ es0501565.
- Mahler, B.J.; Van Metre, P.C.; Crane, J.L.; Watts, A.W.; Scoggins, M.; Williams, E.S. 2012. Coal-tar-based pavement sealcoat and PAHs: Implications for the environment, human health, and stormwater management. *Environ. Sci. Technol.* DOI:10.1021/es203699x.
- National Cancer Institute. 2018. Coal Tar and Coal-Tar Pitch. <https://www.cancer.gov/about-cancer/causes-prevention/risk/substances/coal-tar>.
- Norris, G.A. and R.C. Henry. 2019. Unmix Optimum analysis of PAH sediment sources. *Sci. Total Environ.*, 673, pp. 831-838.
- NRC. 2019. Improving the EPA Multi-Sector General Permit for Industrial Stormwater Discharges. Washington, DC: The National Academies Press. <https://doi.org/10.17226/25355>, pp. 33.
- O'Reilly, K.T. and Edwards, M. 2019. Letter to the Editor: Comment on Norris and Henry (2019), *Science of The Total Environment*. 135248, ISSN 0048-9697, <https://doi.org/10.1016/j.scitotenv.2019.135248>.
- Rowe, A. and O'Connor, T. 2011. Assessment of Water Quality of Runoff from Sealed Asphalt Surfaces. Link]
- Scoggins, M.; McClintock, N.L.; Gosselink, L.; Bryer, P. 2007. Occurrence of polycyclic aromatic hydrocarbons below coal-tar-sealed parking lots and effects on stream benthic macroinvertebrate communities. *Journal of the North American Benthological Society*. DOI:10.1899/06-109.1.
- USGS. 2019. Coal-Tar-Based Pavement Sealant, PAHs, and Environmental Health. https://www.usgs.gov/mission-areas/water-resources/science/coal-tar-based-pavement-sealcoat-pahs-and-environmental-health?qt-science_center_objects=0#qt-science_center_objects.
- Van Metre, P.C.; Mahler, B.J.; Wilson, J.T. 2009. PAHs Underfoot: Contaminated Dust from Coal-Tar Sealcoated Pavement is Widespread in the United States. *Environ. Sci. Technol.* DOI:10.1021/ es802119h.
- Van Metre, P. and Mahler, B. 2010. Contribution of PAHs from coal-tar pavement sealant and other sources to 40 U.S. lakes. *Sci. Total Environ.*, 409, pp. 334-344.
- Van Metre, P. and Mahler, B. 2014. PAH concentrations in lake sediment decline following ban on coal-tar-based pavement sealants in Austin, Texas. *Environ. Sci Technol.*, 48, pp. 7222-7228.
- U.S. Department of Health and Human Services. 2014. 2014 Report on Carcinogens, 14th Edition. Accessed 11/20/19, <https://ntp.niehs.nih.gov/ntp/roc/content/profiles/coal tars.pdf>

Valle, S., Panero, M. A., and Shor, L. 2007. Pollution Prevention and Management Strategies for Polycyclic Aromatic Hydrocarbons in the New York/New Jersey Harbor.

Weinstein, John E., Kevin D. Crawford, Thomas R. Garner, and Alan J. Flemming. 2010. Screening-level ecological and human health risk assessment of polycyclic aromatic hydrocarbons in stormwater detention pond sediments of Coastal South Carolina, USA. *Journal of Hazardous Materials* 178. 906-916.

Zou, Y., Wang, L., Christensen, E.R. 2015. Problems in the fingerprints based polycyclic aromatic hydrocarbons source apportionment analysis and a practical solution, *Environmental Pollution*, Volume 205, Pages 394-402, ISSN 0269-7491, <https://doi.org/10.1016/j.envpol.2015.05.029>.

Request for Comment 3: EPA's Construction General Permit (CGP), which covers stormwater discharges from certain construction activities where EPA is the NPDES permitting authority, currently includes an eligibility criterion for operators who plan to add "cationic treatment chemicals" to stormwater and/or authorized non-stormwater prior to discharge. To be eligible for CGP coverage, those operators must notify the applicable EPA Regional Office in advance and the EPA Regional Office may authorize coverage after the CGP operator has included appropriate controls and implementation procedures designed to ensure that the use of cationic treatment chemicals will not lead to discharges that cause an exceedance of water quality standards. A goal of EPA's stormwater program is to better align the Agency's general permits where appropriate. Therefore, EPA requests comment on whether it is appropriate to add the corresponding CGP eligibility requirement or a similar eligibility requirement to the MSGP for operators who may elect to use cationic treatment chemicals to comply with the MSGP, specifically Part 2.1.2.5 Erosion and Sediment Controls.

"Cationic Treatment Chemical" are defined as 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 PAM.

Part 1.2 Types of Discharges Authorized Under the MSGP

Part 1.2.1 Authorized Stormwater Discharges

This Part specifies which stormwater discharges are eligible for coverage under the permit. As described in Part 1.1.3 of this Fact Sheet, not all stormwater discharges associated with industrial activity are eligible for coverage under the 2020 MSGP (e.g., stormwater discharges regulated by certain national effluent limitations guidelines). Dischargers must refer to this Part of the permit to determine whether a particular stormwater discharge from their site can be covered under the MSGP. For example, Part 1.2.1.3 specifies that discharges that are not otherwise required to obtain NPDES permit authorization, but are mixed with discharges that are authorized under the 2020 MSGP, are eligible for coverage under the 2020 MSGP.

Part 1.2.1 used to be Part 1.1.2 in the 2015 MSGP. EPA moved this part out of the "eligibility conditions" section and created a new section in the permit specifically for types of discharges authorized (and not authorized) under the permit, still referenced in the eligibility conditions section. EPA hopes this will streamline the eligibility conditions section of the permit.

Part 1.2.2 Authorized Non-Stormwater Discharges

This Part lists the non-stormwater discharges authorized under the permit, specifically those non-stormwater discharges authorized for all sectors, for Sector A for spray water, and for Sectors G, H, and J for earth-disturbing activities conducted prior to active mining activities. A proposed change from the 2015 MSGP is a requirement that non-stormwater discharges from routine external building washdown/power wash water must be treated with

appropriate control measures to minimize discharges of mobilized solids and other pollutants. This is similar to an existing requirement applicable to non-stormwater discharges of pavement wash waters. EPA encourages that other control measures be considered when doing such cleaning including using the least amount of water in pressure washing to reduce the quantity of discharge, and running the wash water through a filter to remove pollutants prior to discharge. Other options are to direct the wash water flow through a green infrastructure feature(s) (or some similar treatment), or to capture and infiltrate the flow so there is no discharge. EPA reminds operators using green infrastructure features that proper operation and maintenance of the features is vital. In any case, if there are doubts regarding the presence of contaminants in the wash water, even after treatment, operators should not discharge it to be safe.

Previous MSGP versions authorized any pavement and building washwater to be discharged as long as there were no detergents or toxic/hazardous spill material present in the discharge. But cleaning agents other than detergents could also be utilized and could clearly have the potential to cause water quality issues if discharged. Therefore, EPA is proposing to retain the 2015 MSGP provision that in addition to detergents, hazardous cleaning products are specifically prohibited from being discharged under the permit. EPA is also proposing to retain the 2015 MSGP provision that prohibits the discharge of wash waters that have come into contact with oil and grease deposits, sources of pollutants associated with industrial activities, or any other toxic or hazardous materials, unless the residues have been cleaned up using dry clean-up methods. Additionally, because the act of washing (especially power washing) mobilizes particulates and other substances present on pavement, specific effluent limits have been newly included to ensure such mobilized particulates are controlled before they are discharged.

Part 1.3 Getting Authorization to Discharge

This Part specifies proposed conditions that the operator must meet in order to obtain authorization under the 2020 MSGP.

Part 1.3.1 Prepare Your SWPPP Prior to Submitting Your Notice of Intent (NOI)

This Part requires that the operator develop or update the SWPPP prior to submitting the Notice of Intent (NOI) for permit coverage. If the facility chooses to post the SWPPP on the Internet per Part 6.4.1, the URL must be included on the NOI form and this URL must directly link to the SWPPP (not just the corporate or facility homepage). If the SWPPP is not posted online, the facility must enter additional facility information from the SWPPP on the NOI, per Part 6.4.2.

Part 1.3.2 How to Submit Your Notice of Intent (NOI) to Get Permit Coverage

This Part specifies that to be covered (i.e., authorized to discharge) under the MSGP, the operator must use EPA's NPDES eReporting Tool for the MSGP (NeT-MSGP) to electronically prepare and submit to EPA a complete and accurate NOI by the deadlines listed in Table 1-2. Table 1-2 also provides the discharge authorization date for each category of facility.

Part 1.3.3 Deadlines for Submitting Your NOI and Your Official Date of Permit Coverage

This Part and Table 1-2 provide the deadlines for submitting NOIs for permit coverage and the minimum timeframes following NOI submission for discharge authorization for the different discharge categories. All NOI submittals are subject to a 30-day review period. EPA may use the waiting period to determine whether any additional measures are necessary to meet applicable water quality standards, to be consistent with an applicable WLA, or to comply with state or tribal antidegradation requirements. Additionally, during this waiting period, the Fish and Wildlife Service or the National Marine Fisheries Service, or the SHPO or

THPO or other tribal representative, may request EPA place a hold on an NOI authorization based on concerns about listed species and/or historic properties. Depending on the nature of the issue, EPA may require appropriate action either prior to or following discharge authorization. EPA may decide a delay in authorization is warranted, or that the discharge is not eligible for authorization under the 2020 MSGP, in which case an individual NPDES permit would be required.

For the 2020 MSGP, EPA proposes to establish a discharge authorization waiting period of 60 calendar days after NOI submission for any operators whose discharges were not previously covered under the 2015 MSGP and who have a pending enforcement action related to stormwater by EPA, a state, or a citizen (to include both notices of violation (NOVs) by EPA or a state and notices of intent to bring a citizen suit). Beyond the standard 30-day wait period for all NOIs, EPA would hold an NOI submitted by a facility not previously covered under the 2015 MSGP with a pending enforcement action related to stormwater for an additional 30 calendar days. EPA is proposing this new requirement because the Agency is aware of some instances where a facility with a pending enforcement action will quickly submit an NOI without adequately developing their SWPPP or stormwater control measures (SCMs) in order to avoid further enforcement action. This additional review time would allow EPA to (a) review the facility's SCMs detailed in the NOI and SWPPP to make sure they are appropriate for the facility which may already have stormwater pollution issues, (b) identify any additional SCMs that EPA deems necessary to control site discharges in order to ensure that discharges meet technology-based and water quality-based effluent limitations, and/or (c) conduct further inquiry regarding the site's eligibility for permit coverage. EPA may decide that the discharge is not eligible for authorization under the 2020 MSGP, in which case an individual NPDES permit would be required.

Request for comment 4: EPA requests comment on whether the permit should establish a discharge authorization wait period of 60 calendar days (30 calendar days standard for all new NOIs plus 30 additional days) after NOI submission for any operators whose discharges were not previously covered under the 2015 MSGP and who have a pending enforcement action related to stormwater by EPA, a state, or a citizen (to include both notices of violation (NOVs) by EPA or a state and notices of intent to bring a citizen suit).

Part 1.3.4 Modifying your NOI

This Part specifies that after submitting an NOI, if an operator needs to correct or update any fields, it may do so by submitting a "Change NOI" form using NeT-MSGP. Per Part 7.1, the operator must submit your Change NOI electronically via NeT-MSGP, unless the EPA Regional Office grants a waiver from electronic reporting, in which case the operator may use the paper Change NOI form in Appendix G-2. When there is a change to the facility's operator, the new operator must submit a new NOI, and the previous operator must submit a Notice of Termination (NOT) form as specified in Part 1.4.

In response to operator requests, EPA is also proposing clarification of the timelines for updating the NOI when site conditions or operators change.

Request for Comment 5: Currently EPA accepts changes or edits to the NOI on the actual NOI paper form (Appendix G), if the facility is granted a waiver from electronic reporting. EPA is aware that the actual NOI paper form is not currently formatted for the facility to indicate all of the types of changes it might need to make on the form and does not allow for sufficient space to include the rationale/documentation for requesting the changes, if such changes need Regional approval. EPA requests comment on whether a separate paper Change NOI form (proposed Appendix G-2) would be useful for facilities for submitting modifications to a paper NOI form.

Part 1.3.5 Your Office End Date of Permit Coverage

This Part describes how long permit coverage lasts. This part also covers the content described below under “Continuation of Coverage for Existing Permittees After the Permit Expires.” This clarification was previously stated in Part 1.2.2 of the 2015 MSGP and is being proposed to remain in the fact sheet only for the proposed 2020 MSGP. The clarification describes for facilities the continuation of coverage for existing facilities if the permit expires. Where EPA fails to issue a final general permit prior to the expiration of a previous general permit, EPA has the authority to administratively extend the permit for permittees authorized to discharge under the prior general permit. However, EPA does not have the authority to provide coverage to construction projects not already authorized to discharge under that prior general permit. Once the five-year expiration date for this permit has passed, any such projects would need to obtain coverage under an individual permit, or other general permit that is still in effect.

Continuation of Coverage for Existing Permittees After the Permit Expires

Note that if the 2020 MSGP is not reissued or replaced prior to the expiration date, it will be administratively continued in accordance with section 558(c) of the Administrative Procedure Act (see 40 CFR 122.6) and remain in force and effect for discharges that were covered prior to its expiration. All facilities authorized to discharge prior to the expiration date of the 2020 MSGP will automatically remain covered under the 2020 MSGP until the earliest of:

1. The date the facility is authorized for coverage under a new version of the MSGP following the timely submittal of a complete and accurate NOI. Note that if a timely NOI for coverage under the reissued or replacement permit is not submitted, coverage will terminate on the date that the NOI was due; or
2. The date of the submittal of a Notice of Termination; or
3. Issuance of an individual permit for the facility's discharges; or
4. A final permit decision by EPA not to reissue the MSGP, at which time EPA will identify a reasonable time period for covered dischargers to seek coverage under an alternative general permit or an individual permit. Coverage under the 2020 MSGP will terminate at the end of this time period.

EPA reserves the right to modify or revoke and reissue the 2020 MSGP under 40 CFR 122.62 and 63, in which case permittees will be notified of any relevant changes or procedures to which they may be subject. Where EPA fails to issue another general permit prior to the expiration of a previous one, EPA does not have the authority to provide coverage to industrial operators not already covered under that prior general permit. Once the five-year expiration date for the 2020 MSGP has passed, new operators seeking discharge authorization should contact EPA regarding the options available, such as applying for individual permit coverage.

Part 1.3.6 Requirement to Post a Sign of your Permit Coverage

This Part requires industrial site operators to provide a sign or other notice of permit coverage at a safe, publicly accessible location in close proximity to the facility, as is required of other NPDES permittees. By providing notice of permit coverage and other information about the facility, interested parties are better informed on how to obtain the SWPPP and how to identify the site if reporting potential permit violations.

EPA is proposing requiring that the sign of permit coverage include a statement about how to obtain a copy of the SWPPP either from a URL or from the EPA Regional Office. This

addition will make the protocol for requesting a SWPPP easily understandable by the public. Part 5.4 in the 2015 MSGP already requires MSGP facilities to make their SWPPPs publicly available through a URL or by providing additional information in the NOI.

To improve transparency of the process to report possible violations, EPA also proposes that the sign of permit coverage must include information on how the public can contact EPA if stormwater pollution is observed in the discharge.

Request for Comment 6: EPA requests comment on whether the 2020 MSGP should include a requirement that MSGP operators must post a sign of permit coverage at a safe, publicly accessible location in close proximity to the facility, as is required of other NPDES permittees. EPA requests comment on whether this notice should also include information that informs the public on how to contact EPA if stormwater pollution is observed in the discharge. EPA also requests comment on what other information could be included on any sign or other notice.

Part 1.3.7 Coverage Under Alternative Permits

This Part describes the procedures for obtaining an alternative permit. The following are scenarios in which an alternative permit may be required: 1) a new or previously permitted facility is denied coverage under the MSGP; 2) an existing facility covered under the 2020 MSGP loses their authorization under the MSGP; or 3) an operator requests to be covered under an alternative permit.

Following submittal of a complete and accurate NOI, EPA may notify an operator in writing that it is not covered under the 2020 MSGP, and that it must apply for and/or obtain coverage under either an individual NPDES permit or an alternate general NPDES permit. This notification will include a brief statement of the reasons for this decision and will provide application information or NOI requirements.

If an operator is currently covered under a previously issued MSGP or the 2020 MSGP, the notice will set a deadline to file the permit application or NOI for an individual permit or alternative general permit, and will include a statement that on the effective date of the individual NPDES permit or the date of coverage under an alternative general NPDES permit, coverage under this general permit will terminate. EPA may grant additional time to submit the application or NOI if the operator requests it. If an operator fails to submit an individual NPDES permit application or NOI as required by EPA, the applicability of the MSGP is terminated at the end of the day specified by EPA as the deadline for application or NOI submittal. EPA may take appropriate enforcement action for any unpermitted discharges. If the operator submits a timely permit application or NOI, coverage under the MSGP is terminated on the effective date of the coverage under the alternative permit.

After obtaining coverage under the MSGP, the operator may request to be excluded from such coverage by applying for an individual permit. In this case, the operator must submit an individual permit application per 40 CFR 122.28(b)(3)(iii), along with a statement of reasons supporting the request, to the applicable EPA Regional Office listed in Part 7.9. The request for an individual permit may be granted (or an alternative general permit may be proffered) if the reasons are adequate to support the request. When an individual permit is issued or coverage under an alternative general permit is granted, MSGP coverage is automatically terminated on the effective date of the alternative permit, per 40 CFR 122.28(b)(3)(iv).

Part 1.4 Terminating Coverage

Part 1.4.1 How to Submit your Notice of Termination (NOT) to Terminate Permit Coverage

This Part describes how to submit a Notice of Termination (NOT) to terminate permit coverage. Termination of MSGP coverage indicates that the operator no longer has an obligation to manage industrial stormwater per the MSGP's provisions, based on at least one of the reasons described in Part 1.4.2. To terminate MSGP coverage, the operator must use EPA's NPDES eReporting Tool for the MSGP (NeT-MSGP) to electronically prepare and submit a complete and accurate NOT, unless the EPA Regional Office grants the operator a waiver from electronic reporting, in which case it may use the paper NOT form in Appendix H; the operator's authorization to discharge terminates at midnight of the day that the complete NOT is processed. If EPA determines that the NOT is incomplete or that the operator has not satisfied one of the termination conditions in Part 1.4.2, then the notice is not valid and the operator must continue to comply with the conditions of the permit.

Part 1.4.2 When to Submit Your NOT

If an operator desires to terminate MSGP coverage, it must submit a Notice of Termination, as described in Part 1.4.2, within 30 days after one or more of the following conditions have been met: (1) a new owner or operator has assumed responsibility for the facility; (2) operations have ceased at the facility (including facility closure) and there no longer are discharges of stormwater associated with industrial activity and necessary sediment and erosion controls have already been implemented at the facility as required by Part 2.1.2.5; (3) operators are covered under one of the three mining-related sectors in the permit (i.e., Sectors G, H, and J) and they have met the specific termination requirements described in the specific sector under which they are covered; or (4) permit coverage has been obtained under an individual or alternative general permit for all discharges requiring NPDES permit coverage.

Part 1.5 Conditional Exclusion for No Exposure

This Part states that by submitting a No Exposure Certification (NEC), an operator is no longer required to comply with the MSGP (including the Notice of Termination requirements), providing the operator maintains a condition of "no exposure" (i.e., all industrial materials and operations are not exposed to stormwater). An operator must use EPA's NPDES eReporting Tool for the MSGP (NeT-MSGP) to electronically prepare and submit to EPA a complete and accurate NEC once every five years per Part 7.2, unless the EPA Regional Office grants you a waiver from electronic reporting, in which case you may use the paper NEC form in Appendix K.

Request for comment 7: EPA requests comment on changing the acronym for the No Exposure Certification from "NOE" (as used in the 2015 MSGP) to "NEC" to more accurately represent what the acronym stands for.

Part 1.6 Permit Compliance

This Part explains that any failure to comply with the conditions of the 2020 MSGP constitutes a violation of the CWA (further discussed in Appendix B). Where requirements and schedules for taking corrective actions are specified, 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 MSGP and the CWA, and subsequent failure to remedy such deficiencies within the specified time periods constitutes an independent, additional violation of the 2020 MSGP and CWA. However, where AIM 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 operator takes the required responses within the deadlines in Part 5. Also applicable to all operators is the “duty to comply”, a standard NPDES permit condition listed in Appendix B.

Part 1.7 Severability

Severability is a standard permit condition applicable to every NPDES permit. The term means that if any portion of the 2020 MSGP is deemed to be invalid, it does not necessarily render the whole permit invalid and it is EPA's intent for the MSGP to remain in effect to the extent possible, pursuant to 40 CFR 124.16(a)(2) and 124.60. In the event that any part of the 2020 MSGP is invalidated, EPA will advise the regulated community as to the effect of such invalidation. EPA typically puts all standard permit conditions in an Appendix (Appendix B in 2020 MSGP), but the Agency put the severability requirement in Part 1 to make sure operators do not overlook this provision.

Part 2 Control Measures and Effluent Limits

The 2020 MSGP contains effluent limits that correspond to required levels of technology-based control for various discharges under the CWA (Best Practicable Control Technology Currently Available (BPT) as defined in CWA section 304(b)(1) and Appendix A; Best Available Technology Economically Achievable (BAT), as defined in CWA section 304(b)(2) and Appendix A; and Best Conventional Pollutant Control Technology (BCT), as defined in CWA section 304(b)(4) and Appendix A). Where an ELG or NSPS applies to discharges authorized by this permit, the requirement must be incorporated into the permit as an effluent limitation. These limits are included, as applicable, in the sector-specific requirements of Part 8. Where EPA has not yet issued an effluent limitation guideline, EPA determines the appropriate technology-based level of control based on best professional judgment (BPJ, sometimes also referred to as “best engineering judgment”) of the permit writer. CWA section 402(a)(1); 40 CFR 125.3. For the 2020 MSGP, most of the technology-based limits are based on BPJ decision-making because no ELG applies.

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. This is in contrast to process wastewater 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. EPA includes non-numeric effluent limits in NPDES permits,³ such as the MSGP, such as requirements mandating facilities to “minimize” various types of pollutant discharges, or to implement control measures unless “infeasible.” Consistent with the control level requirements of the CWA, EPA has defined the term “minimize” as “for the purposes of this permit minimize means to reduce and/or eliminate to the extent achievable using control measures that are technologically available and economically practicable and achievable in light of best industry practices.” Similarly, “feasible” means “technologically possible and economically practicable and achievable in light of best industry practices. EPA notes that it does not intend for any permit requirement to conflict with state water rights law.” EPA has determined that the technology-based numeric and non-numeric effluent limits in the

³ 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.

2020 MSGP, 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.

The BAT/BPT/BCT effluent limits in the 2020 MSGP are expressed as specific pollution prevention requirements for minimizing the pollutant levels in the discharge. Some effluent limits have greater specificity because in past MSGPs they were written in very general terms, leaving operators wide latitude in interpreting what constituted compliance, which led to widely varying levels of stormwater program effectiveness. EPA continues to assert that the combination of pollution prevention and structural management practices required by these limits are the best technologically available and economically practicable and achievable controls, as well as the most environmentally sound way to control the discharge of pollutants in stormwater runoff from industrial facilities. This approach is supported by the results of a comprehensive technical survey EPA completed in 1979. Pollution prevention continues to be the cornerstone of the NPDES stormwater program.

Requirements are technologically available

EPA asserts that the requirements of the 2020 MSGP represent BPT, BCT and BAT. Most of the effluent limits in the 2020 MSGP have been permit requirements since EPA first issued the MSGP in 1995 (with minor modifications). Additionally, because most facilities covered under the permit are existing dischargers, these facilities are already implementing control measures to meet the effluent limits in the permit.

Requirements meet the BPT and BAT economic tests set forth in the CWA

There are different economic considerations under BPT, BCT, and BAT. EPA finds that the limits in the 2020 MSGP meet the BPT and BAT economic tests. Essentially, the same types of controls are employed to minimize toxic, nonconventional and conventional pollutants. As a result, EPA is evaluating effluent limits using only the BPT and BAT standards. Since conventional pollutants will also be adequately controlled by these same effluent limits for which EPA applied the BPT and BAT tests, EPA has determined that it is not necessary to conduct separate BCT economic tests.

Under BPT, EPA determined that the requirements of the 2020 MSGP are economically practicable. EPA considered the reasonableness of the relationship between the costs of application of technology in relation to the effluent reduction benefit derived. CWA section 304(b)(1)(B); 40 CFR 125.3(d)(1). EPA estimates the total universe of dischargers that the 2020 MSGP will affect includes approximately 2,400 existing dischargers. Based on estimates provided in prior permits, updated to reflect changes to the permit and current dollars, EPA estimates the approximate incremental cost of complying with the 2020 MSGP is around \$5.6 million for 2,400 facilities over the 5-year permit term or \$2,363 per facility over the 5-year permit term. It is well documented that stormwater control measures (SCMs), like the ones required to comply with the 2020 MSGP, are effective at controlling pollutants in stormwater discharges. For example, the 2009 National Academies of Sciences' report, *Urban Stormwater Management in the United States*, noted that "SCMs, when designed, constructed, and maintained correctly, have demonstrated the ability to reduce runoff volume and peak flows and to remove pollutants. A multitude of case studies illustrates the use of SCMs in specific settings and demonstrates that a particular SCM can have a measurable positive effect on water quality or a biological metric" (9).

\$5.6 million total incremental cost accounts for the cost of some proposed requirements that do not apply to all facilities; different facilities will have different compliance costs therefore an average cost per facility is not necessarily reflective of total cost. The total incremental cost was averaged over 2,400 facilities to obtain a per facility cost of \$2,363

over the five-year permit term. This cost is comparable to the previous 2015 MSGP estimate of \$2,750 per facility. Although \$5.6 million total incremental cost does not account for some proposed requirements that require site-specific controls and can only be calculated per unit cost, EPA expects many facilities will have already implemented controls under the previous permit to comply with some new requirements and that some controls can satisfy multiple requirements. Therefore, it is possible total costs may be lower, depending on which controls the operator has at their facility.

Based on the cost analysis, EPA determined that the requirements of the 2020 MSGP are economically achievable. In determining "economic achievability" under BAT, EPA considered whether the costs of the controls can reasonably be borne by the industry. Because most facilities covered under the permit are existing dischargers and those facilities are already implementing control measures to meet the effluent limits in the permit, and considering the relatively modest incremental (over the 2015 permit) cost of compliance with the 2020 MSGP (around \$475 per year per facility), EPA concludes that the technology-based effluent limitations in the MSGP are unlikely to result in a substantial economic impact to the permitted universe, including small businesses. Hence, EPA interprets this analysis to indicate that BAT limits are economically achievable. The economic analysis for the proposed 2020 MSGP is available on the docket for the 2020 MSGP (EPA-HQ-OW-2019-0372).

Control Measures Used to Meet the Technology-Based Effluent Limits

Stormwater control measures can be actions (including processes, procedures, schedules of activities, prohibitions on practices and other management practices), or structural or installed devices to minimize or prevent water pollution. There are many options that accomplish the objective of preventing pollutants from entering waters of the U.S., and of meeting applicable limits. Industrial facility operators are required to select, design, install and implement site-specific control measures to meet these limits.

EPA generally does not mandate the specific stormwater control measures that operators must select, design, install and implement to meet the technology-based effluent limits in the permit. The permit provides operators the flexibility to determine their site-specific controls, taking into consideration what controls are most suited for their industry in terms of economic practicability and technology availability, and in some cases, considerations such as available space and safety. For example, Part 2.1.2.1 requires operators to minimize the exposure of raw, final and waste materials to stormwater. For some facilities, some or all activities and material storage may be moved indoors, while for others this will not be feasible. However, even when moving all activities/materials indoors is infeasible, some of them could be shielded by roofing or tarps, while still other activities may be limited to times when exposure to precipitation is not likely. Each of these stormwater control measures is acceptable and appropriate depending on the circumstances. In this respect the non-numeric effluent limits in the 2020 MSGP are analogous to more traditional numeric effluent limits, which also do not require specific control technologies to meet the limits.

For many facilities, controls already in place for product loss prevention, accident and fire prevention, worker health and safety or to comply with other environmental regulations may be sufficient to meet the stormwater effluent limits in the MSGP. For many facilities, the effluent limits can be achieved without using highly engineered or complex treatment systems. The specific limits in Part 2.1 of the MSGP emphasize "low-tech" controls, such as minimizing exposure to stormwater, regular cleaning of outdoor areas where industrial activities may take place, proper maintenance, etc. However, sometimes treatment devices or constructed/installed controls may be necessary, particularly where a facility might otherwise not meet water quality standards.

The permit and Fact Sheet provide examples of stormwater control measures, but operators are expected to tailor these to their facilities as well as improve upon them as necessary to meet permit limits.

Part 2.1 Control Measures

Part 2.1 requires operators to select, design, install, and implement control measures, in accordance with good engineering practices and manufacturer's specifications, to meet the technology-based effluent limits listed in Parts 2.1.2 and 2.1.3 and the water quality-based effluent limitations in Part 2.2. Note that compliance with the Part 2 effluent limits involving control measures does not compel operators to undertake any activities that are considered unsafe. Operators must be aware that regulated stormwater discharges include stormwater run-on from outside sources that commingles with their own stormwater discharges associated with industrial activity, and they must account for the commingled discharges accordingly when selecting control measures. If operators find their stormwater control measures are not reducing pollutant discharges adequately, the control measures must be modified in accordance with the Part 5 corrective action requirements.

Some of the control measures required in this Part are straightforward and as a result, the associated Part 6 SWPPP documentation requirements may be minimal. This means that it is acceptable to copy and paste the language of the effluent limit from the permit in the SWPPP without any additional detail or selection of a control measure. EPA maintains in the 2020 MSGP the following documentation provision that was included in the 2015 MSGP to provide for such convenience and burden reduction for operators: "Effluent limit requirements in Part 2.1.2 that do not involve the site-specific selection of a control measure or are specific activity requirements (e.g., 'Cleaning catch basins when the depth of debris reaches two-thirds (2/3) of the sump depth and keeping the debris surface at least six inches below the outlet pipe') are marked with an asterisk (*). When documenting in your SWPPP, per Part 6, how you will comply with the requirements marked with an asterisk, you have the option of including additional information or you may just "cut-and-paste" those effluent limits verbatim into your SWPPP without providing additional documentation (see Part 6.2.4)." The relative lack of leeway or choices that operators have for compliance justifies the option of allowing operators to just reproduce verbatim the requirement as written in the MSGP into their SWPPPs. While minimal documentation may be sufficient and reduces some burden, operators may wish to add more information about where, when, and to which things at the site the effluent limit/control measure will be applied, if they deem this information useful.

The permit's approach to control measures is consistent with the CWA and 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 best management practices (BMPs), i.e., 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).

Part 2.1.1 Control Measure Selection and Design Considerations

In Part 2.1.1 operators are required to consider certain factors when selecting and designing 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 the permit;
- Minimizing impervious areas at the facility and infiltrating runoff onsite (via bioretention cells, green roofs, pervious pavement, etc.) can reduce runoff, and improve ground water recharge and stream base flows in local streams (although care must be taken to avoid ground water contamination);
- Attenuating flow using open vegetated swales and natural depressions can reduce in-stream impacts of erosive flows;
- Conserving and/or 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.
- Implementing structural improvements, enhanced pollution prevention measures, and other mitigation measures, such as the following:
 - Reinforce materials storage structures to withstand flooding and additional exertion of force;
 - Prevent floating of semi-stationary structures by elevating to the Based Flood Elevation (BFE)⁴ level or securing with non-corrosive device;
 - When a delivery of materials is expected, and a storm is anticipated within 48 hours, delay delivery until after the storm or store materials as appropriate (refer to emergency procedures);
 - Temporarily store materials and waste above the BFE level;
 - Temporarily reduce or eliminate outdoor storage;
 - Temporarily relocate any mobile vehicles and equipment to upland areas;
 - Develop scenario-based emergency procedures for major storms that are complementary to regular stormwater pollution prevention planning and identify emergency contacts for staff and contractors; and
 - Conduct staff training for implementing your emergency procedures at regular intervals.

For the 2020 MSGP, EPA proposes that operators would be required to consider implementing enhanced measures, such as structural improvements, additional pollution prevention measures, and other mitigation measures that are complementary to regular stormwater pollution prevention planning. EPA proposes adding this requirement to encourage industrial site operators to consider the risks to their industrial activities and the potential impact of pollutant discharges caused by stormwater discharges from major storm events that cause extreme flooding conditions. Where facilities already have emergency and risk management plans, operators should consider how they might bolster existing procedures to account for the

⁴ Base Flood Elevation (BFE) is the computed elevation to which floodwater is anticipated to rise during the base flood. BFEs are shown on FEMA Flood Maps and on the flood profiles.

impacts on their stormwater controls measures (for instance, controls being filled with sediment or clogged by debris) and potential pollutant discharges during extreme wet weather.

Request for Comment 8: EPA requests comment on whether it is appropriate for the permit to include language similar to the proposed language above that facilities should consider implementing enhanced controls to minimize impacts from stormwater discharges from major storms that cause extreme flooding conditions. EPA requests information on structural improvements, enhanced pollution prevention measures, and other mitigation measures that the permit could require facilities to consider. EPA also requests comment on how the permit might identify facilities that are at the highest risk for stormwater impacts from major storms that cause extreme flooding conditions.

One approach could be to use the Federal Emergency Management Agency's (FEMA) Flood Map Service Center (found at <https://msc.fema.gov/portal/search>) to determine if the facility is in a "Special Flood Hazard Area" or Other Area of Flood Hazard. SFHAs are defined as the area that will be inundated by the flood event having a 1-percent chance of being equaled or exceeded in any given year. The 1-percent annual chance flood is also referred to as the base flood or 100-year flood. SFHAs are labeled as Zone A, Zone AO, Zone AH, Zones A1-A30, Zone AE, Zone A99, Zone AR, Zone AR/AE, Zone AR/AO, Zone AR/A1-A30, Zone AR/A, Zone V, Zone VE, and Zones V1-V30. "Other flood hazard areas" (or moderate flood hazard areas) are labeled Zone B or Zone X (shaded) are also shown on the Flood Map and are the areas between the limits of the base flood and the 0.2-percent-annual-chance (or 500-year) flood. The areas of minimal flood hazard, which are the areas outside the SFHA and higher than the elevation of the 0.2-percent-annual-chance flood, are labeled Zone C or Zone X (unshaded). More information on FEMA flood zones can be found at <https://www.fema.gov/flood-zones>

Part 2.1.2 Non-Numeric Technology-Based Effluent Limits (BPT/BAT/BCT)

The 2020 MSGP requires operators to implement stormwater control measures (SCMs) to comply with non-numeric technology-based effluent limits, expressed narratively pursuant to 40 CFR 122.44(k). The achievement of these non-numeric limits will result in the reduction or elimination of pollutants from stormwater discharges. Such limits were developed using EPA's best professional judgment (BPJ). The requirements in Part 2 are the effluent limits applicable to all discharges associated with industrial activity for all sectors, while additional sector-specific effluent limits are found in Part 8.

Throughout Part 2.1 (and Part 8), the term "minimize" means "reduce and/or eliminate to the extent achievable using control measures (including best management practices) that are technologically available and economically practicable and achievable in light of best industry practice." The term "infeasible" means not technologically available or not economically practicable and achievable in light of best industry practices. EPA notes that it does not intend for any permit requirement to conflict with state water rights law. The following is a summary of the permit's non-numeric technology-based effluent limits:

Part 2.1.2.1 Minimize Exposure

This Part requires operators to limit the exposure of manufacturing, processing, and material storage areas to stormwater in order to minimize (per the definition of "minimize" in Appendix A) pollutant discharges by either locating industrial materials and activities inside or protecting them with storm-resistant coverings. Limiting contact with precipitation 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 a simple practice such as keeping a dumpster lid closed can be very effective. In minimizing exposure, operators must also:

- Use grading, berming, or curbing to prevent runoff of contaminated flows and divert run-on away from these areas;
- Locate materials, equipment, and activities so that potential leaks and spills are contained or able to be contained or diverted before discharging;
- Clean up spills and leaks promptly using dry methods (e.g., absorbents) to prevent the discharge of pollutants;
- Store leaky vehicles and equipment indoors or, if stored outdoors, use drip pans and absorbents;
- Use spill/overflow protection equipment;
- Perform all vehicle and/or equipment cleaning operations indoors, under cover, or in bermed areas that prevent runoff and run-on and also that capture any overspray; and
- Drain fluids from equipment and vehicles that will be decommissioned, and, for any equipment and vehicles that will remain unused for extended periods of time, inspect at least monthly for leaks.*

Part 2.1.2.2 Good Housekeeping

This Part requires that the operator keep all exposed areas that are potential pollutant sources clean to help a facility meet water quality standards. 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 minimizing pollution in stormwater from industrial sites simply involves commonsense improvements to a facility's basic housekeeping methods. A clean and orderly work area can reduce the possibility of accidental spills caused by mishandling of chemicals and equipment and well-maintained material and chemical storage areas can reduce the possibility of stormwater mixing with pollutants.

There are some simple procedures operators can implement 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 these practices. At a minimum, to comply with this effluent limit operators must:

- Sweep or vacuum at regular intervals, or alternatively, wash down the area and collect and/or treat, and properly dispose of the washdown water;
- Store materials in appropriate containers;
- All dumpsters with a lid must remain closed when not in use. For dumpsters and roll off boxes that do not have lids and could leak, ensure that discharges have a control (e.g., secondary containment, treatment). In no cases can there be dry weather discharges from dumpsters or roll off boxes;*
- Minimize the potential for waste, garbage, and floatable debris to be discharged by keeping exposed areas free of such materials or by intercepting them before they are discharged.
- This part also includes a plastic materials requirement for facilities that handle pre-production plastic ("nurdles") to implement BMPs to eliminate such plastic discharges in stormwater. EPA includes this language to identify and increase awareness of the potential for this type of pollution to occur. Examples of plastic material required to be addressed as stormwater pollutants include plastic resin pellets, powders, flakes,

additives, regrind, scrap, waste and recycling.

EPA also recommends that operators store containers that are potential sources of stormwater pollution away from direct traffic routes, stack them according to manufacturer's specifications, and store them on pallets or other similar devices to prevent corrosion.

Part 2.1.2.3 Maintenance

This Part describes how operators must maintain all stormwater control measures so they remain effective. Operators must comply with the following maintenance activity requirements:

- Performing inspections and preventive maintenance of stormwater drainage, source controls, treatment systems, and plant equipment and systems that could fail and result in contamination of stormwater;
- Diligently maintaining nonstructural control measures (e.g., keep spill response supplies available, personnel appropriately trained);
- Inspecting and maintaining baghouses at least quarterly to prevent the escape of dust from the system and immediately removing accumulated dust at the base of the exterior bag house;*
- Cleaning catch basins when the depth of debris reaches two-thirds (2/3) of the sump depth and keeping the debris surface at least 6 inches below the outlet pipe;*

If the operator finds that its control measures need maintenance, it must conduct necessary maintenance immediately. If control measures need to be repaired or replaced, the operator must immediately take all reasonable steps to minimize or prevent the discharge of pollutants until it can implement the final repair or replacement, including cleaning up any contaminated surfaces so that the material will not be discharged during subsequent storm events. Final repairs/replacement of stormwater controls should be completed as soon as feasible but must be no later than the timeframe established in Part 5.1.2 for corrective actions, i.e., within 14 days or, if that is infeasible, no longer than 45 days (or longer per notification of the Region). If a control measure was never installed, was installed incorrectly, or not in accordance with Parts 2 and/or 8, or is not being properly operated or maintained, the operator must conduct corrective action as specified in Part 5.1.

The 2020 MSGP now specifies that "immediately" means that the day the operator finds a condition requiring corrective action, you must take all reasonable steps to minimize or prevent the discharge of pollutants until you can implement a permanent solution. However, if the operator identifies a problem too late in the work day to initiate corrective action, the operator must perform the corrective action the following work day morning. "All reasonable steps" means that the operator responds to the conditions triggering the corrective action, such as cleaning up any exposed materials that may be discharged in a storm event (e.g., through sweeping, vacuuming) or making arrangements (i.e., scheduling) for a new SCM to be installed. EPA also proposes that "all reasonable steps" does not mean taking action when it is unsafe to do so (e.g., due to inclement weather).

This Part includes language on baghouses to highlight the need for their inspection and maintenance, because baghouses can be very significant sources of pollutants. EPA encourages operators to inspect and maintain baghouses more frequently than quarterly and encourages the use of baghouse leak detectors so that problems are detected as soon as possible. This Part also includes industry-standard catch basin cleaning requirements to prevent this maintenance action from being overlooked. Where possible,

EPA encourages operators to clean catch basins prior to the debris depth reaching 2/3 in order to avoid a BMP failure.

Part 2.1.2.4 Spill Prevention and Response Procedures

This Part requires that operators minimize the potential for stormwater exposure from leaks, spills and other releases, which are major sources of stormwater pollution. As a reminder, the term "minimize" is defined, for the purposes of this permit, as "to reduce and/or eliminate to the extent achievable using control measures that are technologically available and economically practicable and achievable in light of best industry practices." In addition to preventing spills and leaks, this effluent limit has requirements for after a spill/release occurs, to limit environmental damage. EPA encourages operators to identify potential spill areas and keep an inventory of materials handled, used, and disposed. This information would be valuable for complying with the requirement to specify the material handling procedures, storage requirements, containment or diversion equipment, and spill cleanup procedures that will minimize the potential for spills/releases and, in the event of a spill/release, ensure a proper and timely response. To comply with this effluent limit, operators must:

- Plainly label containers (e.g., "Used Oil," "Spent Solvents," "Fertilizers and Pesticides") that could be susceptible to spillage or leakage to encourage proper handling and facilitate rapid response if spills or leaks occur;*
- Implement procedures for material storage and handling, including the use of secondary containment and barriers between material storage and traffic areas, or a similarly effective means designed to prevent the discharge of pollutants from these areas (e.g., curbing, spill diversion pond; double-walled tank; drip pan);
- Develop training on the procedures for expeditiously stopping, containing, and cleaning up leaks, spills, and other releases. When needed, execute such procedures as soon as possible;
- Keep spill kits on-site, located near areas where spills may occur or where a rapid response can be made; and
- Notify appropriate facility personnel when a leak, spill, or other release occurs.

Part 2.1.2.4 also specifies that when a leak, spill or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR 110, 40 CFR 117, or 40 CFR 302, occurs during a 24-hour period, the operator must notify the National Response Center (NRC) at (800) 424-8802 or, in the Washington, DC, metropolitan area, call (202) 267-2675 as soon as there is knowledge of the discharge. State or local requirements may necessitate reporting spills or discharges to local emergency response, public health, or drinking water supply agencies. Contact information must be in locations that are readily accessible and available.

In addition to implementing spill prevention and response measures to minimize stormwater contamination, EPA encourages operators to implement controls that will minimize the potential for leaked or spilled material from storage tanks to be discharged into receiving waterbodies. Such discharges can and have caused water quality impairments and serious drinking water problems downstream from the tank release. One notable incident of drinking water contamination caused by direct discharges of spilled material at an industrial stormwater-permitted facility occurred January 9, 2014 at the Freedom Industries facility near Charleston, West Virginia. The spill was caused by a steel storage tank leak, which resulted in direct discharges of crude 4-methylcyclohexane methanol (MCHM) into the Elk River, leaving 300,000 residents, as well as businesses, hospitals, and schools without drinking water. To prevent future incidents like this, EPA encourages MSGP facilities with

material storage tanks, especially those with chemical storage tanks, to implement controls such as the following to both minimize the potential for stormwater contamination and to minimize the potential for direct discharges from storage tank spills or leaks:

- *Secondary containment:* For all chemical liquids and petroleum products that are held in a storage area, tank or other container, store the fluids within an impermeable secondary containment area with a retention capacity of at least 110% of the volume of the largest tank or container, or 10% of the total volume of all tanks and containers in the area, whichever is larger. There should be no overflow from the secondary containment area, which should be designed, constructed, operated and maintained so that the materials can be recovered and so that polluting materials cannot escape directly or indirectly to any public sewer system or to surface waters or ground water. Records should be maintained that document all such tanks and stored materials and their associated secondary containment area.
- *Secondary containment valves:* Secondary containment area valves that could provide stormwater and retained fluids access to a stormwater conveyance system should be controlled by manually activated valves or other similar devices (these should be secured and remain closed with a locking mechanism). Stormwater that accumulates in the containment area should be visually inspected to ensure no leaks or spills have occurred before release of the accumulated stormwater. Records should be maintained that document the individual making the observation, the description of the accumulated stormwater, and the date and time of the release.

This effluent limit also requires that operators keep all industrial equipment and systems in effective operating condition in order to minimize pollutant discharges. Therefore, the operator must conduct regular maintenance and self-inspections (per Part 3) for all storage tanks and secondary containment areas. Operators must look for leaks/spills, cracks, corrosion, etc., to identify deficiencies and/or problem components such as fittings, pipe connections and valves. For any deficiencies identified, operators must conduct the necessary maintenance, or if applicable, take corrective action in accordance with Part 5.1.

Part 2.1.2.5 Erosion and Sediment Controls

This Part requires operators to minimize pollutant discharges from erosion by stabilizing exposed soils at the facility in order to minimize pollutant discharges and placing flow velocity dissipation devices at discharge locations. Velocity dissipation should control channel and streambank erosion and scour in the immediate vicinity of discharge points. Part 2.1.2.5 also requires the use of structural and non-structural controls to minimize the discharge of sediment. EPA requires that whenever polymers and/or other chemical treatment will be used for erosion control, the polymers and/or chemicals and their purpose must be identified in the SWPPP.

The purpose of this requirement is to prevent discharges of sediment from exposed areas of industrial sites that, due to construction activities, steep slopes, sandy soils or other causes, are prone to soil erosion. Construction and other earth-disturbing activities often result in the exposure of underlying soil to wind and precipitation, while steep slopes or sandy soils may not be able to hold plant life so that soils are exposed, leading to erosion and the need for erosion controls.

The types of erosion controls for exposed areas operators should consider first include seeding, mulching and sodding to prevent soil from becoming dislodged. 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, must be used to back up erosion control practices. There are many resources

available to help operators select appropriate control measures for erosion and sediment, including EPA's Stormwater Discharges from Construction Activities website at: <https://www.epa.gov/npdes/stormwater-discharges-construction-activities>.

EPA acknowledges that portions of some industrial facilities are intended to be left unvegetated or unstabilized. For example, sizable unpaved earthen areas are common at large steel mills. For such areas, compaction of the soil, covering with gravel, and/or application of a soil binder may be adequate erosion control measures for meeting Part 2.1.2.5.

See **Request for Comment 3** regarding whether the permit should include an eligibility criterion for operators who plan to add "cationic treatment chemicals" to stormwater and/or authorized non-stormwater prior to discharge.

Part 2.1.2.6 Management of Runoff

This Part requires operators to divert, infiltrate, reuse, contain, or otherwise reduce stormwater runoff to minimize pollutants in the discharge, and to 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 polluted runoff to natural areas or locations where other kinds of treatment occurs.

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.

In selecting, designing, installing, and implementing appropriate control measures, operators are encouraged to consult with EPA's resources relating to runoff management, including the sector-specific *Industrial Stormwater Fact Sheet Series*, (<https://www.epa.gov/npdes/stormwater-discharges-industrial-activities#factsheets>) and any similar state or tribal resources.

If infiltration is a selected control, permittees should pay special attention to the discussion at the end of the 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*.

Part 2.1.2.7 Salt Storage Piles or Pile Containing Salt

This Part requires that operators enclose or cover piles completely or partially comprised of salt in order to minimize pollutant discharges. Operators must also implement appropriate measures to minimize the exposure of the piles during the adding to or removing from processes. Operators do not need to enclose or cover piles if stormwater from the piles is not discharged or if discharges from the piles are authorized under another NPDES permit.

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 runoff 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.

Part 2.1.2.8 Employee Training

This Part requires operators to 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 limits and conditions of the permit. This includes all

members of the stormwater pollution prevention team identified in Part 6.2.1. The permit specifies the types of personnel and the tasks they perform that must be trained, so that they understand the MSGP's requirements and their specific responsibilities with respect to those requirements (e.g., personnel who are responsible for the design, installation, maintenance, and/or repair of controls (including pollution prevention measures). For those personnel needing training, the following areas must be covered, if applicable to the person's duties:

- An overview of what is in the SWPPP;
- Spill response procedures, good housekeeping, maintenance requirements, and material management practices;
- The location of all controls on the site required by the permit, and how they are to be maintained;
- The proper procedures to follow with respect to the permit's pollution prevention requirements;
- When and how to conduct inspections, record applicable findings, and take corrective actions; and
- The facility's emergency procedures, if applicable per Part 2.1.1.

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 appropriate at facilities with high employee turnover or where stormwater programs are more complicated or multi-faceted. Often, training could be a part of routine employee meetings for safety or fire protection. Contractor personnel also must be trained in relevant aspects of stormwater pollution prevention, as appropriate.

Part 2.1.2.9 Non-Stormwater Discharges

This Part specifies that the operator must evaluate for the presence of non-stormwater discharges; the operator must eliminate any non-stormwater discharges not explicitly authorized in Part 1.2.2 or covered by another NPDES permit. Other than the exclusive list of authorized non-stormwater discharges listed in Part 1.2.2, non-stormwater discharges requiring NPDES permit coverage are not, per Part 1.1.3, authorized under the MSGP.

Additionally, Part 2.1.2.9 requires that all wash water, with the exception of discharges from pavement wash water and routine building washdown per Part 1.2.2., drain to a sanitary sewer, sump or other appropriate collection system (i.e., not the stormwater drainage system). Additionally, this permit does not authorize the discharge of vehicle and equipment wash water, including tank cleaning operations. These wastewaters must be covered under a separate NPDES permit, discharged to a sanitary sewer in accordance with applicable industrial pretreatment requirements, or disposed of otherwise in accordance with applicable law. Operators who need 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:

https://www3.epa.gov/npdes/pubs/ldde_manualwithappendices.pdf.

Part 2.1.2.10 Dust Generation and Vehicle Tracking of Industrial Materials

This Part requires operators to control generation of dust and off-site tracking of raw, final, or waste materials in order to minimize pollutant discharges. 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. Such a practice reduces wind velocity at ground level, 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 materials or materials that could be spilled 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 at minimizing pollutant discharges from vehicle tracking as well (provided the wash water is not discharged).

Stormwater Infiltration Control Measures Subject to the Underground Injection Control (UIC) Regulations

EPA promotes stormwater infiltration through green infrastructure as a cost-effective, sustainable, and environmentally friendly approach to stormwater management. The primary goals of this effort are to reduce stormwater discharge volume and contaminants, and sewer overflow events by using vegetation, soils, natural processes, and infiltration technologies to soak, store, infiltrate and/or treat stormwater. When implementing stormwater infiltration, operators should ensure that ground water is protected because under certain conditions, infiltration could allow contaminants to reach underground sources of drinking water. For example, certain geologic and hydrologic conditions could create ready pathways for pollutants in the stormwater to enter the receiving aquifers.

The Safe Drinking Water Act (SDWA) was established, in part, to protect the nation's drinking water. As required by SDWA, EPA established a regulatory program to prevent underground injection which endangers underground drinking water sources and promulgated regulations containing minimum requirements for state underground injection control (UIC) programs. (See 42 U.S.C. ' 300h-1; 40 C.F.R. Parts 144-146). Once EPA approves a state or tribal UIC program as meeting the requirements of SDWA and EPA's implementing regulations, the state or tribe has primary enforcement responsibility for the UIC program. If a state does not apply for primacy, EPA retains direct implementation authority. State, tribal, or federal UIC regulations would apply to any stormwater infiltration control measures that could be classified as an Injection Well.

EPA's regulations define "well injection" as the subsurface emplacement of fluids through a well. A "well" is defined as a bored, drilled or driven shaft, or dug hole whose depth is greater than its largest surface dimension; an improved sinkhole; or a subsurface fluid

distribution system. *Subsurface fluid distribution system* means an assemblage of perforated pipes, drain tiles or other similar mechanisms intended to distribute fluids below the surface of the ground. Commercially manufactured or proprietary infiltration devices may fall into this category. *Improved sinkhole* means a naturally occurring karst depression or other natural crevice found in volcanic terrain and other geologic settings that has been engineered for the purpose of directing and emplacing fluids into the subsurface.

Infiltration control measures that are also injection wells would be subject to UIC regulations and would likely be classified as Class V Injection Wells. Most Class V wells are authorized by rule if operators submit inventory information to the proper authority (state, tribe, or EPA), do not endanger underground sources of drinking water, and are properly abandoned when no longer in use. An operator may also be required to get a Class V permit or take other actions to prevent potential degradation of underground sources of drinking water. Operators can find out the status of their state's UIC program at <https://www.epa.gov/uic>. On June 13, 2008, EPA issued a policy memo that clarified which green infrastructure stormwater infiltration practices have the potential to be regulated as Class V wells by the UIC program. A copy of this memo is available on EPA's website at: <https://www.epa.gov/sites/production/files/2015-10/documents/epamemoinfiltrationclassvwells.pdf>.

Part 2.1.3 Numeric Effluent Limitations Based on Effluent Limitations Guidelines

This Part provides the applicable federal effluent limitations guidelines that facilities must comply with. The following table describes where these limits can be found in the permit.

Regulated Activity	40 CFR Part/Subpart	Effluent Limitation
Discharges resulting from spray down or intentional wetting of logs at wet deck storage areas	Part 429, Subpart I	See Part 8.A.7
Runoff from phosphate fertilizer manufacturing facilities	Part 418, Subpart A	See Part 8.C.4
Runoff from asphalt emulsion facilities	Part 443, Subpart A	See Part 8.D.4
Runoff from material storage piles at cement manufacturing facilities	Part 411, Subpart C	See Part 8.E.5
Mine dewatering discharges at crushed stone, construction sand and gravel, or industrial sand mining facilities	Part 436, Subparts B, C, or D	See Part 8.J.9
Runoff from hazardous waste landfills	Part 445, Subpart A	See Part 8.K.6
Runoff from non-hazardous waste landfills	Part 445, Subpart B	See Part 8.L.10
Runoff from coal storage piles at steam electric generating facilities	Part 423	See Part 8.O.8
Runoff containing urea from airfield pavement deicing at existing and new primary airports with 1,000 or more annual non-propeller aircraft departures	Part 449	See Part 8.S.8

Part 2.2 Water Quality-Based Effluent Limitations

The 2020 MSGP includes water quality-based effluent limits (WQBELs) to ensure that MSGP authorized discharges will be controlled as necessary to meet applicable water quality standards, pursuant to CWA section 301(b)(1)(C) and 40 CFR 122.44(d)(1). The provisions of Part 2.2 constitute the WQBELs of the 2015 MSGP, and supplement the permit's technology-based effluent limits in Part 2.1. The following is a list of the permit's WQBELs:

- Control discharges as necessary to meet applicable water quality standards of all affected states or tribes (See Part 2.2.1);
- Implement any additional measures that are necessary to be consistent with the assumptions and requirements of the applicable Total Maximum Daily Load (TMDL) and its wasteload allocation (See Part 2.2.2.1). For discharges to impaired waters without a TMDL, conduct impaired waters monitoring (See Part 2.2.2.2). Additionally, new discharges to impaired waters must implement any measures required per the Part 1.1.6.2 eligibility requirements;
- Implement any additional measures that EPA determines are necessary to comply with applicable antidegradation requirements for discharges to Tier 2 or 2.5 waters (see Part 2.2.3).

Prior to or after initial discharge authorization, EPA may require operators to implement additional measures on a facility-specific basis, or require operators to obtain coverage under an individual permit, if information in the NOI, required reports, or other sources indicates that, after complying with the technology-based limits in Part 2.1 and the WQBELs in Part 2.2, discharges will not be controlled as necessary to meet water quality standards.

Facilities that achieve the permit's technology-based limits through the careful selection, design, installation, and implementation of effective control measures are likely to be controlling their stormwater discharges to a degree that would make additional water quality-based measures unnecessary. However, to ensure that this is so, the permit contains additional provisions in Part 2.2, which, along with the BAT/BPT/BCT limits in the permit, are as stringent as necessary to achieve water quality standards.

The WQBELs included in the permit continue to be non-numeric. EPA relies on a narrative limit to ensure discharges are controlled as necessary to meet applicable water quality standards, and to ensure that additional measures are employed where necessary to meet the narrative WQBELs, or to be consistent with the assumptions and requirements of an applicable TMDL and its WLA, or to comply with a state or tribe's antidegradation requirements. This is a reasonable approach for the 2020 MSGP, based on the following considerations:

- *Limited waterbody information available about individual dischargers:* EPA will not know prior to receiving NOIs where any new facilities are located and where they will discharge. In addition, existing facilities' NOI data from earlier permits has typically been difficult to access, and this factor plus other NOI system limitations have restricted the number and quality of NOI reviews that EPA could do. Facility type and location, and receiving water information are necessary for EPA to determine what, if any, special protections apply to that water. To assist operators in determining their receiving water information, EPA has a tool in NeT that will automatically identify their receiving water(s) and impairment status. EPA's receipt of the NOI and receiving water information may then trigger a review. For now, however, it is not possible to know what specific requirements apply to facilities *a priori*, and to include any such requirements in a general permit.

- *Review of the NOI and applicable watershed documents is the appropriate forum for deriving facility-specific WQBELs:* Once EPA receives an NOI for the new permit, the Agency will be better able to assess whether any more protective control measures are necessary. For instance, if an NOI indicates that the facility will discharge to an impaired waterbody with an EPA-approved or established TMDL, EPA can analyze the relevant information to determine whether any additional control measures are necessary to meet the permit's effluent limits and whether discharges will be consistent with the TMDL and WLAs. If the operator is unwilling or unable to implement such additional control measures (or other measures that would yield the same results), EPA may notify the facility that it is not eligible for MSGP coverage and must instead apply for an individual permit. EPA may undertake a similar assessment process when facilities indicate that they are discharging to a waterbody designated as Tier 2 or 2.5 for antidegradation purposes.

Part 2.2.1 Water Quality Standards

This Part specifies that operators must control their discharge as necessary to meet applicable water quality standards of all affected states. EPA expects that compliance with the other conditions in the 2020 MSGP (e.g., the technology-based limits, corrective actions) will result in discharges that are controlled as necessary to meet applicable water quality standards. However, if an operator becomes aware, or EPA determines, that a discharge does not meet applicable water quality standards, corrective actions are required per Part 5. In addition, any time EPA determines that the discharge is not meeting the WQBEL (i.e., the discharge is not controlled as necessary to meet applicable water quality standards), the Agency may inform the operator that additional measures are needed, or require that the operator instead apply for an individual permit. The same applies to situations where additional measures are necessary for discharges to be consistent with an available wasteload allocation in an EPA-established or approved TMDL. In such situations, EPA will be available to help operators understand what they need to do to ensure that their discharges are consistent with any available wasteload allocations.

Part 2.2.2 Discharges to Water Quality-Impaired Waters

This Part includes the requirements applicable to discharges to impaired waters. Facilities will be considered to discharge to an impaired water if the first water of the United States discharged to is:

- Identified by a state, tribe, or EPA, pursuant to Section 303(d) of the CWA, as not meeting an applicable water quality standard, or;
- Addressed by an EPA-approved or established TMDL, or;
- Not in either of the above categories but the waterbody is covered by a pollution control program that meets the requirements of 40 CFR 130.7(b)(1).

Part 2.2.2.1 Existing Discharge to an Impaired Water with an EPA-Approved or Established TMDL

This Part specifies EPA may inform operators that additional requirements are necessary for the discharge to be consistent with the assumptions and requirements of an applicable TMDL and its wasteload allocation (WLA). Water quality-based effluent limits must be "consistent with the assumptions and requirements of any available wasteload allocation for the discharge," pursuant to 40 CFR 122.44(d)(1)(vii)(B). Where an operator indicates on its NOI that a discharge is to one of the types of waters this Part covers, EPA will review the applicable TMDL to determine whether it includes provisions that apply to the individual discharger or its industrial sector. If so, EPA will determine whether compliance with the existing permit limits is sufficient or what additional measures are necessary for the discharge to be consistent with the WLA. Alternatively, EPA may decide an individual

permit application is necessary. Because WLAs for stormwater discharges may be specified in many different formats, it has not always been clear to operators what they need to do to ensure that their discharge is consistent with available WLAs. EPA has thus established a process to ensure that these requirements are properly interpreted and communicated by EPA to the facility in a way that is implementable.

Part 2.2.2.2 Existing Discharge to an Impaired Water without an EPA-Approved or Established TMDL

This Part reiterates that facilities discharging to impaired waters without an EPA-approved or established TMDL must still control their discharges as necessary to meet water quality standards (as also required per Part 2.2.1). EPA expects an operator will achieve this if it complies with the other requirements in the permit, including monitoring requirements applicable to impaired waters discharges in Part 4.2.4. However, if information in the NOI, required reports, or from other sources indicates that discharges are not controlled as necessary to meet applicable water quality standards, EPA may inform an operator that it needs to implement additional measures on a site-specific basis to ensure the WQBEL is met, or, alternatively, of the need to apply for an individual permit.

Part 2.2.2.3 New Discharger or New Source to an Impaired Water

This Part requires an operator that is a "new source" or meet the definition of a "new discharger" (see Appendix A) that discharge to impaired waters to maintain for the permit term any control measures in good working order that it has implemented to meet the eligibility requirements of Part 1.1.6.2.

Part 2.2.3 Tier 2 Antidegradation Requirements for New Dischargers or Increased Discharges

This provision applies to new dischargers, new sources, and existing dischargers whose discharges directly to waters designated by a state or tribe as Tier 2 or 2.5 (defined in Appendix A) have increased. (In general, any existing discharger required to notify EPA of an increased discharge consistent with Part 7.1 (i.e., a "planned changes" report) will be considered to have an increased discharge.) Such dischargers must, for antidegradation purposes implement any additional measures that EPA determines are necessary to comply with the permit's WQBEL, including the applicable state or federal antidegradation requirements (state and tribal water quality standards are required to contain an antidegradation policy pursuant to 40 CFR 131.12). EPA may also, per the applicable antidegradation policy, notify operators that they cannot be covered under the MSGP due to the unique characteristics of the discharge or the receiving waters, and that they must apply for an individual permit. Conversely, if EPA does not notify an operator that additional measures are needed to ensure compliance with antidegradation requirements, the operator is authorized to discharge under the permit. New dischargers to waters designated as Tier 3, outstanding national resource waters, as defined in 40 CFR 131.12(a)(3), are not eligible for coverage under the 2020 MSGP (see Part 1.1.6.3) and must apply for an individual permit.

Waters designated as "Tier 2" by states and tribes can generally be described as follows: Tier 2 protects "high quality" waters -- waterbodies where existing conditions are better than necessary to support CWA § 101(a)(2) "fishable/swimmable" uses. Some states have designated waters using criteria which EPA considers to be more stringent than the federal Tier 2 designation, but less stringent than the federal Tier 3 designation. EPA calls such waters "Tier 2.5". Water quality may be lowered in Tier 2 or Tier 2.5 waters where "allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located." 40 CFR 131.12(a)(2). 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 proposed new or increased

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.

Note about alternate antidegradation designations used by some states

Some states have adopted alternative approaches to designating Tier 2 or Tier 3 waters. These are collectively referred to as "Tier 2.5" waters since they fall between Tiers 2 and 3 in terms of characteristics and regulations supporting them. Tier 2.5 waters are commonly described as providing protection more stringent than Tier 2 but allowing some added flexibility that a Tier 3-designated water (Outstanding National Resource Water) would not. Refer to *Memorandum from William Diamond* (Former Director, Standards and Applied Science Division) to *Victoria Binetti* (Chief, Region III, Program and Support Branch), June 13, 1991.

Examples of Tier 2.5 waters exist in Massachusetts, which designates "outstanding resource waters" (ORWs). These waters have exceptional sociologic, recreational, ecological and/or aesthetic values and are subject to more stringent requirements under both the Massachusetts Water Quality Standards and the Massachusetts Stormwater Management Standards. ORWs include vernal pools certified by the Natural Heritage Program of the Massachusetts Department of Fisheries and Wildlife and Environmental Law Enforcement, all Class A designated public water supplies with their bordering vegetated wetlands, and other waters specifically designated. All of the provisions in the MSGP pertaining to Tier 2 waters apply equally to Tier 2.5 waters. And, where there is a reference in this Fact Sheet to Tier 2 waters, the reader should infer that EPA intends to include Tier 2.5 waters as well.

Part 2.3 Requirements Relating to Endangered Species, Historic Properties, and Federal CERCLA Sites

This Part requires operators to continue to implement any agreed-upon measures that were imposed as a condition or prerequisite for becoming eligible under Parts 1.1.4, 1.1.5, and/or 1.1.7 throughout the permit term. Any time an operator becomes aware, or EPA determines, that discharges and/or discharge-related activities are likely to adversely affect listed species and/or critical habitat, or cause water quality violations at federal CERCLA Sites, EPA may impose additional measures on a site-specific basis, or require the operator to obtain coverage under an individual permit.

Part 3 Inspections

Part 3.1 Routine Facility Inspections

This Part was previously all one, larger section in the 2015 MSGP. For the 2020 MSGP, EPA proposes to break the section up into different parts (i.e., inspection personnel, areas that you must inspect, what you must look for during an inspection, and inspection frequency) to more clearly identify the requirements and improve permit readability for operators.

Part 3.1.1 Inspection Personnel

This Part requires that qualified personnel must perform the inspections with at least one member of the stormwater pollution prevention team. Qualified personnel, as defined in Appendix A, are those who are knowledgeable in the principles and practices of industrial stormwater controls and pollution prevention, and who possess the education and ability to assess conditions at the industrial facility that could impact stormwater quality, and the

education and ability to assess the effectiveness of stormwater controls selected and installed to meet the requirements of the permit. The inspector must consider the results of visual and analytical monitoring (if any) for the past year when planning and conducting inspections.

Part 3.1.2 Areas that You Must Inspect

This Part requires operators to conduct inspections during normal facility hours in the following areas:

- Areas where industrial materials or activities are exposed to stormwater;
- Areas identified in the SWPPP that are potential pollutant sources (see Part 5.2.3);
- Areas where spills and leaks have occurred in the past 3 years;
- Discharge points; and
- Control measures used to comply with the effluent limits contained in the permit.

Part 3.1.3 What You Must Look for During an Inspection

This Part requires that the qualified personnel examine or look out for the following during an inspection:

- Industrial materials, residue or trash that may have or could come into contact with stormwater;
- Leaks or spills from industrial equipment, drums, tanks and other containers;
- Offsite tracking of industrial or waste materials, or sediment where vehicles enter or exit the site;
- Tracking or blowing of raw, final or waste materials from areas of no exposure to exposed areas;
- Control measures needing replacement, maintenance or repair.

Part 3.1.4 Inspection Frequency

This Part requires the qualified personnel to conduct inspections at least quarterly (i.e., once each calendar quarter), or in some instances more frequently (e.g., monthly). Increased frequency (i.e., more than quarterly) may be appropriate for some types of equipment, processes and stormwater control measures, or areas of the facility with significant activities and materials exposed to stormwater. For instance, because vehicle and equipment maintenance and cleaning are particularly dirty activities, EPA recommends that they are inspected more frequently. In addition, properly functioning controls for these activities, such as oil-water separators, are very important for an effective stormwater program, and should also be inspected more frequently (but in no case may be inspected less than quarterly). In another example, inspection of outdoor areas associated with regular industrial activity may benefit from more frequent inspections to ensure that the site is swept, garbage is picked up, drips and spills are cleaned, etc., on a regular basis. The operator must document the relevant inspection schedules in the SWPPP. During each calendar year, the operator must conduct at least one of the routine inspections during a period when a stormwater discharge is occurring. This inspection will enable operators to better identify sources of pollutants discharged in stormwater from the facility and to actively observe the effectiveness of control measures implemented to comply with effluent limits. Operators must also observe discharge points, as defined in Appendix A, during this inspection, or, if such discharge locations are inaccessible, inspect nearby downstream locations.

Part 3.1.5 Exceptions to Routine Facility Inspections for Inactive and Unstaffed Sites

Operators of inactive and unstaffed sites may invoke an exception from routine inspections if they eliminate all exposure of industrial activities and materials to stormwater, and document this in the SWPPP. This waiver is available to all sectors covered under the 2020 MSGP. In addition, inactive and unstaffed mines covered under Sectors G, H, and J are eligible for this waiver even if all exposure has not been eliminated, due to the unique issues affecting such facilities, such as the remoteness of many mining sites. Facilities that make use of this waiver must still implement any necessary control measures to comply with applicable permit requirements and must still conduct an annual inspection.

Part 3.1.6 Routine Facility Inspection Documentation

This Part describes the specific information the operator must document for each routine inspection. Additionally, some industry sectors have specific routine inspection requirements, which are described in Part 8 of the permit for the relevant sectors. This Part specifies that the operator conduct any corrective action required as a result of a routine facility inspection consistent with Part 5 of the permit. This Part also clarifies that if a discharge visual assessment is performed during a routine facility inspection, the results of this assessment may be included in the same report as the routine facility inspection report. At a minimum, the operator must document the following for each routine inspection:

- The inspection date and time;
- The name(s) and signature(s) of the inspector(s);
- Weather information;
- All observations relating to the implementation of control measures at the facility, including:
 - A description of any discharges occurring at the time of the inspection;
 - Any previously unidentified discharges from and/or pollutant sources at the site;
 - Any evidence of, or the potential for, pollutants entering the drainage system;
 - Observations regarding the physical condition of and around all discharge points, including any flow dissipation devices, and evidence of pollutants in discharges and/or the receiving water;
 - Any control measures needing maintenance, repairs, or replacement.
- Any additional control measures needed to comply with the permit requirements;
- Any incidents of noncompliance; and
- A statement, signed and certified in accordance with Appendix B, Subsection 11.

Part 3.2 Quarterly Visual Assessment of Stormwater Discharges

This Part was previously all one, larger section in the 2015 MSGP. For the 2020 MSGP, EPA proposes to break the section up into different parts (i.e., visual assessment frequency, visual assessment procedures, and visual assessment documentation) to more clearly identify the requirements and improve permit readability for operators

Quarterly visual assessments of stormwater discharges provide a useful and inexpensive means for operators to evaluate the effectiveness of their control measures. Although the visual examination cannot assess the chemical properties of the facility's stormwater discharges, the examination will provide meaningful results upon which the operator may

act quickly. All industrial sectors covered by the 2020 MSGP must conduct these examinations.

Part 3.2.1 Visual Assessment Frequency

This Part requires that operators collect and visually examine a grab sample of stormwater discharges from each discharge point (except as noted in Part 3.2.3) once each quarter for the entire permit term. These samples are not required to be collected consistent with 40 CFR Part 136 procedures but must be collected in such a manner that the samples are representative of the stormwater discharge. Guidance on monitoring is available at https://www.epa.gov/sites/production/files/2015-11/documents/msgp_monitoring_guide.pdf.

Part 3.2.2 Visual Assessment Frequency

This Part requires the operator to visually assess the sample in a clean, colorless glass or plastic container 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 operator must take the grab samples within the first 30 minutes or as soon as practicable after the occurrence of an actual discharge from the site (including documentation of why sampling was not practicable within the first 30 minutes, if applicable). For storm events, operators must make the assessment on discharges that occur at least 72 hours (three days) from the previous discharge. The 72-hour (three-day) storm interval does not apply if the operator can document that less than a 72-hour (three-day) interval is representative for local storm events during the sampling period. Whenever the visual assessment shows evidence of stormwater pollution, corrective action procedures must be initiated per Part 5.

Part 3.2.3 Visual Assessment Frequency

This Part requires the operator to document the results of the visual assessments in a report maintained onsite with the SWPPP. The report must include the sample location, date and time of both sample collection and visual assessment, personnel collecting the sample and performing visual assessments and their signatures, nature of the discharge (i.e., runoff or snowmelt), results of the observations, and probable sources of any observed stormwater contamination.

When conducting a stormwater visual examination, the pollution prevention team, or individual team member, must 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) must conduct an inspection of the area of the site draining to the examined discharge to look for sources of spilled oil, leaks, etc. If a source can be located, then this information would necessitate that the operator immediately conduct a clean-up of the pollutant source, and/or to revise control measures to minimize the contaminant source.

Part 3.2.4 Exceptions to Quarterly Visual Assessments

This Part includes the same exceptions from the 2015 MSGP to these requirements in order to account for circumstances during which conducting quarterly visual assessments may not be feasible, namely during adverse (e.g., dangerous) weather conditions, or in parts of the country subject to climates with irregular stormwater discharges or to large amounts of snowfall. Where these types of conditions prevent a facility from performing these assessments quarterly, operators may 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 of inactive and unstaffed facilities may invoke a visual assessment exception if they eliminate all exposure of industrial activities and materials to stormwater, and document this in the SWPPP. This waiver is available to all sectors covered under the 2020 MSGP. In addition, inactive and unstaffed mines covered under Sectors G, H, and J are eligible for this waiver even if all exposure has not been eliminated due to the unique issues affecting such facilities, such as the remoteness of many mining sites. Facilities that make use of this waiver must still implement any necessary control measures to comply with applicable permit requirements.

Operators with two or more essentially identical discharge points may also elect to conduct a visual assessment at just one of these discharge points each quarter, but must perform their quarterly assessments on a rotating basis to ensure that they periodically observe each substantially identical discharge points throughout the period of permit coverage. If the operator identifies stormwater contamination through visual monitoring performed at a substantially identical discharge point, the operator must assess and modify his/her control measures as appropriate for each discharge point represented by the monitored discharge point. 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 discharge points where the problem may be occurring.

Part 4 **Monitoring**

This Part was previously Part 6 in the 2015 MSGP. For the 2020 MSGP, EPA proposes moving it to Part 4, so that operators read the monitoring requirements before the corrective action and Additional Implementation Measures (AIM) requirements in Part 5 and the SWPPP documentation requirements in Part 6.

This Part requires that operators collect, analyze, and document stormwater samples consistent with the procedures described in within Part 6 and Appendix B, Subsections 10 – 12, and any additional sector-specific or state/tribal-specific requirements in Parts 8 and 9, respectively.

Part 4.1 **Monitoring Procedures**

The 2020 MSGP requires certain facilities to sample and analyze their stormwater discharges as a way to assess the effectiveness of control measures in meeting the effluent limits contained in the permit. Analytical monitoring measures 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 sufficiently controlled.

Part 4.1 identifies procedures for collecting samples and identifies where, when, and what to sample. These requirements are unchanged from those in the 2015 MSGP, with the addition of an explicit clarification that composite sampling is allowed for benchmark monitoring. These requirements are in addition to the standard permit conditions described in Appendix B, Subsection B.10.

Part 4.1.1 **Monitored Discharge Points**

The monitoring requirements in the permit apply to each discharge point discharging stormwater associated with industrial activity, unless the operator qualifies for the substantially identical discharge point (SIDP) exemption as described in this section (except for numeric effluent limitation monitoring; see below). This SIDP provision provides facilities that have multiple stormwater discharge points with a means to reduce the number of discharge points that must be sampled and analyzed while still providing monitoring data that are indicative of discharges from each discharge point. This may result in a substantial

reduction of resources required for a facility to comply with analytical monitoring requirements. To be considered a SIDP, the discharge point 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 operators believe their facility has two or more discharge points that qualify as substantially identical, they may monitor only one of these discharge points and report that the quantitative data also apply to the other SIDPs. Operators must also document the location of each of the SIDPs and explain why the SIDPs are expected to discharge substantially identical stormwater, 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 EPA approval for this determination; however, EPA may subsequently determine that discharge points are not substantially identical and require sampling of additional discharge points. EPA clarifies in Part 4.1.1 that the allowance for monitoring only one of the SIDPs is not applicable to any discharge point with numeric effluent limitations. Operators must monitor each discharge point covered by a numeric effluent limitation as identified in Part 4.2.2.

Part 4.1.2 Commingled Discharges

This Part requires that if stormwater discharges associated with industrial activity commingle with discharges not authorized by the MSGP (e.g., unregulated stormwater or other permitted wastewater), then the operator must sample the stormwater discharge before it mixes with the other discharges when practicable. This provision is intended to ensure that monitoring results are representative of discharges covered under the permit and not indicative of other discharges from the facility. EPA acknowledges that in certain instances, such as when authorized stormwater discharges are commingled with other waste streams prior to on-site treatment, sampling only authorized stormwater may be impracticable.

Part 4.1.3 Measurable Storm Events

This Part specifies the characteristics of a measurable storm event as an event that results in a discharge from the permitted facility. By defining a storm event as one that results in a discharge, it affords the operator flexibility to sample during any storm event that produces a discharge, rather than having to ensure that a minimum magnitude is reached. The permit requires that operators collect samples 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) period is included in an attempt to eliminate monitoring discharges soon after a previous storm event washed away residual pollutants; operators may waive this requirement where they document that less than a 72-hour (3-day) interval is representative for local storm events during the season when sampling is being conducted. The permit allows for sampling of snowmelt in addition to stormwater. 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.

Part 4.1.4 Sample Type

This Part specifies that operators must take a minimum of one grab sample from the measurable storm event being monitored. This will allow operators to make accurate comparisons of monitoring results to the corresponding benchmark threshold levels or effluent limitations. Operators must take the grab sample during the first 30 minutes of the discharge, except for snowmelt monitoring which has no 30-minute requirement since (1) runoff typically does not occur during a snow event (2) collecting a snowmelt sample within 30 minutes of commencement of discharge would very likely be impractical (because the snow will not have melted yet), and (3) the "first flush" effects of snowmelt are not as well

defined (i.e., the time when the highest pollutant concentrations occur). If operators collect more than one grab sample, only those samples the operator collects during the first 30 minutes of discharge are to be used for performing any necessary analyses. If it is not possible to collect a grab sample during the first 30 minutes, facilities can take a grab sample as soon as possible, but the operator must document and keep with the SWPPP an explanation of why a grab sample during the first 30 minutes could not be done.

EPA is proposing that operators also be allowed to use composite sampling for benchmark monitoring, as the NRC study recommended. EPA is not proposing that composite sampling be required. Composite samples can provide a more comprehensive characterization of the facility's discharge than grab samples but can be costlier in some ways. EPA had allowed facilities to use composite sampling in previous versions of the MSGP, but in this proposal, EPA is explicitly allowing composite sampling except for those parameters that require a short holding time before processing, such as pH and those parameters that can degrade or transform quickly.

Composite sampling may be manual or automated. For manual sampling, a facility would collect multiple grab samples during a storm event and combine portions of each grab sample to form a single composite sample that is then analyzed. For automated sampling, a facility would install an automatic sampler at the end of a flume, weir, or other similar device to direct the stormwater to a collection point. The sampler could be set up to collect samples on some interval, and, depending on the equipment, may be able to combine individual samples automatically into a composite sample. Automated samplers can also collect either flow-weighted or time-weighted composites. Using automated samplers can eliminate the need for a person to physically collect samples, which can be helpful if a storm happens outside of normal business hours. These samplers can lower labor costs and mitigate any safety concerns but require maintenance which would not otherwise be required if done manually. Facilities may also find that electronic sensors and data loggers used in the field can be a cost-effective way to monitor parameters like turbidity, conductivity, dissolved oxygen, and pH.

Part 4.1.5 Adverse Weather Conditions

When adverse weather conditions make sampling dangerous, storm event monitoring may be postponed until the next discharge 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 operators 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 as "no data" during the usual reporting period. This provision applies to all monitoring requirements of the permit.

Part 4.1.6 Climates Where Limited Rainfall Occurs During Parts of the Year or Freezing Conditions Exist that Prevent Discharges

This Part provides for the implementation of alternative monitoring schedules for facilities located in arid and semi-arid climates, or in areas subject to snow or prolonged freezing. Alternate monitoring schedules allow permittees the flexibility to allocate their resources effectively to capture the required number of stormwater discharge events during the permit term. This flexibility will yield a more accurate characterization of pollutant concentrations in facility stormwater discharges during times of the year when precipitation is actually occurring, and during snowmelt discharges in areas subject to extended winter seasons and prolonged freezing. This special exception will provide EPA with more data

that can be used to evaluate facility pollutant levels. Incumbent with this flexibility is operators' responsibility to identify those periods during which discharges are most likely to occur and establish a schedule distributing the required monitoring events during those periods.

Part 4.1.7 Monitoring Periods

This Part specifies that the monitoring requirements commence during the first full calendar quarter following either [insert 90 days after permit effective date] or following the date of authorization to discharge, whichever date comes later. For quarterly benchmark monitoring, this Part defines the calendar quarters during which monitoring must occur and also describes when the first monitoring quarter is to commence. Operators in climates with irregular stormwater discharges may define alternate monitoring periods, as described above, provided that the operator keep documentation of the revised schedule with the SWPPP. Note that EPA's DMR system will automatically generate pre-populated discharge monitoring report (DMR) forms based on the facility's sector and other information provided in the NOI form.

Part 4.1.8 Monitoring for Authorized Non-Stormwater Discharges

This Part states that operators are only required to monitor authorized non-stormwater discharges in Part 1.2.2 when they are commingled with stormwater discharges associated with industrial activity.

Part 4.1.9 Monitoring Reports

This Part specifies that monitoring data must be reported using EPA's electronic DMR tool as described in Part 7.4 (unless a waiver from electronic reporting has been granted from the EPA Regional Office, in which case a paper DMR form may be submitted.)

Part 4.2 Required Monitoring

The 2020 MSGP contains five types of monitoring requirements:

- Benchmark monitoring (Part 4.2.1);
- Effluent limitations monitoring (Part 4.2.2);
- State- or tribal-specific monitoring (Part 4.2.3);
- Impaired waters monitoring (Part 4.2.4); and
- Other monitoring required by EPA (Part 4.2.5).

The frequency of monitoring depends on which of these five types of monitoring applies to each permitted facility. If any of these monitoring requirements overlap, operators may use a single sample to comply with those overlapping requirements. The permit also specifies that when an effluent limitation is lower than the benchmark threshold for the same pollutant⁵, the Additional Implementation Measure (AIM) trigger is based on an exceedance of the effluent limitation, which would subject the facility to the AIM requirements of Part 5.2. EPA clarifies however that benchmark thresholds are not effluent limitations. See Part 4.2.1.

EPA is considering a tiered approach to monitoring in the proposed 2020 MSGP as suggested by the NRC study. The proposed approach would include:

⁵ Note that benchmarks thresholds are not effluent limitations, see Part 4.2.1 of the Permit.

- A possible “inspection-only” option in lieu of benchmark monitoring available to low-risk facilities (see Part 4.2.1.1);
- A new category of benchmark monitoring parameters called universal benchmark monitoring (pH, TSS, and COD) that applies to all sectors (see Parts 4.2 and 8);
- Existing sector-specific benchmark monitoring parameters in the 2015 MSGP and any additionally proposed sector-specific benchmark monitoring parameters that are finalized (see Parts 4.2 and 8); and
- Continued benchmark monitoring based on a repeated or significant exceedance of a benchmark threshold as proposed in the Additional Implementation Measures (AIM) process (see Part 5).

Part 4.2.1 Benchmark Monitoring

This permit requires benchmark monitoring as an indicator of the performance of facilities' stormwater control measures. Since first issuance of the MSGP in 1995, benchmark monitoring has been employed as a means by which to measure the concentration of a pollutant in a facility's industrial stormwater discharges. See 60 FR 50804. Analytical results from benchmark monitoring are quantitative and therefore can be used to compare results from discharge to discharge and to quantify any improvement in stormwater quality attributable to the stormwater control measures, or to identify a pollutant that is not being adequately controlled. The benchmark thresholds are the pollutant concentrations above which represent a level of concern. The level of concern is a concentration at which a stormwater discharge could potentially impair or contribute to impairing water quality or affect human health from ingestion of water or fish. The benchmarks are also set at a level, that if below, a facility's discharges pose less potential for a water quality concern. As such, the benchmarks provide an appropriate level to determine whether a facility's stormwater control measures are successfully implemented. See 60 FR 50804 for a discussion on the origin of the MSGP's benchmarks.

The 2019 NRC Study on industrial stormwater noted that some stakeholders have described benchmark monitoring as overly burdensome to industries and producing data that go unutilized. On the other hand, other stakeholders have expressed concern that if stormwater problems are observed through benchmark monitoring, the mechanisms to ensure issues are effectively addressed are lacking. EPA is aware that some stakeholders have also suggested that EPA completely discontinue benchmark monitoring and that operators, and EPA, should rely on annual reporting and quarterly visual assessments as the main mechanisms to assess stormwater control effectiveness at industrial facilities.

Benchmark monitoring, annual reports, and visual assessments are all complementary, but ultimately serve different purposes for the operator, and for EPA.

Annual reporting only occurs once per year during the permit term, and thus limits the number of opportunities and delays the time the operator must assess and react to potential problems at their facility. Additionally, while annual reports contain valuable information on facility inspections, visual assessments, corrective actions, and Additional Implementation Measures, the data is subjective, anecdotal, and qualitative. Visual assessments are also an important component of a facility's stormwater program, which requires the operator to observe water quality characteristics, such as color, clarity, solids, and oil sheen and can indicate issues from pollutants that are not required to be monitored for. Although quarterly visual assessments and quarterly benchmark monitoring occur at the same frequency, visual assessments again result in narrative descriptions of stormwater pollution and may not provide the precision necessary for the operator to address a specific pollutant problem.

Compiling and evaluating information from either annual reports or visual assessments in a systemic, meaningful way is more challenging than quantitative benchmark data. Annual reports tell an overall story of what happened with stormwater discharges at the facility for a given year, and visual assessments give a general, observed indication of discharge quality for a given quarter. Benchmark monitoring data, however, provides numerical indicators of stormwater control effectiveness, what pollutants are being discharged, and at what magnitude, which can be addressed in real-time and compared over time.

EPA has always tried to balance the burden to the regulated community with its obligation under the CWA to ensure industrial stormwater discharges meet all provisions of CWA §301, including applicable water quality standards (CWA §402(p)(3)(A)). To date, EPA has not received adequate information or data suggesting a viable alternative approach to benchmark monitoring for characterizing industrial sites' stormwater discharges, quantifying pollutant concentrations, and assessing stormwater control measure effectiveness. If such alternative approaches exist, EPA is interested in learning about them and their potential to accomplish these objectives. **See request for comment 9.**

Request for Comment 9: EPA requests comment on viable alternative approaches to benchmark monitoring for characterizing industrial sites' stormwater discharges, quantifying pollutant concentrations, and assessing stormwater control measure effectiveness.

Benchmark monitoring requirements described in Part 4.2.1 require operators to collect stormwater samples for laboratory chemical analyses. For clarity, EPA continues to emphasize that the benchmark thresholds in the EPA MSGP are not, and have never been, effluent limits themselves. Therefore, an exceedance of the benchmark threshold is not a violation of the permit. At the same time, the permit contains a narrative effluent limitation to protect water quality.

Part 4.2.1.1 Applicability of Benchmark Monitoring

Universal Benchmark Monitoring Applicable to All Sectors

The 2015 MSGP required benchmark monitoring for around 55 percent of MSGP facilities; the other 45 percent of facilities did not have any chemical-specific benchmark monitoring. More specifically, in the 2015 MSGP, 19 subsectors were not subject to any benchmark monitoring requirements (B2, C5, D2, E3, F5, I1, J3, N2, P1, R1, T1, U3, V1, W1, X1, Y2, Z1, AB1, and AC1) while the remaining 34 subsectors did have required benchmark monitoring.

EPA proposes to require all facilities to conduct benchmark monitoring for three indicator parameters of pH, total suspended solids (TSS), and chemical oxygen demand (COD), regardless of sector/subsector, called universal benchmark monitoring, as recommended by the NRC study. This proposed requirement applies to all sectors/subsectors, including those facilities that previously did not have any chemical-specific monitoring requirements and those that previously did not have these three specific benchmark parameters under the 2015 MSGP. The NRC study suggested that such universal benchmark monitoring would provide a baseline and comparable understanding of industrial stormwater risk, broader water quality problems, and stormwater control effectiveness across all sectors. The study states that "all three parameters are direct measures of water quality and are appropriate choices for industry-wide sampling because all three can be indicators of broader water quality problems and the presence of other pollutants." In addition, the study says these parameters can indicate absence, neglect, or failure of a stormwater control measure, which can lead to high concentrations of potential pollutants (NRC, 36). EPA previously considered adding these three parameters as universal benchmark monitoring requirements to the 2005 MSGP (O'Donnell, 2005), and several states currently require some

degree of universal monitoring in their industrial stormwater permits (California, Connecticut, Minnesota, and Washington).

EPA proposes that all operators in all sectors must monitor for these three parameters in addition to any existing or proposed benchmark parameters that may be finalized in the 2020 MSGP, if applicable. Any sector/subsector that had to monitor for pH, TSS, and/or COD as a sector-specific benchmark under the 2015 MSGP would now monitor for these parameters in the 2020 MSGP as part of universal benchmark monitoring, which EPA is proposing to have a different monitoring frequency than existing sector-specific benchmark monitoring, discussed further below.

EPA notes that the NRC Study did not opine on a specific or different corrective action protocol for possible exceedances of universal benchmark monitoring parameters. EPA assumes the NRC Study committee was aware of the existing 2015 MSGP corrective action protocol for benchmark exceedances, as it is referenced throughout the Study. EPA also assumes the NRC Study committee was aware of EPA's obligation to propose the Additional Implementation Measure (AIM) protocol for benchmark exceedances as an enhancement to the 2015 MSGP corrective action protocol, as required by the Settlement Agreement. The NRC study states "the EPA is currently developing Additional Implementation Measure (AIM) requirements in response to a legal settlement that would provide actionable consequences for large or repeated benchmark exceedances" (NRC, 21). Because the NRC Study recommended pH, TSS, and COD as benchmark parameters, and not some other type of monitoring, EPA assumes the same protocol for exceedances should apply to these parameters just like any other benchmark parameter.

Request for Comment 10: EPA requests comment the above proposed universal benchmark monitoring for pH, TSS, and COD applicable to all sectors. EPA requests comment on whether universal benchmark monitoring is appropriate and what parameters should be required.

Request for Comment 11: EPA requests comment on whether the permit should include an inspection-only option for "low-risk" facilities in lieu of conducting benchmark monitoring, as recommended in the NRC study. EPA requests comment on ways to identify facilities that would be eligible for an inspection-only option, what frequency would be appropriate for such an inspection, what the inspection should entail, and what qualifications or certifications an inspector should have.

Background on Request for Comment 11 – The Inspection-Only Option

The NRC Study recommended that EPA provide low-risk facilities with an option to have a certified inspector perform a comprehensive site inspection in lieu of benchmark monitoring requirements in the proposed 2020 MSGP. Providing an option for inspection in lieu of monitoring can reduce the burden on small, low-risk facilities and eliminate potentially unreliable monitoring data, while improving stormwater management.

Identifying "low-risk" facilities:

Categorizing low-risk facilities that would be eligible for an inspection-only option is somewhat challenging. The NRC Study suggested some example conditions for low pollutant discharge risk (see NRC Study Table 3-3) but acknowledges that EPA would need to further develop concrete and implementable criteria for determining low-risk facilities (NRC, 57). One option EPA could consider is an inspection-only option based on "light manufacturing" industrial facilities (e.g., food processing, printing and publishing, electronic and other electrical equipment manufacturing, public warehousing and storage) categorized in 40 CFR 122.26(b)(14)(xi). These facilities have a primary standard industrial classification (SIC) code of one of following: 20XX, 21XX, 22XX, 23XX, 2434, 25XX, 265X, 267X, 27XX, 283X, 285X, 30XX, 31XX (except 311X), 323X, 34XX (except 3441), 35XX, 36XX, 37XX

(except 373X), 38XX, 39XX, and 4221-25 (where "X" indicates other possible digits in the SIC code, e.g., 20XX could be 2041). Light manufacturing industrial facilities are involved in the manufacturing and distribution of goods and services that typically take place indoors, as opposed to the production and handling of raw materials and chemicals, and therefore exhibit a lower risk of contributing to water quality problems via stormwater discharges. The 1999 Phase II stormwater rule brought "light industry" under the stormwater permitting regulations, but continued to acknowledge the low-risk characteristics of this category of industries. See 64 FR 68722.

EPA requests comment on other criteria (besides the "light manufacturing" SIC codes discussed above) to categorize "low-risk" facilities. One other possible criterion could be that the facility had coverage under the 2015 MSGP and did not have any benchmark exceedances during that permit term; another possible criterion could be that the facility had coverage under the 2015 MSGP and did have a benchmark exceedance but amended their SWPPP and did not have repeat exceedances. The NRC Study did suggest that facility site size might be a criterion for categorizing low-risk, but acknowledges that size may not fully represent the risk profile. Because size does not capture type or intensity of activity, EPA is concerned this is not a viable criterion for categorizing low-risk facilities. EPA requests comment on these and any other options the Agency should consider for determining low-risk facilities eligible for an inspection-only option.

Frequency of Inspections:

EPA is interested in the appropriate inspection frequency for an inspection-only option. One approach could be to require eligible facilities to undergo two comprehensive site inspections conducted by a certified, professional inspector during their permit coverage instead of conducting benchmark monitoring. The first professional site inspection could be conducted within the first year of permit coverage, and the second inspection could occur in the third year of permit coverage. EPA initially considered two inspections per permit term in the cost analysis, but requests comment the appropriateness of other frequencies for this option.

Contents of the Inspection:

EPA requests comment on what the professional inspection should entail. The inspection could include the following, or a combination thereof:

- Review the permit and the Stormwater Pollution Prevention Plan (SWPPP); include in the report a detailed description and professional opinion of whether and/or to what degree the SWPPP meets the requirements set forth in the permit;
- Review all permit-related records, including self-inspection reports; include in the report a detailed description and professional opinion of whether and/or to what degree the facility is complying with the permit and the SWPPP;
- Walk the facility site and verify that the SWPPP is accurate and that the SCMs are in place and functioning; include in the report a detailed description and professional opinion of whether and/or to what degree the SWPPP is accurate and that the SCMs are in place and functioning; and
- Identify in the report additional control measures or other actions the facility needs to take and the timeframe by which those measures or actions should be completed to effectively manage stormwater pollution.
- Consideration of the degree of exposure of industrial activities and materials at a facility.

EPA also requests comment on what follow up the Agency should require with the inspection report. EPA could consider requiring the operator to submit the original, unmodified inspection report from the professional inspector to EPA electronically within 30 days of the inspection. If after reviewing the inspection report, EPA determines that conditions at the facility indicate substantial concerns and/or recurrent problems that have remained unaddressed, or there has been a lapse in inspections, EPA could consider requiring the operator to conduct benchmark monitoring.

Professional Inspector Credentials:

EPA requests comment on certifications or qualifications the Agency should consider for a third-party professional inspector for this inspection-only option. The NRC Study recommended that the certified inspector be an employee of a municipal separate storm sewer system (MS4), a private third-party company, or a parent corporation, as long as the inspector is not directly involved in the day-to-day operation or oversight of the facility being inspected (NRC, 55). Because the inspection-only option would be available to eligible facilities instead of conducting benchmark monitoring, EPA wants to ensure the inspector has the appropriate credentials to evaluate the effectiveness of the facility's stormwater control measures, does not have any conflicts of interest, and will conduct an un-biased, fair inspection.

EPA currently does not have its own certification program for industrial stormwater inspections, nor can the Agency officially endorse private third-party certification programs. The 2015 MSGP does require a "qualified personnel" to prepare the SWPPP and conduct facility self-inspections. In this context, a "qualified personnel" is defined as "qualified personnel are those who are knowledgeable in the principles and practices of industrial stormwater controls and pollution prevention, and who possess the education and ability to assess conditions at the industrial facility that could impact stormwater quality, and the education and ability to assess the effectiveness of stormwater controls selected and installed to meet the requirements of the permit." However, EPA requests comment on whether the credentials of the "qualified personnel" as currently defined are sufficient for the professional, third-party inspection envisioned for the inspection-only option. EPA request comment on how the Agency could adapt the "qualified personnel" qualifications or whether the inspection credentials for the inspection-only option should be more rigorous, given that the facility would be exempt from otherwise required benchmark monitoring.

EPA initially evaluated the professional inspection being conducted by a Professional Engineer (PE) in the cost analysis. If EPA had more information on other third-party professional certifications in industrial stormwater inspections, the Agency may include this option in the final permit.

Cost of the Inspection-Only Option:

EPA considered the inspection-only option in the cost analysis conducted for this proposed permit using the criteria discussed above (i.e., "light manufacturing" facilities; two inspections per permit term; the inspections conducted by a PE). Based on the results of this analysis, EPA made a preliminary conclusion that the costs show the inspection-only option may not be a viable alternative and that benchmark monitoring may be more cost effective for operators. This is due to the relatively high labor rates of a professional inspection from a PE as compared to the sampling costs of benchmarking monitoring. EPA notes this is just one approach and as discussed above, requests comment on other criteria the Agency should evaluate in order to make the inspection-only option an effective alternative for low-risk facilities. For a full discussion and detailed analysis of the costs, see

Section E.5 of the Cost Impact Analysis for the Proposed 2020 Multi-Sector General Permit (MSGP) in the docket.

Proposed Monitoring Requirements for Sectors I, P, and R (see also Part 8)

The NRC study recommended that EPA require benchmark monitoring for Sectors I, P, and R. None of these sectors currently have benchmark monitoring in the 2015 MSGP. EPA proposes to require specific benchmark monitoring for these three sectors. The proposed benchmark values are based on existing benchmark thresholds for the proposed parameters.

Facilities in Sector I (Oil and Gas Extraction) use many types of chemicals that could become sources of pollutants in stormwater discharges. These include diesel fuel, oil, solvents, drilling fluid, acids, and various chemical additives. The NRC study listed ammonia, lead, nickel, nitrate, zinc, and polycyclic aromatic hydrocarbons (PAHs) as pollutants associated with oil and gas extraction facilities. EPA proposes that facilities in Sector I have benchmark monitoring for ammonia, nickel, total recoverable lead, nitrate-nitrogen, total recoverable zinc, and hardness. EPA does not currently have recommended aquatic life criteria for PAHs nor a chemical-specific benchmark threshold for any industrial sector. However, the NRC study suggested that COD could be used as a surrogate for PAHs and EPA recognizes that it could be a surrogate for other organic pollutants as well. Given that EPA proposes that all sectors, including I, have required universal benchmark monitoring for pH, TSS, and COD, EPA is not proposing to add a sector-specific benchmark for COD.

Facilities in Sector P (Land Transportation and Warehousing) typically have areas for vehicle and equipment storage, cleaning, and maintenance, fueling, material storage, and locomotive sanding areas. They can use on-site chemicals like solvents, diesel fuel, gasoline, hydraulic fluids, antifreeze, and transmission fluids. Leaks and spills from petroleum-based products and chemicals can also contain PAHs. EPA proposes that facilities in Sector P have benchmark monitoring for lead, mercury, and hardness.

Facilities in Sector R (Ship and Boat Building and Repair Yards) perform activities like fluid changes, mechanical repairs, engine maintenance and repair, parts cleaning, refinishing, paint removal, painting, fueling, metal working, welding, cutting, and grinding. These sorts of activities can include using solvents, oils, fuel, antifreeze, acid and alkaline wastes, abrasives, and paints and can create dust. EPA proposes that facilities in Sector R have benchmark monitoring for total recoverable chromium, total recoverable copper, total recoverable lead, total recoverable nickel, total recoverable zinc, and hardness.

Request for Comment 12: EPA requests comment on whether chemical-specific benchmark monitoring proposed in Part 8 for Sectors I, R, and P is appropriate for these sectors. EPA requests comment on whether the proposed monitoring parameters are appropriate for these sectors and any data or information related to the sources and activities related to these sectors.

Part 4.2.1.2 Benchmark Monitoring Schedule

Schedule for Universal Benchmarks Applicable to All Sectors (pH, TSS, and COD)

For universal benchmark monitoring parameters of pH, TSS, and COD, EPA proposes that operators would be required to conduct quarterly benchmark monitoring, as identified in Part 4.1.7, for each year of permit coverage commencing no earlier than [date 90 days after permit effective date]. For any data exceeding the benchmark threshold for these three parameters that triggered any event as specified in Parts 5.2.1.1, 5.2.2.1, and 5.2.3.1, EPA proposes that operators would be required to comply with Part 5.2 (Additional Implementation Measures).

EPA proposes that facilities monitor and report for these three parameters on a quarterly basis for the entire permit term, regardless of any benchmark threshold exceedances, to ensure facilities have current indicators of the effectiveness of their stormwater control measures throughout the permit term. For facilities that had pH, TSS, and/or COD as a benchmark in the 2015 MSGP, those parameter(s) would follow the newly proposed quarterly monitoring schedule for the entire permit term. The NRC study suggests that quarterly stormwater event samples collected over only the first year of the permit term are inadequate to characterize industrial stormwater discharges or describe industrial stormwater control measure performance over the permit term. The study states that "extended sampling over the course of the permit would provide greater assurance of continued effective stormwater management and help identify adverse effects from modifications in facility operation and personnel over time" (NRC, 83).

There are well-established standardized analytical procedures for all three parameters of pH, TSS, and COD and analytical determinations are expected to be relatively inexpensive. The NRC study acknowledges that the additional cost burden for these three parameters is expected to be relatively small given that all facilities are already required to collect quarterly stormwater samples for visual monitoring.

Because some operators choose to sample more than the required number of times, EPA has included specific proposed language in the permit that the extra samples may be used to calculate their benchmark average. Any additional sampling does not reduce the requirement that the monitoring be completed over a minimum of four calendar quarters. Therefore, additional samples collected in one quarter for this purpose cannot replace sampling required in other quarters. (Note: requirement for four calendar quarters of monitoring is not applicable to airports given that the monitoring requirements for that sector are related to winter application of deicing chemicals.)

Request for Comment 13: EPA requests comment on whether to permit should require facilities to monitor and report for the proposed universal benchmark monitoring parameters (pH, TSS, and COD) on a quarterly basis for the entire permit term, regardless of any benchmark threshold exceedances, to ensure facilities have current indicators of the effectiveness of their stormwater control measures throughout the permit term.

Schedule for Sector-Specific Benchmarks

For all sector-specific benchmark monitoring parameters, EPA proposes that the monitoring schedule remains unchanged from the 2015 MSGP, except for pH, TSS, and COD which have a newly proposed schedule, discussed above. For all sector-specific benchmark monitoring parameters, operators would be required to conduct quarterly benchmark monitoring, as identified in Part 4.1.7, for the first four full quarters of permit coverage commencing no earlier than [date 90 days after permit effective date]. If the four-quarter annual average for any parameter does not exceed the benchmark threshold, the operator has fulfilled the sector-specific benchmark monitoring requirements for that parameter for the permit term and can discontinue benchmark monitoring for that parameter. The facility must comply with Part 5 (Additional Implementation Measures) and continue quarterly benchmark monitoring for any parameter with data exceeding the benchmark threshold as specified in Parts 5.2.1.1, 5.2.2.1, and 5.2.3.1. Exceptions for data exceeding benchmarks, including from natural background pollutant sources and run-on, were moved to Part 5.2.5 AIM Exceptions.

Derivation of the Benchmark Levels

The 2020 MSGP retains some of the same benchmark monitoring thresholds as the final 2015 MSGP but proposes to modify and add some benchmark thresholds based on the NRC study recommendations. The process that EPA followed in selecting the benchmark

parameter thresholds for the permit was as follows: Step 1: Use EPA's final CWA section 304(a) recommended acute criterion value; Step 2: If no EPA acute criterion exists, use the chronic EPA criterion; Step 3: If neither acute nor chronic criteria exist, use data from discharge studies or technology-based standards to establish a benchmark. In general, the freshwater acute criteria are less restrictive than chronic water quality criteria. Because of the intermittent nature of wet weather (i.e., stormwater) discharges and the high and variable ambient flows that generally result from precipitation events, EPA views acute criteria as generally more appropriate than chronic criteria in this context. Since benchmarks are usually set equal to recommended ambient water quality criteria for the receiving waters, with no allowance for dilution during storm events, they are conservative values. Exceedance of a benchmark threshold does not necessarily indicate that a discharge is not meeting an applicable water quality standard, but does require the facility to evaluate the effectiveness of its control measures, with follow-up Additional Implementation Measures (AIM) response where required per Part 5.2. For a full discussion of EPA's approach for the derivation of the benchmarks, see the Fact Sheet for the 1995 MSGP (60 Fed. Reg. 50825, September 29, 1995), 2000 MSGP (65 Fed. Reg. 64746), and the 2008 MSGP (73 Fed. Reg. 56572).

The MSGP defines saline or salt waters for the purposes of benchmark monitoring as those waters with salinity equal to or in exceedance of 10 parts per thousand 95 percent or more of the time, unless otherwise defined as a coastal or marine water by the applicable state or tribal surface water quality standards. This definition is consistent with 40 CFR 131.36. These benchmarks represent the available acute ambient water quality criteria for priority toxic and non-priority pollutants in saltwater.

The NRC study recommended that EPA update information related to aluminum, selenium, arsenic, cadmium, magnesium, iron, copper, and PAHs. EPA proposes some permit changes related to these recommendations.

Aluminum

Just like the 2015 MSGP, EPA proposes that facilities in subsectors C2, E1, F1, F2, M1, N1, Q1, and AA1 perform benchmark monitoring for aluminum. The NRC study recommended that EPA update the aluminum benchmark value in the 2020 MSGP but the information that NRC relied upon is based on criteria still in draft form and not yet issued. This draft 2017 aquatic life criteria for aluminum uses a multiple linear regression method that considers total hardness, pH, and dissolved organic carbon (DOC). The 2015 MSGP freshwater aluminum benchmark is 0.75 mg/L (same as 750 µg/L); the 2017 draft update recommends increasing the acute criteria to 1,400 µg/L based on a pH value of 7, hardness value of 100 mg/L, and DOC value of 1 mg/L. Given the criteria is still in draft form, EPA proposes to use the same benchmark value for aluminum as listed in the 2015 MSGP, but may update it if the criteria is issued before EPA finalizes the 2020 MSGP.

Selenium

As in the 2015 MSGP, facilities in subsectors G2 and K1 are required to monitor for selenium in the 2020 MSGP. The NRC study also recommended that EPA allow facilities that repeatedly exceed the benchmark values for selenium to use the EPA-developed aquatic life criteria to evaluate water quality risk on a site-specific basis and discontinue comparisons to national benchmarks. In 2016, EPA updated ambient aquatic life criteria recommendations for selenium that included new chronic freshwater criteria of 1.5 µg/L for still waters and 3.1 µg/L for flowing waters (EPA, 2016a). EPA did not develop concentration-based acute criteria. EPA based these updated selenium criteria on the bioaccumulation of selenium and reproductive effects on fish species and translated the chronic criteria for short term or intermittent exposure instead of developing a specific acute criterion.

Allowing permittees who have repeatedly exceeded benchmarks to perform facility-specific analyses could provide additional information on any potential adverse effects that could occur based on specific facility conditions. However, the translation of the chronic criteria would require gathering additional data, including background base-flow concentration of selenium in the receiving water and the length of exposure. At this time, given the extra data collection associated with implementing the new criteria, EPA is not proposing to use the latest aquatic life criteria.

Request for Comment 14: In 2016, EPA updated recommended ambient aquatic life criteria for selenium that changed the chronic freshwater criteria from 3.1 µg/L to 1.5 µg/L for still or flowing waters. The 2016 recommended criteria accounts for the bioaccumulation properties of selenium and reproductive effects on fish species. It also includes a translation of the chronic criteria for short term or intermittent exposure in lieu of acute criteria. The translation of the chronic criteria to an appropriate benchmark must be calculated based on site-specific considerations (i.e., background base-flow concentrations of selenium and length of exposure) in the receiving waterbody. EPA requests comments on whether the 2020 MSGP should allow operators that repeatedly exceed the selenium benchmark values to use the recommended 2016 aquatic life criteria to evaluate water quality risk on a site-specific basis and discontinue comparisons to national benchmarks.

Arsenic

EPA proposes that subsectors A2, G2, and K1 perform benchmark monitoring for arsenic. The benchmark value in the 2015 MSGP is 0.15 mg/L (=150 µg/L) for freshwater and 0.069 mg/L (=69 µg/L) for saltwater. These values were selected based on concerns about near-coastal freshwater discharges flowing quickly into sensitive saline waters, which have a saltwater acute aquatic criteria value of 0.069 mg/L. The NRC recommended that EPA base the value on the acute aquatic life criterion of 340 µg/L unless EPA can justify why arsenic in stormwater from freshwater in near-coastal setting is of concern or until it develops a criterion based on intermittent exposure. EPA proposes to continue using the chronic freshwater criteria for setting the arsenic benchmark given that it prefers not to weaken a discharge requirement unless good scientific evidence exists that a pollutant is less toxic than previously believed. This is not the case with arsenic. Furthermore, arsenic toxicity increases substantially in saline waters. Since many permitted facilities are located in coastal states, and their discharge may reach saline waters quickly, EPA proposes to use the chronic criteria for arsenic to protect these estuarine environments.

Request for Comment 15: EPA requests comment or any information related to updating the arsenic freshwater benchmark threshold based on the recommended acute criterion of 340 µg/L rather than the chronic criterion of 150 µg/L and specifically any concerns related to near-coastal freshwater discharges flowing into sensitive saline waters.

Cadmium

The 2015 MSGP required subsectors G2 and K1 to perform benchmark monitoring for cadmium. EPA based the 2015 MSGP benchmark threshold on the 2001 acute aquatic life criterion that was hardness-dependent for freshwater and 0.04 mg/L for saltwater. Since then, EPA updated this criterion in 2016 to 1.8 µg/L to represent the best science available by accounting for new laboratory tests, including the effects of total hardness on cadmium toxicity and included 75 new species and 40 new genera in the testing process. EPA proposes to update this benchmark value to match the new criterion.

Request for Comment 16: EPA requests comment on updating the benchmark value for cadmium to be based on the updated recommended 2016 acute chronic life criteria.

Magnesium

The 2015 MSGP required subsector K1 to monitor for magnesium and included a benchmark value of 0.064 mg/L. The NRC study recommended that EPA remove the magnesium benchmark from the 2020 MSGP since it is a “natural component of surface and groundwater and does not appear to be toxic to a majority of aquatic organisms at concentrations likely to be encountered in most waters” (NAS, 41). Significant evidence does not exist to indicate adverse impacts of aquatic organism and EPA does not provide an aquatic life criterion for magnesium. Magnesium concentrations present in stormwater are not anticipated to be toxic to most aquatic organisms⁶. EPA could not find any information to support continuing to require this benchmark parameter and therefore proposes to remove magnesium as a benchmark parameter in the 2020 MSGP.

Request for Comment 17: EPA requests comment or any information related to the acute effects of magnesium on aquatic organisms that would warrant retaining a magnesium benchmark in the 2020 MSGP.

Iron

In the 2015 MSGP, EPA required subsectors C1, C2, E2, F2, G2, H1, L2, M1, N1, O1, Q1, and AA1 to monitor for iron. The NRC study found few studies on the acute effects of iron on aquatic organisms and recommended that EPA no longer require an iron benchmark. EPA proposes to remove this benchmark.

Request for Comment 18: EPA requests comment or any information related to the acute effects of iron on aquatic organisms that would warrant retaining an iron benchmark in the 2020 MSGP.

Copper

The 2015 MSGP required subsectors A2, F2, F3, F4, G2, and N1 to monitor for copper. The NRC recognized EPA’s previous decision to not update the copper benchmark value because the 2007 aquatic ambient water quality criterion was based on the Biotic Ligand Model (BLM) and would place extra sampling burden on facilities because the facility would need to do additional sampling to acquire the site-specific water quality data needed by the BLM, such as hardness, pH, and dissolved organic carbon. The NRC study recommended that EPA allow facilities that repeatedly exceed the benchmark threshold to use the latest aquatic life criteria to evaluate water quality risk on a site-specific basis and discontinue comparisons to national benchmarks.

Request for Comment 19: EPA requests comments on whether the benchmark should change in the 2020 MSGP to allow facilities that repeatedly exceed the copper benchmark to use the latest recommended aquatic life criteria to evaluate water quality risk on a site-specific basis. Site-specific analysis would discontinue comparison to national benchmarks and use the latest recommended criteria equations for calculating toxicity criteria based on short-term exposure using additional water chemistry and/or flow data.

Polycyclic Aromatic Hydrocarbons (PAHs)

Applicable MSGP Sub-Sector	Activity Represented	Contributing SIC Codes ¹	PAH Pollutant Load (kg/year)
C5	Industrial Organic Chemicals; Petroleum Refining	2865, 2869, 2911	131,073 ²

⁶ van Dam, R. A., A. C. Hogan, C. D. McCullough, M. A. Houston, C. L. Humphrey, and A. J. Harford. 2010. Aquatic toxicity of magnesium sulfate, and the influence of calcium, in very low ionic concentration water. *Environmental Toxicology and Chemistry* 29(2):410 – 421.

Applicable MSGP Sub-Sector	Activity Represented	Contributing SIC Codes ¹	PAH Pollutant Load (kg/year)
Q1	Water Transportation Facilities	4491, 4493	6,351 ³
C4	Plastics Materials and Synthetic Resins, Synthetic Rubber, Cellulosic and Other Manmade Fibers Except Glass	2821, 2822	3,270 ⁴
F1	Steel Works, Blast Furnaces, and Rolling and Finishing Mills	3312, 3313, 3317	628 ⁵
C2	Industrial Inorganic Chemicals	2812, 2813, 2819	491 ⁶
C3	Soaps, Detergents, and Cleaning Preparations; Perfumes, Cosmetics, and Other Toilet Preparations	2843	287
Y2	Miscellaneous Plastic Products; Musical Instruments; Dolls, Toys, Games, and Sporting and Athletic Goods; Pens, Pencils, and Other Artists' Materials; Costume Jewelry, Costume Novelties, Buttons, and Miscellaneous Notions, Except Precious Metal; Miscellaneous Manufacturing Industries	3081	282
P1	Railroad Transportation; Local and Highway Passenger Transportation; Moto Freight Transportation and Warehousing; United States Postal Service; Petroleum Bulk Stations and Terminals	4011, 4013, 4213, 4226, 4231, 5171	253 ⁷
A2	Wood Preserving	2491	251
A1	General Sawmills and Planing Mills	2421	206
AC1	Computer and Office Equipment; Measuring, Analyzing, and Controlling Instruments; Photographic and Optical Goods, Watches, and Clocks; Electronic and Electrical Equipment and Components, Except Computer Equipment	3624	164
D2	Miscellaneous Products of Petroleum and Coal	2992, 2999	90
C1	Agricultural Chemicals	2873	46
I1	Crude Petroleum and Natural Gas; Natural Gas Liquids; Oil and Gas Field Services	133, 1321, 1389	11 ⁸
M1	Automobile Salvage Yards	5012	6.9
S1	Air Transportation Facilities	4581	4.9
F5	Primary Smelting and Refining of Nonferrous Metals; Secondary Smelting and Refining of Nonferrous Metals; Miscellaneous Primary Metal Products	3334, 3399	3.7 ⁹
AB1	Industrial and Commercial Machinery, Except Computer and Office Equipment; Transportation Equipment Except Ship and Boat Building and Repairing	3523, 3537, 3713, 3714, 3721, 3724, 3743	1.4 ¹⁰

Several PAHs have been shown to be extremely toxic to and bioaccumulate in fish and aquatic invertebrates, and are known or probable human carcinogens. See Part 1.1.8 of this Fact Sheet for a detailed discussion of PAH toxicity. Although EPA does not have national recommended aquatic life criteria for individual or total PAHs, some states have developed criteria for certain individual PAHs (for example, Illinois, Kansas, Colorado, and Arizona). In addition, EPA does not have any PAH benchmark monitoring requirements for

any sector under the MSGP. The NRC study recommended that EPA collect data or require monitoring related to PAHs in the MSGP to determine an adequate surrogate or if additional PAH monitoring is warranted (NRC, 33).

Some facilities covered under the MSGP use, handle, or generate chemicals and products in the course of their industrial activity that could release PAHs into the environment that will be exposed to stormwater. For example, facilities may pave loading dock areas and other surfaces used for industrial activities with coal-tar sealcoat that contains PAHs. Some facilities that process or use timber products may use creosote that contains PAHs to preserve or protect wood. Many facilities may use or handle petroleum or have vehicles or equipment that could spill or leak oils and grease that contain PAHs.

EPA conducted an industry analysis that looked at sectors/subsectors included in the 2015 MSGP that may have petroleum hydrocarbons at their facilities that could be exposed to stormwater. The analysis looked at industrial process wastewater discharges as a proxy to identify industries that may use, handle, or generate PAHs. EPA identified the following subsectors and related activities that have total PAH loadings of greater than 1 kg/year:

1. Applicable SIC codes with reported total PAH loadings used in calculating the total annual pollutant load.
2. Petroleum refining (SIC code 2911); and industrial organic chemicals, not elsewhere classified (SIC code 2869) accounts for most of the loading identified in this sector (130,571 kg/year and 496 kg/year, respectively).
3. Marinas (SIC code 4491) account for most of the loading identified in this sector (6,379 kg/year).
4. Plastics materials, synthetic resins, and nonvulcanizable elastomers (SIC code 2821) accounts for most of the loading identified in this sector (3,265 kg/year).
5. Steel works, blast furnaces (including coke ovens), and rolling mills (SIC code 3312); and electrometallurgical products, except steel (SIC code 3313) account for most of the loading identified in this sector (589 kg/year and 39 kg/year, respectively).
6. Industrial inorganic chemicals, not elsewhere classified (SIC code 2819); and alkalis and chlorine (SIC code 2812) account for most of the loading identified in this sector (440 kg/year and 51 kg/year, respectively).
7. Petroleum bulk stations and terminals (SIC code 5171); railroads, line-haul operating (SIC code 4011); and special warehousing and storage, not elsewhere classified (SIC code 4226) account for most of the loading identified in this sector (146 kg/year, 85 kg/year, and 22 kg/year, respectively).
8. Oil and gas field services, not elsewhere classified (SIC code 1389); and crude petroleum and natural gas (SIC code 1311) account for most of the loading identified in this sector (9 kg/year and 2 kg/year, respectively).
9. Primary production of aluminum (SIC code 3334) accounts for most of the loading identified in this sector (3 kg/year).
10. Aircraft engines and engine parts (SIC code 3724) account for most of the loading identified in this sector (0.9 kg/year).

Implementing standard pollution prevention/source control methods and stormwater control measures as required by other parts of the permit could reduce PAHs in stormwater, but facilities may not design those controls to specifically address PAHs and without some

type of PAH-related monitoring, it may be difficult to determine the effectiveness of those measures on minimizing PAHs in stormwater.

Therefore, EPA could consider requiring monitoring for PAHs or surrogates if information and/or preliminary monitoring shared with EPA indicates it is warranted. However, EPA does not have recommended aquatic life criteria for either individual or total PAHs at this time. The 1995 and 2000 MSGPs included a benchmark for pyrene of 0.01 mg/L based on the laboratory derived minimum level (ML). As an alternative, EPA could consider requiring monitoring for total petroleum hydrocarbons (TPH), a variety of chemicals that come from crude oil. These chemicals can include hexane, jet fuels, mineral oils, benzene, toluene, xylenes, naphthalene, fluorene, other petroleum products, and gasoline components. Another alternative is to require monitoring for chemical oxygen demand (COD) as a surrogate for PAHs. The NRC study stated that COD could be a possible surrogate, but that more data could help to correlate PAH concentrations to COD. However, NRC noted that COD may not be specific or sensitive enough to detect moderate/low concentrations of PAHs. EPA proposes that all facilities conduct universal benchmark monitoring for pH, TSS, and COD. These parameters can be used as indicators of stormwater pollution and stormwater control effectiveness. See discussion above in this Part.

EPA evaluated options for developing a benchmark threshold for PAHs, TPH, or COD as a surrogate for PAHs for subsectors that have total PAH loadings of greater than 1 kg/year (A1, A2, C1, C2, C3, C4, C5, D2, F1, F5, I1, M1, P1, Q1, S1, Y2, AB1, and AC1) specified in the table above. After conducting the cost analysis for this proposed permit for the three options, EPA concluded that COD is the most cost-effective option as a surrogate, and since it is already being proposed under the new universal benchmark monitoring, no additional monitoring for PAHs is being proposed at this time. EPA requests comment on information and data related to specific sectors with petroleum hydrocarbon exposure that can release PAHs, any concentrations of individual PAHs and/or total PAHs at industrial sites, and the correlation of PAHs and COD. EPA may consider additional monitoring for PAHs in the final permit if it receives sufficient information to develop an appropriate benchmark threshold. For a full discussion and detailed analysis of the options and the costs, see Section E.3 of the Cost Impact Analysis for the Proposed 2020 Multi-Sector General Permit (MSGP) in the docket.

Request for Comment 20: EPA requests comment on information and data related to pollutant sources under all industrial sectors with petroleum hydrocarbon exposure that can release polycyclic aromatic hydrocarbons (PAHs) via stormwater discharges, any concentrations of individual PAHs and/or total PAHs at industrial sites, the correlation of PAHs and COD, and appropriate pollution prevention/source control methods and stormwater control measures that could be used to address PAHs.

The following table presents the permit's freshwater and saltwater benchmark values, and the source of those values. In most cases, EPA has not revised benchmarks since they were first published in the 1995 MSGP. However, EPA updated the benchmark thresholds to match the units that appear in the source documents as indicated. In these cases, the benchmark thresholds are not identified as being different than the final 2015 MSGP.

MSGP Benchmark Values and Sources					
Pollutant	2015 MSGP Benchmark	2015 MSGP Source (see footnotes)	Different in 2020 MSGP?	2020 MSGP Source (see footnotes)	2020 MSGP Benchmark
Total Recoverable Aluminum (T) ^a	0.75 mg/L	1	No	1	750 µg/L ^b

MSGP Benchmark Values and Sources						
Pollutant		2015 MSGP Benchmark	2015 MSGP Source (see footnotes)	Different in 2020 MSGP?	2020 MSGP Source (see footnotes)	2020 MSGP Benchmark
Total Recoverable Beryllium		0.13 mg/L	2	No	2	130 µg/L ^b
Total Recoverable Iron		1.0 mg/L	3	Yes	16	Removed
Biochemical Oxygen Demand (5-day)		30 mg/L	4	No	4	30 mg/L
pH		6.0 – 9.0 s.u.	4	No	4	6.0 – 9.0 s.u.
Chemical Oxygen Demand		120 mg/L	5	No	5	120 mg/L
Total Phosphorus		2.0 mg/L	6	No	6	2.0 mg/L
Total Suspended Solids (TSS)		100 mg/L	7	No	7	100 mg/L
Nitrate and Nitrite Nitrogen		0.68 mg/L	7	No	7	0.68 mg/L
Total Recoverable Magnesium		0.064 mg/L	8	Yes	16	Removed
Turbidity		50 NTU	9	No	9	50 NTU
Total Recoverable Antimony		0.64 mg/L	12	No	1	640 µg/L ^b
Ammonia		2.14 mg/L	13	No	1	2.14 mg/L
Total Recoverable Cadmium	Freshwater ^c	0.0021 mg/L	1	No, Criteria Updated ^d	15	1.8 µg/L ^b
	Saltwater	0.04 mg/L	14	No, Criteria Updated ^d	15	33 µg/L ^b
Total Recoverable Copper	Freshwater ^c	0.014 mg/L	1	No	1	14 µg/L ^b
	Saltwater	0.0048 mg/L	14	No	14	48 µg/L ^b
Total Recoverable Cyanide	Freshwater	0.022 mg/L	1	No	1	22 µg/L ^b
	Saltwater	0.001 mg/L	14	No	14	1 µg/L ^b
Total Recoverable Mercury	Freshwater	0.0014 mg/L	1	No	1	1.4 µg/L ^b
	Saltwater	0.0018 mg/L	14	No	14	1.8 µg/L ^b
Total Recoverable Nickel	Freshwater ^c	0.47 mg/L	1	No	1	47 µg/L ^b
	Saltwater	0.074 mg/L	14	No	14	74 µg/L ^b
Total Recoverable	Freshwater	0.005 mg/L	3	No	3	5 µg/L ^b

MSGP Benchmark Values and Sources						
Pollutant		2015 MSGP Benchmark	2015 MSGP Source (see footnotes)	Different in 2020 MSGP?	2020 MSGP Source (see footnotes)	2020 MSGP Benchmark
Selenium ^e	Saltwater	0.29 mg/L	14	No	14	290 µg/L ^b
Total Recoverable Silver	Freshwater ^c	0.0038 mg/L	1	No	1	3.8 µg/L ^b
	Saltwater	0.0019 mg/L	14	No	14	1.9 µg/L ^b
Total Recoverable Zinc	Freshwater ^c	0.12 mg/L	1	No	1	120 µg/L ^b
	Saltwater	0.09 mg/L	14	No	14	90 µg/L ^b
Total Recoverable Arsenic	Freshwater ^c	0.15 mg/L	3	No	3	150 µg/L ^b
	Saltwater	0.069 mg/L	14	No	14	69 µg/L ^b
Total Recoverable Lead	Freshwater ^c	0.082 mg/L	3	No	3	8.2 µg/L ^b
	Saltwater	0.21 mg/L	14	No	1	210 µg/L ^b
Chromium (III)	Freshwater	Not included	--	Yes	17	570 µg/L
Chromium (VI)	Freshwater	Not Included	--	Yes	17	16 µg/L
	Saltwater	Not Included	--	Yes	14	1,100 µg/L

^a New criteria for these parameters are currently under development. If criteria are finalized prior to the finalization of the 2020 MSGP EPA may revise these values based on the new criteria,

^b Values have been updated to match original units found in source documents.

^c These pollutants are dependent on water hardness where discharged into freshwaters. The freshwater benchmark value listed is based on a hardness of 100 mg/L. When a facility analyzes receiving water samples for hardness, the permittee must use the hardness ranges provided in Table 1 in Appendix J of the 2015 MSGP and in the appropriate tables in Part 8 of the 2015 MSGP to determine applicable benchmark values for that facility. Benchmark values for discharges of these pollutants into saline waters are not dependent on receiving water hardness and do not need to be adjusted.

^d The values for these pollutants are based on water quality criteria, but EPA updated to reflect 2016 "National Recommended Water Quality Criteria."

^e New criteria developed in 2016, but values are currently based on previous criteria.

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-01-0102006)
13. "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)
14. "National Recommended Water Quality Criteria." Acute Aquatic Life Saltwater (CMC) available at: <http://water.epa.gov/scitech/swguidance/standards/criteria/current/index.cfm#altable>
15. "Aquatic Life Ambient Water Quality Criteria: Cadmium, 2016" (EPA 820-R-16-002)
16. Improving the EPA Multi-Sector General Permit for Industrial Stormwater Discharges, 2019. Available at: <https://www.nap.edu/catalog/25355/improving-the-epa-multi-sector-general-permit-for-industrial-stormwater-discharges>
17. "National Recommended Water Quality Criteria Table." Available at: <https://www.epa.gov/wqc/national-recommended-water-quality-criteria-aquatic-life-criteria-table>

Part 4.2.1.3 Exception for Inactive and Unstaffed Sites

This Part allows for an exception from benchmark monitoring for facilities that are both inactive and unstaffed, when such facilities no longer have industrial activities or materials exposed to stormwater. EPA is retaining this exception because these facilities will not be contributing pollutants in stormwater discharges. These facilities could alternatively submit a No Exposure Certification terminating permit coverage. However, EPA realizes that some facilities plan to recommence industrial activity in the future and therefore may wish to keep active permit coverage. To qualify for this exception, a facility must maintain a signed certification with their SWPPP documentation (Part 6.5 of the permit) that indicates that the site is inactive and unstaffed, and that there are no industrial activities or materials exposed to stormwater. Facilities are not required to obtain advance approval for this exception. The 2020 MSGP retains the allowance for inactive and unstaffed sites in the mining industry (i.e., Sectors G, H, and J) to qualify for this exception where some industrial activities or materials are still exposed to stormwater. This provision is included for mining sites because of the large number of extremely remote sites in these sectors, and the impracticability/infeasibility of reaching these sites during qualifying storm events. However, these sites must still be identified in a SWPPP, and must still adopt control measures to minimize pollutant discharges and meet water quality standards.

The permit clarifies that if circumstances change and industrial materials or activities become exposed to stormwater or facilities become active and/or staffed, this exception no longer applies and operators must immediately begin complying with the applicable benchmark monitoring requirements under Part 4.2 as if they were in the first year of permit coverage, and notify EPA of the change in the NOI by submitting a "Change NOI" form. In the same way, if an operator does not qualify for this exception at the time it is authorized to discharge, but during the permit term the facility becomes inactive and unstaffed, and there are no industrial materials or activities that are exposed to stormwater, then the operator must notify EPA of this change in the "Change NOI" form. The operator may discontinue benchmark monitoring once they have done so, and have prepared and signed the statement described above concerning their qualification for this special exception.

Part 4.2.2 Effluent Limitations Monitoring

Numeric effluent limitations have been included in previous versions of the MSGP, based on national effluent limitation guidelines for certain industry-specific discharges (see Part 4.2.2). Consistent with minimum monitoring requirements for NPDES permit limits established at 40 CFR 122.44(i), operators must monitor for these parameters at least once each year for the duration of permit coverage. Numeric effluent limitations are specified in the sector-specific requirements in Part 8. Monitoring for all parameters must be conducted according to the procedures in Part 4.1 unless otherwise noted.

The 2020 MSGP retains the requirement for corrective action whenever there is an exceedance of a numeric effluent limitation. EPA also clarifies that, in contrast to benchmarks, an exceedance of an effluent limitation constitutes a violation of the permit. Failure to conduct required corrective action and follow-up monitoring as required in Part 4.2.2.3 is an additional violation.

Additionally, facilities that use coal simply for steam generation are not subject to numeric effluent limitations. Applicable control measures for these facilities must be selected, designed, installed, and implemented consistent with the stormwater control requirements established in Part 2 of the permit.

Part 4.2.2.2 clarifies that facilities subject to effluent limitation guidelines are required to monitor each discharge point discharging stormwater, and that the flexibility afforded for benchmark and impaired waters monitoring for substantially identical discharge points does not apply to effluent limitation guidelines monitoring.

Part 4.2.2.3 specifies follow-up monitoring requirements for pollutants that exceed any effluent limitation contained in the permit. EPA is maintaining the requirement to conduct follow-up monitoring as a way to ensure that facilities come back into compliance with applicable effluent limitations as soon as possible. While the NPDES regulations require a minimum of annual monitoring to demonstrate compliance with applicable effluent limitations, the vast majority of NPDES permits for industrial wastewater discharges require more frequent monitoring (up to daily for certain pollutants/sources in some instances). Monitoring at the regulatory minimum of once per year is appropriate for stormwater discharges, provided facilities remain in compliance with the numeric effluent limitations. However, it is appropriate to require more frequent monitoring once the effluent limitation is exceeded. Otherwise, there would be an additional year to wait to confirm that facilities have come back into compliance with the limitation. This is an unacceptably long period for facilities to be potentially out of compliance with the limitation. EPA notes that failure to complete follow-up monitoring and reporting within the stipulated timeframes constitutes additional violations of the permit, in addition to the initial effluent limitation violation.

Consistent with other types of effluent monitoring, the permit requires that operators report follow-up monitoring results to EPA through EPA's DMR system (see Part 7). Procedures and timeframes for reporting exceedances of numeric effluent limitations are described in Part 7.7 of the Fact Sheet.

Part 4.2.3 State or Tribal Required Monitoring

Where a state or tribe has imposed a numeric effluent limitation, has established a wasteload allocation, or has stipulated specific monitoring requirement(s) as a condition for certification under CWA Section 401, a minimum monitoring frequency of once-per-year has been included in the permit. This annual monitoring frequency applies only if a state or tribe does not specify an alternative monitoring frequency. Exceedances of state or tribal numeric effluent limitations are permit violations in the same way as exceedances of

effluent limitation guidelines-based limitations are violations. Both types of violations require the same corrective action and follow-up monitoring.

Part 4.2.4 Impaired Waters Monitoring

This Part contains provisions for monitoring discharges to water quality impaired receiving waters. The following is a step-by-step discussion on how an operator should determine appropriate monitoring requirements.

Operators must indicate in their NOI whether they discharge to an impaired water, and, if so, the pollutants causing the impairment, or any pollutants for which there is a TMDL. To assist operators in determining their receiving waters' information, NeT will automatically provide receiving waters' information and their impairment status based on the latitude and longitude of stormwater discharge points the operator provides on the NOI form. This information is also readily accessible from the state or tribal integrated report/CWA section 303(d) lists of waters.

If the discharge is to an impaired water, the monitoring requirements under Part 4.2.4 are triggered; otherwise, a facility has no obligations under Part 4.2.4. EPA specifies that facilities will be considered to discharge to an impaired water if the first water of the U.S. to which they discharge is identified by a state, tribe, or EPA pursuant to Section 303(d) of the CWA as not meeting an applicable water quality standard, or has been removed from the 303(d) list because the impairments are addressed in an EPA-approved or established TMDL, or is covered by pollution control requirements that meet the requirements of 40 CFR 130.7(b)(1). For discharges that enter a separate storm sewer system prior to discharge, the first water of the U.S. discharged to is the waterbody that receives the stormwater discharge from the storm sewer system.

When developing TMDLs, EPA and the states evaluate contributions from upstream segments and contributing waterbodies. As such, in some instances, upstream sources may be identified as a contributor to an impairment. Where EPA has reason to believe that permitted facilities have the potential to not meet applicable water quality standards, notwithstanding any indication in a facility's NOIs that it does not discharge to an impaired water, EPA may require the operator to perform additional monitoring and/or adopt additional control measures to address the potential contribution to the impairment, i.e., to ensure that the discharge is controlled as necessary to meet water quality standards. In these instances, EPA will notify the operator, in writing, of any additional obligations, including monitoring requirements, to meet such water quality-based effluent limit.

The permit requires facilities to monitor for all pollutants for which the receiving waterbody is impaired, with a few noteworthy exceptions as discussed below. For waters impaired by pollutants without an approved TMDL, monitoring is required where a standard analytical test method in 40 CFR Part 136 exists for the pollutant or surrogate parameter. If the pollutant for which the waterbody is impaired is suspended solids, turbidity or sediment/sedimentation, the parameter to be monitored is total suspended solids (TSS). If the pollutant of concern is an indicator or surrogate pollutant, then the pollutant indicator (e.g., dissolved oxygen) must be monitored. No monitoring is required when a waterbody's biological communities are impaired but no pollutant is specified as causing the impairment, or when a waterbody's impairment is related to hydrologic modification, impaired hydrology, or other non-pollutant (e.g., exotic species, habitat alterations, objectionable deposits). If a TMDL has been approved or established that applies to the discharge, EPA will notify the facility of any monitoring requirements based on any assumptions and requirements of the TMDL and any wasteload allocation for the discharge.

Part 4.2.4.1 Facilities Required to Monitor Discharges to Impaired Waters

The appropriate impaired waters monitoring frequency is determined based on whether there is an approved or established TMDL for the pollutant in the impaired water.

Discharges to impaired waters without an EPA-approved or established TMDL

For those facilities discharging to impaired waters without an approved or established TMDL, annual monitoring is required for each discharge point discharging to an impaired water. In the 2015 MSGP, operators had to monitor for all pollutant(s) causing the impairment or their surrogate(s). For the 2020 MSGP, EPA proposes that operators compare the list of industrial pollutants identified in Part 6.2.3.2 and any sector-specific benchmark monitoring pollutants to the list of pollutants for which the waterbody is impaired and for which a standard analytical method exists (see 40 CFR Part 136). EPA proposes that operators must monitor for pollutants that appear on both lists, including “indicator” or “surrogate” pollutants that clearly overlap those lists. This proposal potentially narrows the list of pollutants that operators must monitor for and ensures those pollutant parameters are associated with the industrial activity.

For the 2020 MSGP, EPA proposes that following three consecutive years of monitoring, impaired waters monitoring is no longer required if the pollutant of concern is not detected and is not expected to be present in the discharge, or is detected but the operator determined that the pollutant’s presence is caused solely by the natural background levels. This is a change from the 2015 MSGP where impaired waters monitoring could be discontinued after the first year of monitoring. This proposal balances the potential narrowing of the pollutant list with an extended timeframe for monitoring, with two additional samples over two additional years. The basis for discontinuing impaired waters monitoring under this Part must be documented and retained with the SWPPP.

Operators are advised to follow the same guidance provided in Part 5.2.4.2 of this Fact Sheet in determining if the natural background exception is applicable. Operators should consult their EPA Regional Office for help, if needed. The same exception may also be available to discharges of pollutants attributed solely to run-on sources. This exception is only available after discussing the situation and receiving guidance and approval from the appropriate EPA Regional Office.

Any monitoring requirements associated with impaired waters without a TMDL will be automatically prepopulated on a facility’s DMR forms in EPA’s electronic DMR tool based on the information provided on the NOI form.

EPA notes that, as with all five types of monitoring in the 2020 MSGP, operators can combine monitoring activities where requirements are duplicative (e.g., if effluent limitation guidelines- based limits and impaired water monitoring both require testing for the same parameter at the same discharge point).

Discharges to impaired waters with an EPA-approved or established TMDL

If a facility discharges to an impaired water with an approved or established TMDL, operators must monitor for the pollutant(s) for which the TMDL was written unless EPA informs the operator that they are not subject to such a requirement consistent with the assumptions and requirements of the TMDL and its wasteload allocation. EPA modified this requirement in the 2020 MSGP so that operators are assumed to be required to monitor for the pollutant(s) for which the TMDL was written, rather than relying on EPA to affirmatively inform the operator of such. The operator may contact the EPA Regional Office for monitoring parameters and frequency.

The monitoring requirements in Part 4.2.4 are intended to provide the states and EPA with further information on the impacts stormwater from permitted industrial facilities have on impaired waters, and to help ensure that the facilities are not causing or contributing to the impairment. For discharges to impaired waters that do not yet have an approved TMDL for pollutants of concern, these monitoring data are important for developing the TMDL to identify potential sources of the pollutants causing the impairment(s) as well as to identify sources that are not likely to contribute to the impairment(s) and thus may not be included in the TMDL or its wasteload allocation. They are also important for assessing whether additional water quality-based effluent limits, either numeric or qualitative, are necessary on a site-specific basis to ensure that facilities meet water quality standards. For discharges of pollutants to waters with an approved or established TMDL, monitoring data provides a means of ensuring that discharges are controlled consistent with the TMDL, as well as a useful tool to assess the facility's progress toward achieving necessary pollutant reductions consistent with any wasteload allocation.

Part 4.2.4.2 Exception for Inactive and Unstaffed Sites

Part 4.2.4.2 of the permit includes an exception from impaired waters monitoring for facilities that are both inactive and unstaffed, when such facilities no longer have industrial activities or materials exposed to stormwater. See Fact Sheet Part 4.2.1 for further information about this exception. This exception has different requirements for Sectors G, H, and J.

Part 4.2.5 Additional Monitoring Required by EPA

EPA may determine that additional discharge monitoring is necessary to meet the permit's effluent limits, specifically the permit's water quality-based effluent limit. In this case, EPA will provide the appropriate facility with a brief description of why additional monitoring is needed, locations and parameters to be monitored, frequency and period of monitoring, sample types, and reporting requirements.

Part 5 Corrective Actions and Additional Implementation Measures (AIM)

EPA is proposing new additional implementation measures that are consistent with a settlement agreement reached by parties and intervenors challenging the former permit.⁷ In addition to the proposal related to the settlement agreement, EPA also proposes that the corrective actions conditions in Part 5.1.1 and subsequent action deadlines in Part 5.1.2 remain unchanged from the 2015 MSGP. Those conditions in Part 5.1.1 include an unauthorized release, an exceedance of numeric effluent limits, failed or improperly installed SCMs, and visual assessments indicating water quality standards may be violated. If any conditions in Part 5.1.1 occurred, Part 5.1.2 requires that the operator implement timely fixes so that the condition triggering the issue is resolved.

Previous MSGPs also required corrective action in the event of an exceedance of a benchmark monitoring value. The 2015 MSGP's corrective action required the facility to review the SWPPP and adjust SCMs, depending on the facility's assessment, to bring any exceedances below the benchmark threshold.

The additional implementation measures will increase regulatory certainty for those who must comply with the permit while resolving environmental groups' concerns that the previous corrective actions were not sufficient to ensure that the permit controlled discharges as sufficient to protect water quality. In the challenge to the 2015 MSGP, petitioners posited that the 2015 MSGP's corrective action requirements for benchmark

⁷ J. Mot. to Hold Consol. Cases in Abeyance Pending Resp't's Performance Under Settlement Agreement, *Waterkeeper Alliance, Inc. v. U.S. EPA*, Docket No. 15-2091 (L), 15-2259 (CON), 15-2428 (CON), 15-3315 (CON).

exceedances were inadequate because they allowed facilities to comply with the permit by making only minimal SCM changes, or no changes, and often these changes did not lower pollutant levels below the benchmark thresholds, indicating poor stormwater control effectiveness. Petitioners also wanted repeated unsuccessful attempts by facilities to reduce pollutant levels below benchmarks to, at some point, be a permit violation. At the same time, some industry stakeholders wanted more certainty and clarity with respect the expectations under the permit. EPA's concurs that more specific responses to benchmark exceedances may be appropriate in certain situations. However, the Agency has always and continues to hold that benchmark thresholds by themselves are not water quality-based effluent limits (or any effluent limit) and therefore facilities whose responses to benchmark exceedances comply with the permit's requirements, but do not achieve sub-benchmark pollutant levels, cannot be in violation of the permit, because a benchmark exceedance is not definitive proof that a water quality standard has been exceeded. EPA is therefore proposing in the 2020 MSGP a clearer process to improve the previous permit's requirements for responding to benchmark exceedances.

The proposed improvement to the permit's provisions for responding to benchmark exceedances include a three-stage protocol that gets progressively more prescriptive with the required SCMs, and thus more protective, when quarterly monitoring results exceed or repeatedly exceed benchmark values. There are three stages of response, known in the 2020 MSGP proposal as "Additional Implementation Measures" or "AIM"; so-named to bolster EPA's long-held position that benchmark exceedances alone are not permit violations nor do they signify a condition that is in violation of the permit. The 3-tiered AIM protocol would be triggered after a facility has either a single egregious exceedance of a benchmark value (e.g., greater than 4 or 8 times the benchmark), or high levels of quarterly sampling average exceedances. The proposed AIM requirements apply on parameter-specific basis and supplement, as opposed to supplant, the technology-based, water quality-based, and remaining provisions of the permit. Regarding annual averages, their calculation (i.e., the clock) is reset upon triggering and complying with each tier individually above.

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

Specific details about each AIM tier are discussed further below.

Part 5.1 Corrective Action

Part 5.1.1 Conditions Requiring SWPPP Review and Revision to Ensure Effluent Limits are Met

As discussed above, EPA is proposing that the corrective actions conditions in Part 5.1.1 and subsequent action deadlines in Part 5.1.2 remain unchanged from the 2015 MSGP. If operators find that any of the conditions in Part 5.1.1 of the proposed 2020 MSGP have occurred, they are required to review and revise their SWPPP to eliminate the condition so that the permit's effluent limits are met and pollutant discharges are minimized. Operators may become aware of these conditions through an inspection, monitoring, or other means, or if EPA informs the operator of the condition(s).

The SWPPP review should focus on sources of pollution, spill and leak procedures, non-stormwater discharges, selection, design, installation and implementation of control

measures. Part 5.1 of the proposed 2020 MSGP specifies the following conditions requiring review and revision to ensure effluent limits are met, which are identical to the correction action triggering conditions in the 2015 MSGP:

- An unauthorized release or discharge (e.g., spill, leak, or discharge of non-stormwater not authorized by the MSGP or another NPDES permit) occurring at the facility.
- A discharge that violates a numeric effluent limitation listed in Table 2-1 and/or in the Part 8 sector-specific requirements.
- Control measures that are not stringent enough for the discharge to meet applicable water quality standards or the non-numeric effluent limits in the permit.
- Where a required control measure was never installed, was installed incorrectly, or not in accordance with Parts 2 and/or 8, or is not being properly operated or maintained.
- Whenever a visual assessment shows evidence of stormwater pollution (e.g., color, odor, floating solids, settled solids, suspended solids, foam).

Part 5.1.2 Deadlines for Corrective Actions

The proposed 2020 MSGP includes specific deadlines for taking corrective actions to remedy deficiencies. These proposed deadlines remain largely unchanged from the 2015 MSGP. The time limits in Part 5 are those that EPA considers reasonable for making the necessary repairs or modifications and are included specifically so that inadequacies are not allowed to persist indefinitely.

When conditions exist that trigger corrective action, a facility must immediately take (i.e., on the same day the condition was found) all reasonable steps to minimize or prevent pollutant discharges until the operator can implement a permanent solution

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

The proposed 2020 MSGP requires that the operator take subsequent action to implement a permanent solution no later than 14 calendar days from discovering the corrective action-triggering condition (e.g., by installing a new or modifying an existing control or by completing any needed stormwater control repairs). This proposed requirement has not changed from the 2015 MSGP.

EPA does recognize that there may be circumstances in which immediate action to initiate corrective action may not be possible within the same day a corrective action condition is found. "All reasonable steps" does not necessitate taking action when it is unsafe to do so (e.g., due to inclement weather). EPA also recognizes that there may be circumstances where it is not feasible to complete needed corrective actions within 14 days, and therefore provides that operators may modify the schedule for completing the corrective action so that corrective action is taken as soon as practicable after the 14-day timeframe, and is completed no later than 45 days after discovery of the triggering condition. If the will take longer than 45-days to complete the corrective action, the permit also allows operators to take the minimum additional time necessary to complete the corrective action, provided that the operator notifies the EPA Regional Office. Operators must provide

a rationale for an extension of the timeframe, and a corrective action completion date to the EPA Regional Office, and also include this in their corrective action documentation.

EPA recognizes that identifying both the need to take corrective action and the appropriate modifications to the control measures will, in some cases, be an iterative process. Several storm events may be needed to determine how to fully resolve the triggering issue(s). For example, if a visual assessment indicates that the facility is discharging suspended solids in stormwater, an appropriate corrective action may be to immediately clean up any signs of visible sources of the pollutants on the site (e.g., through immediate sweeping or vacuuming of exposed surfaces), and then to review the SWPPP to identify additional potential deficiencies or pollutant sources. If poor housekeeping is suspected to be the cause, permittees may decide to implement a new schedule of increased sweeping or vacuuming within 14 calendar days. However, if a subsequent visual assessment indicates that suspended solids remain a stormwater pollution issue that would be a separate corrective action-triggering event. In such a case, operators would undertake the corrective action review process again in order to assess and correct other deficiencies that are suspected to be the cause, meaning that the corrective action deadlines in Part 5.1.2 would be reset.

EPA emphasizes that these timeframes are not grace periods within which an operator is relieved of any liability for a permit violation that may have triggered the corrective action. If the original inadequacy triggering a corrective action constitutes a permit violation, then that violation is not deferred or erased by the timeframe EPA has allotted for corrective action. In all cases, failing to take corrective action as required in Part 5 constitutes a permit violation separate and apart from any violation that the triggering event may have constituted.

Part 5.1.3 Effect of Corrective Action

The permit states that if the condition triggering the corrective action review is a permit violation (e.g., exceedance of a numeric effluent limitation), correcting it does not remove the original violation. Additionally, failure to take corrective action in accordance with Part 5 is a separate permit violation (in addition to any permit violation that may have triggered corrective action). EPA will consider the appropriateness and promptness of corrective action in determining enforcement responses to permit violations. This proposed provision is unchanged from the 2015 MSGP.

Part 5.1.4 Substantially Identical Discharge Points

If the event triggering corrective action is associated with a discharge point that has been identified as a "substantially identical discharge points" (see Parts 3.2.4.5 and 4.1.1), permittees must assess the need for corrective action for all related substantially identical discharge points. Any necessary changes to control measures that affect these other discharge points must also be made before the next storm event if possible, or as soon as practicable following that storm event. Any corrective actions must be conducted within the timeframes set forth in Part 5.1.2.

Part 5.2 Additional Implementation Measures (AIM)

As discussed above, EPA is proposing improvements to the permit's provisions for responding to benchmark exceedances. EPA is proposing a three-stage protocol that gets progressively more prescriptive with the required SCMs, and thus more protective, when monitoring results exceed or repeatedly exceed benchmark values. For the next proposed 2025 MSGP, EPA will evaluate the benchmark monitoring data submitted under this permit along with data on the AIM Tiers triggered by any benchmark exceedances to analyze the

effectiveness of the AIM response requirements (i.e., implementing more robust SCMs) on reducing benchmark exceedances. The following is a discussion of each proposed AIM tier.

Part 5.2.1 AIM Tier 1

Part 5.2.1.1 AIM Tier 1 Triggering Events

AIM Tier 1 has two proposed triggering events. The first trigger of AIM Tier 1 is based on a quarterly sampling annual average benchmark exceedance. Here, AIM is triggered when a four-sample average exceeds a benchmark value. If the facility takes less than four benchmark samples and the results are such that an exceedance of the four-quarter average is mathematically certain (i.e., if the sum of quarterly sample results to date is more than four times the benchmark value) then the facility has exceeded the benchmark, triggering AIM Tier 1. Using a different method of determining what would be an appropriate maximum level, e.g., based on the standard deviation for an assumed normal (Gaussian) distribution of analytes, EPA deemed to be overly complicated and would lead to too many compliance errors.

The second trigger of AIM Tier 1 is based on the same principle as the first trigger, only this time the exceedance that triggers AIM is a single sampling result that is more than four times the benchmark value. This means that even with three other samples achieving zero values, that single sample would still make the four-sample average exceed by up to but less than or equal to two times the benchmark value. If a single sample exceeds the benchmark value by more than 8 times, the operator would trigger AIM Tier 2.

Request for Comment 21: EPA requests comment on requiring an AIM Tier 1 trigger based on facility changes, i.e., if construction or a change in design, operation, or maintenance at the facility significantly changes the nature of pollutants discharged in stormwater from the facility, or significantly increases the quantity of pollutants discharged. A similar trigger was included in Part 4.2 of the 2015 MSGP as a condition requiring SWPP review to determine if modifications were necessary.

Part 5.2.1.2 AIM Tier 1 Responses

There are three proposed responses for any Tier 1 trigger. First the facility would need to immediately review existing control measures, SWPPP, and other on-site activities to see if any actions or SWPPP revisions are necessary. Examples of portions of the facility's control measures, SWPPP, and other on-site activities it should review include: sources of pollution, spill and leak procedures, non-stormwater discharges, and selection, design, installation, and implementation of your control measures. Secondly, after reviewing the control measures and SWPPP, the facility would install those additional implementation measures, such as a single comprehensive clean-up, a change in subcontractor, a modification or replacement of an existing SCM, and/or increased inspections, to bring the exceedances below the parameter's benchmark threshold in order to suspend the AIM process. However, a facility could determine that, after reviewing the control measures and SWPPP, that nothing further needs to be done to achieve lower pollutant levels. In this case, the facility would be required to document per Part 5.3 and include in the annual report why it expected its existing SWPPP and SCMs to bring exceedances below the parameter's benchmark threshold for the next 12-month period. With the variability of stormwater and the small sample set of monitoring results, it may be reasonable for the facility to conclude that the current control measures are performing appropriately and further monitoring will support that the facility's existing controls will achieve the necessary pollutant reductions. This response mirrors the 2015 MSGP's corrective action response requirements. The third response to an AIM Tier 1 trigger is that quarterly monitoring would continue into the next year. Even if AIM was triggered in the first quarter of the first year of monitoring, EPA proposes that the facility would first comply with AIM Tier 1 requirements, continue

monitoring for the remaining three quarters, and then continue monitoring into the following year.

Part 5.2.1.3 AIM Tier 1 Deadlines

EPA proposes that if any actions or modifications to the control measures are necessary from an AIM Tier 1 trigger that the operator would be required to implement those actions or modifications within 14 days. If doing so within 14 days is infeasible, the operator would be required to document per Part 5.3 why it is infeasible and then would be required to implement such actions or modifications within 45 days. EPA is proposing the 14-day deadline for AIM Tier 1 responses because achieving benchmark averages under the threshold to avoid further AIM requirements should provide the impetus to make timely changes, if deemed necessary.

Part 5.2.2 AIM Tier 2

The proposed AIM Tier 2 triggering events are either from continued or repeat benchmark exceedances after Tier 1 or by significant benchmark exceedances that are greater than Tier 1 (both annual average and single-sample). The first trigger for AIM Tier 2 is repeat benchmark exceedances from Tier 1, where two consecutive annual averages each exceed a benchmark value. The other two triggers for AIM Tier 2 are more significant benchmark exceedances that would cause the operator to immediately trigger Tier 2 and skip Tier 1. These triggers are two sampling events for a parameter within a two-year period being over four times the benchmark threshold; or a single sample being more than eight times the benchmark threshold (unless the operator immediately documents in per Part 5.3 that the single event was an aberration, how any measures with 14 days of such event will prevent a reoccurrence, and takes a sample during the next qualifying rain event that is either less than the benchmark threshold, in which case the operator does not trigger any AIM requirement based on the aberrant event, or less than 4 times but greater than 1 times the benchmark threshold, in which case the operator triggers Tier 1; however, an operator may only avail itself of the aberration demonstration opportunity one time per parameter per discharge point, which shall include substantially similar discharge points).

Request for Comment 22: EPA requests comment on whether it is appropriate to make the above exception for an "aberrant event" in proposed Part 5.2.2.1.c.i available to other AIM Tier levels and/or AIM triggering events. EPA requests comment on any additional action(s), analysis, or documentation that should be required as part of this exception and any appropriate or alternative timeframes for complying with the exception. For example, immediate mitigation so that there is no further discharge or chance of discharge of the pollutants of concern; documentation (including photographs) in an incident report that explains how this lone event was an aberration and how any permanent measures you implement will prevent a reoccurrence; and whether any incident report should be submitted to the EPA Region.

Part 5.2.2.2 AIM Tier 2 Responses

Exceedances of Tier 2 magnitude are likely to warrant mandatory fixes. Therefore, after Tier 2 is triggered, the Tier 2 response would require the operator to select and implement all feasible SCMs from the appropriate sector-specific Stormwater Control Measure Checklist(s) that applies to their facility, which are found in Appendix O of the permit. These checklists enumerate the types of industrial activities and pollutant sources typically found at regulated facilities, broken out by the MSGP's 29 sectors. For each activity/pollutant source, there are a suite of SCMs that an operator could implement to control discharges from the respective activities/pollutant sources. Checklist SCMs are mostly of the pollutant prevention type, along with basic stormwater treatment (e.g., inlet filters), and enhanced training and inspections. Because the SCM Checklists are intended to be as complete as possible, SCMs may be inappropriate, interchangeable or redundant, and thus not relevant

once the specific activity/pollutant source is adequately controlled. In addition, many of the SCMs may already be included in the operator's SWPPP as part of compliance with the MSGP's Part 2 effluent limitations.

To lower pollutant levels below benchmarks (to better protect water quality and enable operators to get out of the AIM process), EPA is proposing to require operators to select from the checklist(s) those SCMs best suited for their site-specific conditions, sources, and pollutants (if not already implemented) and to notate on their checklist whether the SCM is implemented. For those SCMs deemed redundant or not needed (e.g., due to already being present, not having the specific activity/pollutant source at the site, source is not exposed to stormwater, some other SCM is providing the same function, etc.), the operator must indicate why the SCM is not being selected. This helps ensure that SCM selections are made with rigor and completeness, yielding an effective SWPPP. The final response to an AIM Tier 2 trigger is that quarterly monitoring would continue into the next year.

Part 5.2.2.3 AIM Tier 2 Deadlines

The operator would be required to select and implement all feasible SCMs to comply with Tier 2 within 14 days and document per Part 5.3 how the measures will achieve benchmark thresholds. If the operator does not to implement an SCM from the checklist, then it would be required to document why it did not implement such measures per Part 5.3. If it is infeasible for the operator to implement a measure within 14 days, it may take up to 45 days to implement such measures, but would be required to document per Part 5.3 why it was infeasible to do so within in 14 days. EPA may also grant you an extension beyond 45 days based on an appropriate demonstration by the operator. While persistent high levels of pollutants should be mitigated as soon as possible, EPA acknowledges that operators may need more time for planning, designing, and funding purposes. After full implementation of the Tier 2-mandated SCMs, an operator must commence another cycle of quarterly benchmark monitoring for all discharge points. The substantially identical discharge points provision that normally reduces monitoring burdens no longer applies to ensure pollutant loads from all discharges are being mitigated.

Part 5.2.3 AIM Tier 3

The proposed AIM Tier 3 triggering events are either from continued or repeat benchmark exceedances after Tier 2 or by significant benchmark exceedances that are greater than Tier 1 and Tier 2 (both annual average and single-sample). The first two triggers for AIM Tier 3 mirror previous Tier triggers: repeat benchmark exceedances from Tier 2, where for a third year in a row the annual average exceeds a benchmark value; or a third single quarterly monitoring result within a three-year period is more than four times the benchmark value. A repeat of Tier 2 triggers again indicates the operator's responses to Tier 2 were ineffective and an even higher-level response is now necessary in Tier 3. There are two other triggers for AIM Tier 3 for more significant benchmark exceedances that would cause the operator to immediately trigger Tier 3 and skip Tiers 1 and 2: two sampling events for a parameter within a three-year period are each over 8 times the benchmark threshold; or four consecutive samples for a parameter are over the benchmark threshold and their average is more than two times the benchmark threshold.

Part 5.2.3.2 AIM Tier 3 Responses

The Tier 3 response would require an operator to implement one or more permanent, structural or treatment technology train appropriate for the pollutants of concern. Treatment removes pollutants from effluent rather than the more prevalent stormwater approach of pollution prevention. Structural controls could include building structures to prevent stormwater from being discharged. Treatment and structural controls are regarded as a last resort due to the complexity and cost to the operator and is proposed to be

mandated only when earlier attempts to lower pollutants via pollution prevention and other procedural changes fail to do so, or a single sample exceedance is so large that the average would be well above the benchmark. EPA believes very few operators will need to comply with Tier 3 after completing Tiers 1 or 2.

An exception EPA is proposing to AIM Tier 3 would be applicable when an operator has acquired sufficient data and generates an analysis that demonstrates that their discharges do not and will not result in any exceedance of a water quality standard. Computer models would likely be used to make such a case, such as SWMM, DR3M and HSPF. EPA proposes that an exception for feasibility at AIM Tier 3 is inappropriate because benchmark exceedances at AIM Tier 3 are substantially egregious to warrant the permanent control measures proposed to be implemented, that feasibility considerations are already accounted for in the previous AIM Tiers, and that industrial stormwater discharges are explicitly required to meet all provisions of CWA §301, including applicable water quality standards (CWA §402(p)(3)(A)).

Request for Comment 23: EPA requests comment on whether it is appropriate to make the above exception for a "discharges not resulting in any exceedance of water quality standards" in proposed Part 5.2.3.3.b available to other AIM Tier levels and/or AIM triggering events.

A second option is also available under Tier 3 to install infiltration or retention controls as a substitute or adjunct to permanent treatment controls, albeit this option is not always feasible. If the site-specific conditions are conducive to it, an operator can infiltrate stormwater discharges via a retention pond or an underground injection well, or retain the discharge on site using green infrastructure. The intent of this option is simply to not discharge pollutants offsite. There are numerous obstacles to using of this option, such as aquifer impacts, hydrologic connectivity to water bodies, and the type of pollutants of concern. EPA intends to develop guidance on determining the feasibility of an infiltration/retention approach and how to implement it for industrial stormwater discharges. Because this is a new approach and the potential for adverse impacts to groundwater, EPA is proposing that operators who intend to invoke this Tier 3 alternative would be required to submit their analysis to the EPA Regional Office for approval, showing their infiltration controls would be appropriate, safe, in compliance with other laws and regulations, and effective in lieu of treatment for the high pollutant discharges. The final response to an AIM Tier 3 trigger is that quarterly monitoring would continue into the next year.

Part 5.2.3.3 AIM Tier 3 Deadlines

EPA is proposing that installation of appropriate treatment control measures would be required to be completed within 30 days of the Tier 3 triggering event. If not feasible within 30 days, the operator may take up to 90 days to install such measures, documenting per Part 5.3 why it is infeasible to install the measure within 30 days. EPA may also grant an extension beyond 90 days based on an appropriate demonstration by the operator. If after AIM Tier 3 compliance, the operator continues to exceed the benchmark threshold for the same parameter, EPA may require you to apply for an individual permit.

Part 5.2.4 AIM Exceptions

The proposed AIM protocol has two proposed exceptions that could allow an operator to be relieved of compliance with AIM requirements at any AIM Tier level. These exceptions are carry-overs from the 2015 MSGP: one being run-on from a neighboring source which elevates the operator's pollutant levels, which requires EPA approval before the operator can qualify for this exception, and the other being natural background levels of pollutants causing the elevated levels.

Details on AIM Exception due to Natural Background Pollutant Levels

EPA maintains from the 2015 MSGP the option for facilities to justify benchmark exceedances based on local natural background concentrations, with some modifications. Part 5.2.4.2 allows for an exception from AIM requirements and further benchmark monitoring when natural background levels are solely responsible for the exceedance of a benchmark threshold, provided that all the following conditions are met and the operator submits an analysis and documentation to the EPA Regional Office:

- The four-quarter average concentration of your benchmark monitoring results minus the concentration of that pollutant in the natural background is less than or equal to the benchmark threshold; and
- You document and maintain with your SWPPP, as required in Part 6.5, your supporting rationale for concluding that benchmark exceedances are in fact attributable solely to natural background pollutant levels. You must include in your supporting rationale any data previously collected by you or others (including literature studies) that describe the levels of natural background pollutants in your stormwater discharge. Natural background pollutants are those substances that are naturally occurring in soils or ground water. Natural background pollutants do not include legacy pollutants from earlier activity on your site, or pollutants in run-on from neighboring sources which are not naturally occurring, such as other industrial facilities or roadways.

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

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

This is a change from the 2015 MSGP's exception for natural background concentrations which required there to be no net facility contribution of the pollutant (i.e., the average concentration detected in discharges from all facility discharge points required to be monitored for four separate events minus the average natural concentration of the parameter could not exceed zero). EPA is proposing this change because the newly proposed method of subtracting natural background concentrations from the total benchmark exceedance is a less burdensome threshold for operators to meet and makes more sense as a method to determine the contributions of natural background pollutants.

Request for Comment 24: EPA requests comment on changing the threshold for the natural background exception throughout the permit from the 2015 MSGP, which required no net facility contributions, to the proposed 2020 MSGP method of subtracting natural background concentrations from the total benchmark exceedance to determine if natural background levels

are solely responsible for the exceedance. EPA requests comment on implications of this change and other factors the Agency should consider in proposing this change to the exception.

Request for Comment 25: EPA requests comment on other appropriate methods to characterize natural background pollutant concentrations. EPA is aware that the National Stormwater Quality Database (NSQD) is a collection of urban stormwater runoff data from municipal separate storm sewer systems (MS4s) and contains concentration data from urban open spaces, among other land use categories. EPA is concerned this dataset does not accurately represent pollutant concentrations that are attributable only to natural background sources and whether utilizing NSQD data to calculate an exception for industrial stormwater dischargers would be appropriate. EPA requests comment on the advantages and limitations of the NSQD dataset, whether it can be adjusted for use in the MSGP for calculating natural background concentrations, and how that could be accomplished.

This natural background exception could apply to parameters such as metals derived from natural mineral deposits and nutrients attributable to background soil, vegetation, or wildlife sources. Natural background levels cannot be attributed to run-on from non-natural sources such as other industrial sites or roadways (however, per Part 5.2.4.3, a facility may be eligible to discontinue monitoring for pollutants that occur solely from run-on sources). If background concentrations are not responsible for the benchmark exceedance, the facility will need to comply with the applicable AIM requirements, per Part 5.2. Facilities must use the same sample collection, preservation, and analysis methods for natural background monitoring as required for benchmark monitoring.

If facilities experience average benchmark exceedances for one or more pollutants during coverage under the 2020 MSGP or suspect that they might have benchmark exceedances caused entirely by natural background, they can begin monitoring the natural background pollutant concentrations from a non-human impacted reference site concurrently with required benchmark monitoring and compliance with AIM requirements. After monitoring for four quarters and adequately determining that exceedances are the result of pollutants present in the natural background, facilities may discontinue additional benchmark sampling if all conditions in Part 5.2.4.2 are met. The following is a list of the types of information that should be considered to support a rationale for the natural background exception:

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

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

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

The justification for this exception must be kept on-site with the facilities' SWPPP (see Part 6.5), and made available to EPA for concurrence. EPA may review the facility's determinations that a benchmark exceedance is based solely on natural background concentrations, and disallow the exception if the Agency finds the documentation inadequate. Facilities that have previously made a determination that benchmark exceedances are attributable solely to the presence of that pollutant in the natural background may be able to rely on a previous analysis and rationale for waiving compliance with AIM requirements and discontinuing benchmark monitoring under the 2020 MSGP. However, these facilities must conduct four quarters of benchmark monitoring in the first year of permit coverage under the 2020 MSGP and the results must continue to show that the four-quarter average concentration of the benchmark monitoring results minus the concentration of that pollutant in the natural background is less than or equal to the benchmark threshold. In such circumstances, there is no ongoing burden to comply with AIM requirements or to expend additional resources in justifying the rationale for meeting this exception, and benchmark monitoring can be discontinued for the permit term (except for universal benchmark monitoring of pH, TSS, and COD).

Details on AIM Exception due to Run-On

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

- After reviewing and revising your SWPPP, as appropriate, you should notify the other facility or entity contributing run-on to your discharges and request that they abate their pollutant contribution.
- If the other facility or entity fails to take action to address their discharges or sources of pollutants, you should contact your EPA Regional Office.

Part 5.3 Corrective Action and AIM Documentation

For any event described in Parts 5.1, 5.2.1.1, 5.2.2.1, or 5.2.3.1, operators must document basic information describing the event that triggers corrective action and their response to that event. As described previously, the permit establishes conditions for both immediate and longer response periods. Operators must maintain a copy of this documentation with their SWPPP as well as summarize this information in the annual report. These documentation requirements are substantially similar to the 2015 MSGP.

Request for Comment 26: EPA requests comment on methods for tracking AIM Tiers that may have been triggered by an operator. One approach could be to require the operator to self-select any AIM Tiers that have been triggered in the past quarter when submitting quarterly monitoring results per proposed Part 7.4.

Part 6 Stormwater Pollution Prevention Plan (SWPPP)

This Part requires operators to develop a SWPPP to document the specific control measures they will use to meet the limits contained in Part 2 and Part 8, if applicable, as well as to document 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 operators, inspectors, and other authorities in ensuring and documenting that effluent limits are met. Per Part 6.3, this documentation must be kept up-to-date (e.g., with inspection findings, after stormwater controls are modified). Failure to develop and maintain a current SWPPP is a recordkeeping violation of the permit, and is separate and distinct from a violation of any of the other substantive requirements in the permit, such as effluent limits, corrective action, inspections, monitoring, reporting, and sector- or state-specific requirements. For the proposed 2020 MSGP, EPA added a proposed clarification in this Part that facilities should consider the SWPPP to be a living document and that keeping the SWPPP up-to-date-also entails making revisions and improvements to their stormwater management program based on new information and experiences with wet weather events, including with major storm events.

To be covered under the MSGP, operators must complete a SWPPP prior to submitting an NOI for permit coverage (existing MSGP-permitted facilities must update their existing SWPPP). Doing so helps to ensure that operators have (1) taken steps to identify all sources of pollutant discharges in stormwater; and (2) implemented appropriate measures to control these discharges in advance of authorization to discharge under the new permit.

This Part contains most of the required elements to be documented in the SWPPP; however, sector-specific SWPPP documentation requirements are also included in Part 8 of the permit. Those permit elements that all facilities must document include: 1) the establishment of a stormwater pollution prevention team; 2) a description of the site; 3) a summary of potential pollutant sources; 4) a description of control measures; 5) monitoring and inspection procedures (including schedules); 6) documentation to support eligibility considerations under other federal laws; and 7) signature requirements.

Note that any discharges not expressly authorized in the MSGP cannot become authorized or shielded from liability under CWA section 402(k) by disclosure to EPA, state, or local authorities after issuance of this permit via any means, including the NOI to be covered by the permit, the SWPPP, during an inspection, etc.

Part 6.1 Part Person(s) Responsible for Preparing the SWPPP

This Part requires that the operator prepare the SWPPP in accordance with good engineering practices and to industry standards. Examinations of SWPPPs during inspections have found some SWPPPs to be generic and minimal rather than detailed and site-specific.

With respect to the SWPPP preparation standards requirement, the SWPPP may be developed by either the facility/operator itself or a contractor, but in all cases the person or party that develops the SWPPP must be a "qualified person", and the SWPPP must be certified per the signature requirements in Part 6.2.7. A "qualified person" is a person knowledgeable in the principles and practices of industrial stormwater controls and pollution prevention, and who possesses the education and ability to assess conditions at the industrial facility that could impact stormwater quality, and to assess the effectiveness of stormwater controls selected and installed to meet the requirements of the permit. The requirement for a qualified person to develop the SWPPP and then be certified provides accountability and increases the chance that SWPPPs will be available to and followed by facility personnel. Regardless of the SWPPP certification, EPA may still determine after reviewing a SWPPP that it is not in compliance with the requirements of Part 6.2. In this instance, EPA may require the SWPPP to be reviewed, amended as necessary, and certified by a Professional Engineer with the education and experience necessary to prepare an adequate SWPPP. For the mining sectors (G, H and J), the certifier may also be a Professional Geologist. This professional credentials requirement option is for severely

and/or persistently deficient SWPPPs. This requirement engenders no additional burden when the permit is fully complied with originally.

Part 6.2 Contents of Your SWPPP

The SWPPP must address the specific requirements in this Part. Operators may choose to reference other documents in their SWPPP, as appropriate, rather than recreating the same text in the SWPPP. However, when referencing other documents, operators are responsible for ensuring that their SWPPP and the other documents referenced together contain all the necessary elements to fully address the elements in Part 6.2. In addition, operators must ensure that a copy of the referenced document is in an accessible format that can be made immediately available to facility employees, EPA, a state or tribe, etc., per Part 6.4, such as Spill Prevention, Control and Countermeasure (SPCC) plans. Regardless of whether all required SWPPP components are combined into one document, operators should keep an index that identifies where individual SWPPP components are addressed.

Part 6.2.1 Pollution Prevention Team

The operator must identify a qualified individual or team responsible for developing and revising the facility's SWPPP. These persons are responsible for implementing and maintaining the control measures to meet effluent limits, and taking corrective action and AIM responses where necessary. Personnel 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 covered. EPA expects most operators 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. Identification 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.

Part 6.2.2 Site Description

The SWPPP must describe the industrial activities, materials employed, and physical features of the facility that may contribute significant amounts of pollutants in stormwater discharges. The SWPPP must also contain both a general location map of the facility that shows where the facility is in relationship to receiving waters and other geographical features, plus a more detailed site map that contains information on facility/site characteristics that affect stormwater discharge quality and quantity. For areas of the facility that generate stormwater discharges associated with industrial activity that contain potentially significant quantities of pollutants (i.e., pollutant amounts that could cause a water quality standards exceedance), 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 must be identified. The site map must also include locations of such things as: control measures; receiving waters; stormwater conveyances, inlets and discharge points; potential pollutant sources; past significant spills or leaks; stormwater monitoring points; municipal separate storm sewer systems; and locations and sources of run-on to operators' sites (see the permit for a 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. A detailed site description and site map assists operators in identifying issues and setting priorities for the selection, design and implementation of measures taken to meet effluent limits, and in identifying potential changes in materials, materials management practices, or site features. It is also vital for executing proper inspections.

Part 6.2.3 Summary of Potential Pollutant Sources

This Part requires operators to identify the potential sources of pollutants from industrial activities that could result in contaminated stormwater discharges, unauthorized non-stormwater discharges, and potential sources of authorized non-stormwater discharges. "Stormwater discharges associated with industrial activities" is defined, pursuant to 40 CFR 122.26(b)(14), 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; 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 "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. "Stormwater discharges associated with industrial activities" does not include areas located at a facility separate from the facility'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. Part 6.2.3 is only applicable to those portions of a facility covered under the permit, but the areas of the facility not covered under the MSGP should be identified and an explanation provided as to why such areas need not be covered.

Note that potential pollution sources include a facility's roof(s) and other surfaces that could accumulate pollutants originating from an industrial process and deposited through the air. Roofs, walls, etc., exposed to emissions from industrial areas can build up such pollutants over dry periods, which can be mobilized during a rain event or in snowmelt, so the operator needs to identify these areas and include them in the SWPPP. Likewise, industrial structures containing materials that could become pollutants discharged in stormwater (e.g., copper cladding on buildings or zinc from galvanized fences) must also be identified as potential pollutant sources.

For each area that may be a pollutant source at the site, permittees must describe the following:

Part 6.2.3.1 Activities in the Area

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

Part 6.2.3.2 Pollutants

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 exposed to stormwater in the three years prior to the date the operator prepares or amends their SWPPP. Also include any additional significant materials that may become a pollutant source that the operator plans to use during the permit's term.

EPA defines "significant materials", per 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 the CWA section 311(b)(2)(A); 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 Resource Conservation and Recovery Act (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. See 40 CFR 302.4 for the list of such hazardous substances.

Part 6.2.3.3 Spills and Leaks

The operator must document in the SWPPP where potential spills and leaks could occur that could contribute pollutants to stormwater discharges, and the corresponding discharge point(s) that could be affected by such spills and leaks. The pollutant list must include all significant materials that have been handled, treated, stored or disposed, and exposed to stormwater in the three years prior to SWPPP preparation or amendment. New owners/operators of existing facilities should try to identify any significant spills or leaks attributable to past owners (within reason). 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). Note that 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 per Part 2.1.2.4.

As required in Part 5.1.2 of the permit, the operator must document any spills or leaks that occur while covered under the permit. Documenting spills does not relieve operators 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.

Part 6.2.3.4 Unauthorized Non-Stormwater Discharges

This Part requires the facility to evaluate and document unauthorized non-stormwater discharges. The documentation must include: the date of any evaluation; a description of the evaluation criteria used; a list of the discharge points or onsite drainage points that were directly observed during the evaluation; if there are any unauthorized non-stormwater discharges, and, if so, the actions taken and/or control measures used to immediately eliminate those or documentation that shows the facility obtained an individual NPDES wastewater permit.

Acceptable test or evaluation techniques include, but are not limited to, dye testing, television surveillance, visual observation of discharge points or other appropriate locations during dry weather, water balance calculations, and analysis of piping and drainage schematics. A combination of these mechanisms may be appropriate 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. Where the operator discovers unauthorized non-stormwater discharges, the documentation must also include a description of how the facility immediately eliminated those discharges or a

documentation showing the facility obtained an individual NPDES wastewater permit for those discharges.

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 a facility identifies an authorized non-stormwater discharge, a facility must document in their SWPPP the location of that discharge and the appropriate control measures implemented to meet limits. In many cases, the same types of control measures 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 control measures.

Part 6.2.3.5 Salt Storage

The operator must identify in the SWPPP any storage piles containing salt, including piles that are only partially comprised of salt, used for deicing or other commercial or industrial purposes.

Part 6.2.3.6 Sampling Data

This Part requires existing MSGP-permitted facilities to summarize in their SWPPP all stormwater discharge sampling data collected during the previous permit term, as appropriate. Such a summary will support the identification of potential pollutants and pollutant sources at a facility and also the selection of source control practices to meet permit limits. The summary must include an adequately descriptive narrative and may also include data table/figures. Narrative summaries only are appropriate where available data is very limited or where data results and findings are otherwise easily and concisely conveyed in a brief paragraph. Summaries utilizing tables or charts are appropriate where more data are available. New dischargers must provide a summary of any available stormwater discharge sampling data that they may have, including the methods used to collect the data and the sample collection location.

Part 6.2.4 Description of Control Measures to Meet Technology-Based and Water Quality-Based Effluent Limits

Operators must describe in their SWPPP the control measures implemented at their site to achieve each of the effluent limits in Parts 2.1.2, 2.1.3, 2.2, 2.3, 8 (if applicable) and 9 (if applicable), and to address any stormwater run-on that commingles with discharges covered under the permit. The description of the control measures must include the location and type of control implemented, including how the Part 2.1.1 selection and design considerations were followed, and how they address the pollutant sources in Part 6.2.3. The control measures in Part 2.2 marked with asterisks are not required to be elaborated on in the SWPPP beyond the inclusion of the requirement language verbatim. Further discussion of this relaxed documentation requirement is provided in Part 2.1 Control Measures in this Fact Sheet.

Part 6.2.5 Schedules and Procedures**Part 6.2.5.1 Pertaining to Control Measures Used to Comply with the Effluent Limits in Part 2**

This Part specifies what schedules and operating procedures the operator must document in a SWPPP for the appropriate Part 2 effluent limits. Documenting these activities will help improve facility compliance with the requirements.

Good Housekeeping (see also Part 2.1.2.2). Document the schedule or the convention used for determining when pickup and disposal of waste materials occur, and also a schedule for routine inspections for leaks and conditions of drums, tanks and containers

Maintenance (see also Part 2.1.2.3). Document the preventative maintenance procedures and schedules, including for regular inspections, testing, maintenance and repair of all control measures.

Spill Prevention and Response Procedures (see also Part 2.1.2.4). Document the procedures for preventing and responding to spills and leaks, including notification procedures. Document the control measures for material handling and storage, and the procedures for preventing spills that can contaminate stormwater. Also specify cleanup equipment, procedures and spill logs, as appropriate.

Erosion and Sediment Control (see also Part 2.1.2.5). Identify any polymers and/or other chemical treatments used and the purpose.

Employee Training (see also Part 2.1.2.8). Document the content of the training and the frequency/schedule of training for employees who have duties in areas of industrial activities subject to this permit.

Part 6.2.5.2 Pertaining to Inspections and Assessments

This Part requires operators to document in their SWPPP the procedures to be followed for routine facility inspections (Part 3.1) and for quarterly visual assessments (Part 3.2). The SWPPP must include information such as person(s) or position(s) performing the inspections/assessments, the specific items to be covered by the inspections/assessments, and the respective schedules. Operators invoking the exception for inactive and unstaffed sites for quarterly inspections or visual assessments must provide information in the SWPPP to support such a claim.

Part 6.2.5.3 Pertaining to Monitoring

This Part requires operators to document in a SWPPP the specific monitoring requirements and procedures that they will follow. Operators must include information such as locations where samples are to be collected, person(s) or position(s) responsible for collecting samples, the frequency of sampling and the pollutants to be sampled, sampling protocols, natural background level information, if applicable, and procedures that will be followed to gather storm event data. Requiring this documentation helps ensure that operators know about their monitoring responsibilities and should improve facility compliance with the permit's requirements.

If operators choose to use the substantially identical discharge point exception in Part 3 for quarterly visual assessments or Part 4.2 for benchmark monitoring, they are required to describe in their SWPPP the locations of each of these discharge points, the general industrial activities conducted in the drainage area of each discharge point, the control measures being implemented for each discharge point, 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 discharge points are expected to discharge substantially identical effluents.

Part 6.2.6 Documentation to Support Eligibility Considerations Under Other Federal Laws

Part 6.2.6.1 Documentation Regarding Endangered and Threatened Species and Critical Habitat Protection

Identical to the 2015 MSGP, this Part requires SWPPP documentation that supports operators' endangered and threatened ("listed") species eligibility criterion selected per Part 1.1.4 and Appendix E, including: whether listed species are found in proximity to the facility; a description of any communication between the permittee and the U.S. Fish & Wildlife Service and/or the National Marine Fisheries Service (the Services); results of the listed species screening process; and, if applicable, a description of the measures implemented to protect the listed species. The operator must document this information to ensure it is properly eligible for permit coverage vis-à-vis endangered species and may be separately reviewed by EPA and/or the Services.

Part 6.2.6.2 Documentation Regarding Historic Properties

The SWPPP documentation required for endangered and threatened species and critical habitat protection is the same as in the 2015 MSGP that supports operators' historic properties eligibility determination per Part 1.1.5 and Appendix F, including: results of their historic property screening investigations; whether stormwater discharges would have an effect on a property listed or eligible for listing on the National Register of Historic Properties (NRHP), a summary of any consultation with the SHPO or THPO; and, if applicable, a description of the measures the operator will implement to avoid or minimize adverse impacts on historic properties. The operator must document this information to ensure it is properly eligible for permit coverage vis-à-vis historic properties and may be separately reviewed by SHPOs/THPOs.

Part 6.2.7 Signature Requirements

This Part requires the operator to sign and date the SWPPP consistent with procedures detailed in Appendix B, Subsection 11 (a standard permit condition for signatory requirements, pursuant to 40 CFR 122.22). Operators may appoint an authorized representative consistent with EPA regulations if they think it is more appropriate for someone else to sign the SWPPP certification, e.g., a member of the stormwater pollution prevention plan team. The signature requirement includes an acknowledgment that there are significant penalties for submitting false information.

Part 6.3 Required Modifications

This Part requires that the operator update the SWPPP whenever any of the triggering conditions for corrective action in Part 5.1 occur, or when a review following the triggering conditions in Part 5.1 indicates that changes to an operator's control measures are necessary to meet the effluent limits in the permit. The SWPPP must be signed and dated by an authorized representative each time it is modified. Note that failure to update the SWPPP is a recordkeeping violation, not a violation of an effluent limit. For example, if an operator changes its maintenance procedures, but fails to update its SWPPP to reflect these changes, a recordkeeping violation will result.

Part 6.4 SWPPP Availability

Identical to the 2015 MSGP, this Part requires that a complete and current SWPPP be accessible in any format at the facility and must be immediately available to facility

employees; EPA, a state, or tribe; the operator of an MS4 receiving discharges from the site; and representatives of the Services at the time of a site inspection. In addition, as described below, operators must make available either their SWPPP or certain information from their SWPPP to the public (except for any confidential business information (CBI) or restricted information [as defined in Appendix A]).

Enhanced transparency and public accessibility of required NPDES documentation are Agency priorities, and will better enable the goals and requirements of the CWA to be met. The difficulty of obtaining facility and discharge information often made it more difficult for citizens and groups to protect their local resources, and reduced the ability of state and federal agencies to provide program oversight. Timely, complete, and accurate information regarding potential pollutant sources, the types and concentration of receiving water pollution, stormwater control measures implemented, etc., are vital for protecting water quality and can provide a powerful incentive to improve compliance and performance. Operators who object to making SWPPP information publicly available may instead apply for an individual NPDES permit.

Part 6.4.1 SWPPP Posting on the Internet

The permit provides two options for meeting the requirement to make the operator's SWPPP or SWPPP information publicly available. Part 6.4.1 details the option to provide a URL of the operator's SWPPP location on their NOI form. Operators using this option must post their SWPPP on their own website or on an associated website, i.e., a relevant and easily discerned website such as a corporate or government website, where the facility submitting the SWPPP is identified on the homepage and facility information is presented on and easily accessed at that website. Operators must post an updated SWPPP at least once a year no later than 45 days after conducting the final routine facility inspection for the year required in Part 3.1.

After an NOI is submitted, the URL would be accessible via EPA's Integrated Compliance Information System (ICIS) and Enforcement and Compliance History Online (ECHO) System. Although CBI and restricted information may be withheld from the public, such information may not be withheld from EPA or the Services.

Part 6.4.2 SWPPP Information Provided on NOI Form

This Part provides the second option for meeting the requirement for operators to make their SWPPP or SWPPP information publicly available. For those facilities with SWPPPs not in a format that lends themselves to being put online or that lack a website to host it, salient SWPPP information can be extracted or summarized and input into the NOI per Part 7.3. Although not as complete as an entire SWPPP, the information required, such as the control measures and control measures implemented to comply with the non-numeric technology-based effluent limits required in Part 2.1.2, will be sufficient for stakeholders to be aware of what a facility is doing to protect local resources and comply with permit provisions. Operators must post an updated SWPPP at least once a year no later than 45 days after conducting the final routine facility inspection for the year required in Part 3.1.

Part 6.5 Additional Documentation Requirements

This Part includes a list of documents, findings, activities and information that the operator must keep with the SWPPP. EPA requires documentation of various implementation activities, such as reports of routine facility inspections and descriptions of corrective actions and/or AIM responses, after facilities are authorized to discharge. This documentation is useful both for facility personnel and EPA (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.

Part 7 Reporting and Recordkeeping**Part 7.1 Electronic Reporting Requirement**

Operators must comply with a number of different reporting requirements described throughout the 2020 MSGP. Part 7.2 includes a summary of all of the required information that the operator must submit. Part 7.1 requires all operators to submit all NOIs, NOTs, NECs, annual reports, and Discharge Monitoring Reports DMRs electronically, unless the EPA Regional Office has granted them a waiver. Waivers may only be granted on a case-by-case basis and must be based on one of the following conditions: (1) If the operator's headquarters is physically located in a geographic area (i.e., zip code or census tract) that is identified as under-served for broadband Internet access in the most recent report from the Federal Communications Commission; or (2) If the operator has significant issues regarding available computer access or computer capability. This requirement is consistent with EPA's proposed Electronic Reporting Rule (78 FR 46005).

Part 7.3 Additional SWPPP Information Required in an NOI

Part 6.4 requires operators to make some of the information in their SWPPP publicly available. The purpose of this requirement is to better inform the public and regulatory agencies about the nature of a facility's activities and permitted discharges that could impact receiving waters and about the facility's compliance with the permit. The permit provides two options for making this information publicly available. One option allows operators to post their SWPPP on the Internet and provide the URL on their NOI form, per Part 6.4.1. For those facilities with SWPPPs not in a format that lends itself to being put online or that lack a website to host it, EPA offers a second option under which salient SWPPP information can be extracted verbatim or summarized and included on the NOI form.

Although not as complete as an entire SWPPP, the information required in the NOI, such as the control measures and control measures implemented to comply with the non-numeric technology-based effluent limits required in Part 2.1.2, will be sufficient for stakeholders to get a good idea of what a regulated facility is doing to protect water resources and comply with permit provisions. If operators do not provide a SWPPP URL, their NOI form must include the following salient SWPPP information:

- a. Onsite industrial activities and other potential sources of pollutants, including potential spill and leak areas (see Parts 6.2.3.1, 6.2.3.3 and 6.2.3.5);
- b. Pollutants or pollutant constituents associated with each industrial activity exposed to stormwater that could be discharged in stormwater and any authorized non-stormwater discharges listed in Part 1.2.2 (see Parts 6.2.3.2);
- c. Stormwater control measures employed to comply with the non-numeric technology-based effluent limits required in Part 2.1.2 and Part 8, and any other measures taken to comply with the requirements in Part 2.2 Water Quality-Based Effluent Limitations (see Part 6.2.4). If polymers and/or other chemical treatment will be used, the polymers and/or chemicals used and the purpose must be identified;
- d. Schedules for good housekeeping and maintenance, and the schedule for all inspections required in Part 3 (see Parts 5.2.5.1 and 5.2.5.2).

Part 7.4 Reporting Monitoring Data to EPA

The purpose of submitting monitoring data to EPA is to document stormwater quality and identify potential water quality concerns to EPA, states, and stakeholders. *Monitoring requirements* (i.e., parameters required to be monitored and sample frequency) will be prepopulated on a facility's electronic DMR forms based on the information it reported on

the NOI form (through the NeT system). Accordingly, operators must report certain changes in monitoring frequency to EPA through the submittal of a "Change NOI" form in NeT. These monitoring changes include:

- All benchmark monitoring requirements have been fulfilled for the permit term;
- All impaired waters monitoring requirements have been fulfilled for the permit term;
- Benchmark and/or impaired monitoring requirements no longer apply because the facility is inactive and unstaffed;
- Benchmark and/or impaired monitoring requirements now apply because the facility has changed from inactive and unstaffed to active and staffed;
- For Sector G2 only: Discharges from waste rock and overburden piles have exceeded benchmark values;
- A numeric effluent limitation guideline has been exceeded;
- A numeric effluent limitation guideline exceedance no longer occurs.

Once monitoring requirements have been completely fulfilled, operators are no longer required to report monitoring results using EPA's electronic DMR reporting tool.

For benchmark monitoring, EPA notes that sampling results must be submitted to EPA no later than 30 days after receiving laboratory results for each quarter that benchmark samples are required to be collected per Part 4.2.1.2. For any of monitored discharge points that did not have a discharge within the reporting period, operators must report using EPA's electronic DMR reporting tool that there was no discharge for that discharge point no later than 30 days after the end of the reporting period.

Part 7.5 Annual Report

In the 2020 MSGP, EPA is retaining the requirement to submit electronically an annual report. This provision, along with SWPPP information being made accessible, will provide citizens and other stakeholders with more information about activities and discharges that could affect their receiving waters. The annual report must include a summary of the routine site inspection and visual assessment findings, corrective action and AIM responses documentation, and any noncompliance observed. Operators must submit annual reports (unless the EPA Regional office has granted a waiver from electronic reporting) by January 30th for each year of permit coverage.

Part 7.6 Exceedance Report for Numeric Effluent Limitations

As described in Part 4.2.2.3, operators must conduct follow-up monitoring any time a monitoring event identifies an exceedance of a numeric effluent limitation. Part 7.6 specifies that the operator must submit an exceedance report to the EPA Regional Office no later than 30 days after receiving laboratory results. Part 7.6 also identifies the specific information the operator must include in this report, which is necessary for EPA to assess the potential impact of this discharge on water quality and the adequacy of the operator's response in addressing the exceedance.

Part 7.7 Additional Standard Recordkeeping and Reporting Requirements

Operators must comply with a number of different reporting requirements in the 2020 MSGP. Specific reporting requirements are included in Part 7; however, additional standard reporting requirements are included in Part 9 applicable to certain states or tribes as well as standard reporting requirements detailed in Appendix B, Subsection 12. Part 7.7 includes a summary of all of the required reports from Appendix B, Subsection 12, and specifies which

reports the operator must submit to the appropriate EPA Regional Office. Reports required to be submitted include:

- 24-hour reporting (see Appendix B, Subsection 12.F) for any noncompliance which may endanger health or the environment. Any information must be provided orally within 24 hours from the time the operator became aware of the circumstances;
- 5-day follow-up reporting to the 24 hour reporting (see Appendix B, Subsection 12.F) - A written submission must also be provided within five days of the time the operator became aware of the circumstances;
- Reportable quantity spills (see Part 2.1.2.4) – The operator must provide notification, as required under Part 2.1.2.4, as soon as there is knowledge of a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity.
- Planned changes (see Appendix B, Subsection 12.A) – The operator must give notice to EPA promptly, no fewer than 30 days prior to making any planned physical alterations or additions to the permitted facility that qualify the facility as a new source or that could significantly change the nature or significantly increase the quantity of pollutants discharged;
- Anticipated noncompliance (see Appendix B, Subsection 12.B) – The operator must give advance notice to EPA of any planned changes in the permitted facility or activity which they anticipate will result in noncompliance with permit requirements;
- Compliance schedules (see Appendix B, Subsection 12.F) – Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit must be submitted no later than 14 days following each schedule date;
- Other noncompliance (see Appendix B, Subsection 12.G) – The operator must report all instances of noncompliance not reported in your monitoring report (pursuant to Part 7.1), compliance schedule report, or 24-hour report at the time monitoring reports are submitted; and
- Other information (see Appendix B, Subsection 12.H) – The operator must promptly submit facts or information if the operator becomes aware that they failed to submit relevant facts in the NOI, or that they submitted incorrect information in the NOI or in any report.

Part 7.8 Record Retention Requirements

This Part requires operators 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 MSGP. Part 7.8 describes recordkeeping requirements associated with activities covered under the permit. These include the original SWPPP and any modifications, to provide an 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. Operators must retain copies of these documents for a period of at least three years from the date that the operator's coverage under the permit expires or is terminated. The recordkeeping requirements in Appendix B, Subsection B.12 include a more general statement of the NPDES standard condition for records retention, but does not impose additional requirements on the operator above what is required in Part 7.8.

Part 8 Special Requirements for Discharges Associated with Specific Industrial Activities

Except for the changes to the monitoring requirements described in Part 4 of this Fact Sheet and the changes to individual sectors listed below, the general format and requirements in the sector-specific parts of the permit (Part 8) are similar to the 2015 MSGP.

Sectors G, H and J (Mining Sectors)

EPA proposes to clarify the language for Sector G monitoring requirements for discharges from waste rock and overburden piles at active metal mining facilities (Part 8.G.8.2 and 8.G.8.3). These particular monitoring requirements for Sector G under the 2015 MSGP have a unique, and potentially confusing, monitoring schedule. Part 8.G.8.2 for discharges from waste rock and overburden piles requires the operator to conduct benchmark monitoring once in the first year for the parameters listed in Table 8.G-2, and twice annually in all subsequent years of permit coverage for any parameters for which the benchmark has been exceeded. Part 8.G.8.3 requires operators to conduct additional analytical monitoring for other pollutants of concern listed in Table 8.G-3. Where a parameter overlaps for both Parts 8.G.8.2 and 8.G.8.3, the operator may use any monitoring results conducted for Part 8.G.8.2 to satisfy the monitoring requirement for that parameter for Part 8.G.8.3. Part 8.G.8.3 specifies that the monitoring schedule for this additional analytical monitoring should be quarterly monitoring as per Part 4.2.1.2 (Part 6.2.1.2 in the 2015 MSGP). Given the overlap in parameters the operator is required to monitor for in these two parts and the potential confusion about the monitoring schedules for the same parameter, EPA proposes to align the monitoring schedule for Part 8.G.8.3 to that of Part 8.G.8.2, that is, once in the first year and twice annually in all subsequent years of coverage under this permit for any parameters for which the benchmark has been exceeded. Radium and uranium analytical monitoring is also required in Part 8.G.8.3 but these parameters do not have corresponding benchmark values in Part 8.G.8.2. Without a benchmark value to compare to, the operator would be unable to determine if the parameter has been exceeded; therefore the proposed monitoring schedule of "once in the first year and twice annually in all subsequent years of coverage under this permit for any parameters for which the benchmark has been exceeded" would not make sense for these two parameters. EPA proposes to require the operator to monitor for radium and uranium quarterly for the first four full quarters of permit coverage commencing no earlier than [insert 90 days after permit effective date], after which the operator may discontinue monitoring for these two parameters. EPA also requests comment on suspending the analytical monitoring currently required for radium and uranium in Part 8.G.8.3 until a relevant water quality criterion and possible benchmark value can be developed.

Request for Comment 27: EPA requests comment on whether the newly proposed language in Part 8.G.8.3 clarifies the monitoring requirements for that part and if the proposed monitoring frequency is appropriate. EPA also requests comment on suspending the analytical monitoring currently required for radium and uranium in Part 8.G.8.3 until a relevant water quality criterion and possible benchmark value can be developed. EPA requests comment on any alternative or additional clarifications to the monitoring frequencies the agency should consider for this Part.

Sector I (Oil and Gas Extraction)

Facilities in Sector I (Oil and Gas Extraction) use many types of chemicals that could become sources of pollutants in stormwater discharges. These include diesel fuel, oil, solvents, drilling fluid, acids, and various chemical additives. The NRC study listed ammonia, lead, nickel, nitrate, zinc, and polycyclic aromatic hydrocarbons (PAHs) as pollutants associated with oil and gas extraction facilities. EPA proposes that facilities in Sector I have benchmark monitoring for ammonia, nickel, total recoverable lead, nitrate-nitrogen, total recoverable zinc, and hardness. EPA does not currently have recommended aquatic life

criteria for PAHs, so no specific PAH benchmark monitoring would be required. However, the NRC study suggested that COD could be used as a surrogate for PAHs and EPA recognizes that it could be a surrogate for other organic pollutants as well. Given that EPA proposes that all sectors, including I, have required universal benchmark monitoring for pH, TSS, and COD, EPA is not proposing to add a sector-specific benchmark for COD.

Sector P (Land Transportation and Warehousing)

Facilities in Sector P (Land Transportation and Warehousing) typically have areas for vehicle and equipment storage, cleaning, and maintenance, fueling, material storage, and locomotive sanding areas. They can use on-site chemicals like solvents, diesel fuel, gasoline, hydraulic fluids, antifreeze, and transmission fluids. Leaks and spills from petroleum-based products and chemicals can also contain PAHs. EPA proposes that facilities in Sector P have benchmark monitoring for lead, mercury, and hardness.

Sector R (Ship and Boat Building and Repair Yards)

Facilities in Sector R (Ship and Boat Building and Repair Yards) perform activities like fluid changes, mechanical repairs, engine maintenance and repair, parts cleaning, refinishing, paint removal, painting, fueling, metal working, welding, cutting, and grinding. These sorts of activities can include using solvents, oils, fuel, antifreeze, acid and alkaline wastes, abrasives, and paints and can create dust. EPA proposes that facilities in Sector R have benchmark monitoring for total recoverable chromium, total recoverable copper, total recoverable lead, total recoverable nickel, total recoverable zinc, and hardness.

Part 9 Permit Conditions Applicable to Specific States, Indian Country or Territories

Section 401 of the CWA (See also 40 CFR §122.44(d)(3) and §124.53(a)) provides that no federal license or permit, including NPDES permits, to conduct any activity that may result in any discharge into navigable waters shall be granted until the State/Tribe in which the discharge originates certifies that the discharge will comply with the applicable provisions of sections 301, 302, 303, 306, and 307 of the CWA. In the final permit, the requirements under this Part of the permit will provide state, U.S. territory and tribal requirements that these entities certify are necessary in order for the permit to include limits to achieve their water quality centers water quality standards.

Appendices

Appendix A Definitions and Acronyms

Appendix A provides definitions for permit-specific terms and a list of acronyms used throughout the permit.

The following definitions were revised in the permit:

- Green Infrastructure - the range of measures that use plant or soil systems, permeable pavement or other permeable surfaces or substrates, stormwater harvest and reuse, or landscaping to store, infiltrate, or evapotranspire stormwater and reduce flows to sewer systems or to surface waters. See Section 502 of the Federal Water Pollution Control Act (33 U.S.C. 1362).
- Primary Industrial Activity – EPA mistakenly omitted 122.26(b)(14)(xi) from the list of activities under this definition in the 2015 MSGP and is amending the definition in the permit to match 122.26(b)(14).

The following acronyms were added to the permit:

- AIM – Additional Implementation Measures

Appendix B Standard Permit Conditions

Appendix B includes the standard NPDES permit conditions consistent with 40 CFR 122.41. EPA did not propose any changes the standard permit conditions or to this appendix.

Appendix C Areas Covered

Appendix C specifies in what areas of the country the permit would apply, and includes specific corresponding permit numbers. EPA added areas where EPA is the permitting authority in Indian country within the state of New York and Region 4 to the areas eligible for permit coverage under the MSGP. Previously eligible operators in Region 4 worked with the Region directly to get industrial stormwater permit coverage. For the 2020 MSGP, those operators can seek coverage under EPA's MSGP.

Appendix D Activities Covered

Appendix D describes the types of activities covered by the permit by subsector, SIC or Activity Code, and activity represented. EPA did not propose any changes to activities covered under the MSGP or to this appendix.

Appendix E Procedures Relating to Endangered Species

Appendix E specifies the Part 1.1.4 eligibility criteria related to the protection of endangered and threatened ("listed") species and critical habitat and the procedures operators must follow to meet the criteria. See Fact Sheet discussion for Part 1.1.4 for proposed changes.

Appendix F National Historic Preservation Act Procedures

EPA did not propose any changes to the historic preservation requirements or this appendix. Section 106 of the NHPA requires Federal agencies to take into account the effects of Federal "undertakings" on historic properties that are either listed on, or eligible for listing on, the National Register of Historic Places. The term Federal "undertaking" is defined in the NHPA regulations to include a project, activity, or program of a Federal agency including those carried out by or on behalf of a Federal agency, those carried out with Federal financial assistance, and those requiring a Federal permit, license or approval. See 36 CFR 800.16(y). Historic properties are defined in the NHPA regulations to include prehistoric or historic districts, sites, buildings, structures, or objects that are included in, or are eligible for inclusion in, the National Register of Historic Places. This term includes artifacts, records, and remains that are related to and located within such properties. See 36 CFR 800.16(1).

EPA's issuance of the MSGP is a federal undertaking within the meaning of the NHPA regulations. To address any issues relating to historic properties in connection with issuance of the permit, EPA has included criteria for operators to use to certify that potential impacts of their covered activities on historic properties have been appropriately considered and addressed. Although individual applications for coverage under the general permit do not constitute separate Federal undertakings, the screening criteria and certifications provide an appropriate site-specific means of addressing historic property issues in connection with EPA's issuance of the permit.

Coverage under the 2020 MSGP is available only if operators certify that they meet one of the eligibility criteria following the procedures in Appendix F related to compliance with historic properties protection pursuant to the NHPA. These criteria are used to identify whether land disturbances associated with the installation or revision of subsurface stormwater control measures would affect properties listed in, or eligible for listing in, the

National Register of Historic Properties; and, if so, to determine the measures that will prevent or mitigate adverse effects to the properties.

EPA does not anticipate any effects on historic properties from the pollutants in the stormwater discharges covered by the 2020 MSGP. However, existing and new operators could undertake activities in connection with the 2020 MSGP that might affect historic properties if they install or new or modify control measures that involve subsurface disturbance. The overwhelming majority of sources covered under the 2020 MSGP will be operators that are seeking renewal of previous permit coverage. If these existing dischargers are not planning to construct new stormwater controls or conveyance systems, they have already addressed NHPA issues. In the 2015 MSGP, they were required to certify that they were either not affecting historic properties or they had obtained written agreement from the applicable SHPO, THPO, or other tribal representative regarding methods of mitigating potential impacts. EPA is not aware of any adverse effects on historic properties under the 2015 MSGP, nor the existence or need for a written agreement. Therefore, to the extent the 2020 MSGP authorizes renewal of prior coverage without relevant changes in operation, it has no potential to affect historic properties.

Where operators install or modify control measures that involve subsurface disturbance, the area of potential effect (APE) for the activities performed to comply with the permit, for historic preservation purposes, is limited to the location and depth of the earth disturbance associated with the installation or modification of the stormwater control measures. Operators need only consider the APE when doing the historic properties screening procedures to determine their eligibility criteria in Appendix F. This is the only scenario where activities authorized or undertaken in connection with the 2020 MSGP may affect historic properties. Since both new and existing dischargers could undertake such activities, all operators are required to follow the historic property screening procedures to document eligibility.

Appendix G Notice of Intent

Parts 1.3.2 and 7.1 require operators to use the electronic NPDES eReporting Tool system, or "Net" system, to prepare and submit NOIs. However, where operators request and receive approval from their EPA Regional Office, they are authorized use the paper NOI form provided in Appendix G on a case-by-case basis.

Operators must provide the following types of information on the NOI form: (1) Permit Information, (2) Facility Operator Information, (3) Facility Information, (4) Discharge Information, (5) SWPPP Information, (6) Endangered Species Protection, (7) Historic Preservation, and (8) Certification Information. The NOI form provides EPA with the information necessary to help determine whether industrial operators have issues that could affect their eligibility to discharge under the permit, and enables EPA to better match operators with their respective monitoring requirements and to prioritize oversight activities.

The NOI form has been updated the 2015 permit. New questions on the form include:

- Were you previously covered under the 2015 MSGP? (yes/no)
 - If no, do you have a pending enforcement action related to stormwater by EPA, a state, or a citizen (to include both notices of violation (NOVs) by EPA or a state and notices of intent to bring a citizen suit)? (yes/no)
- Will you, during the term of this permit, use coal-tar sealcoat on paved surfaces where industrial activities are located? (yes/no)

Appendix H Notice of Termination

Parts 1.4 and 7.1 require operators to use the NPDES eReporting Tool system, or “NeT” system, to prepare and submit their NOT when any of the conditions in Part 1.4.2 have been met. However, where the EPA Regional Office specifically authorizes operators to use a paper NOT form, those operators are required to complete and submit the paper form provided in Appendix H. EPA did not propose any changes to the NOT requirements or this appendix.

Appendix I Annual Reporting Form

Parts 7.1 and 7.5 require operators to use NeT to prepare and submit an Annual Report. However, where the EPA Regional Office specifically authorizes operators to use a paper Annual Report form, those operators must complete and submit the paper form provided in Appendix I. Information required consists of general information on the facility, summary findings from the routine facility inspections and quarterly visual assessments, and a description of corrective actions and/or AIM responses taken and the status of follow-up repairs, maintenance activities, or new SCMs installations for the previous year. EPA added the requirement to include AIM responses in the annual report form for the 2020 MSGP.

Appendix J Calculating Hardness in Receiving Waters for Hardness-Dependent Metals

Appendix J provides guidance to operators for determining their receiving water’s hardness level for hardness-dependent metals benchmark monitoring. EPA did not propose any changes this appendix.

Appendix K No Exposure Certification

Part 7.1 requires operators to use the NPDES eReporting Tool system, or “NeT” system, to prepare and submit a No Exposure Certification. However, where operators request and receive approval from their EPA Regional Office, they are authorized to use the paper NEC form provided in Appendix K on a case-by-case basis. The NEC form informs EPA that the industrial operator has certified eligibility for the no exposure permitting exemption. EPA proposes to change the acronym for the No Exposure Certification from NOE to NEC.

Appendix L List of Tier 3, Tier 2, and Tier 2.5 Waters

Appendix L provides a list of Tier 3, Tier 2, and Tier 2.5 waters to assist industrial operators in determining eligibility for coverage under Parts 1.1.6.3, and in complying with any applicable requirements in Part 2.2. EPA did not propose any changes this appendix.

Appendix M Discharge Monitoring Report Form

Part 7.1 requires operators to use EPA’s electronic DMR tool to prepare and submit their Discharge Monitoring Reports. However, where an operator requests and receives a waiver from their EPA Regional Office, the operator is authorized use the paper DMR form included in Appendix M. The DMR form provides EPA with the information necessary to determine compliance with monitoring requirements. EPA did not propose any changes this appendix.

Appendix N List of SIC and NAICS Codes

For informational purposes only, Appendix N contains all the 1987 Standard Industrial Classification (SIC) codes that are regulated under stormwater regulations, and matches them up with corresponding North American Industrial Classification System (NAICS) codes. NAICS codes have been in use since they replaced the SIC codes in 1997. There is not a one-to-one correspondence between the two systems, so a comprehensive list of regulated codes for both systems was generated. Such a list of codes and how these codes fit into the MSGP’s sectors may be of interest to stakeholders. EPA added the following SIC codes that were mistakenly omitted from pervious permits:

- Sector P: 4221-4225 (Farm Product Warehousing and Storage; Refrigerated Warehousing and Storage; and General Warehousing and Storage)
- Sector X: 2761 (Manifold Business Forms)
- Sector AA: 3442 (Metal Doors, Sash, Frames, Molding, and Trim Manufacturing).

Appendix O Summary of Permit Reports and Submittals

Appendix O provides a list of reporting and recordkeeping information that must be generated and, in many cases, submitted to the EPA. EPA did not propose any changes this appendix.

Appendix P List of CERCLA Sites

Appendix P provides a list of receiving waters associated with CERCLA sites to assist industrial operators in determining eligibility for coverage under Part 1.1.7. These receiving waters have been identified by the EPA Regional Office as the ones most likely to experience contamination/recontamination due to toxic pollutants (particularly pollutants for which the site became associated with CERCLA clean ups) being introduced/reintroduced into the receiving water. Currently, the eligibility criterion in Part 1.1.7 (Part 1.1.4.10 in the 2015 MSGP) only applies to facilities in EPA Region 10. EPA requests comment on whether this eligibility criterion should be applied in all EPA Regions for facilities that discharge to Federal CERCLA sites that may be of concern for recontamination from industrial stormwater discharges. EPA is also interested in information from the public that would assist the Agency in identifying such sites. EPA also requests comment on requiring such facilities to notify the EPA Regional Office a minimum of 30 days in advance of submitting the Notice of Intent (NOI) form.

Appendix Q Sector-Specific Stormwater Control Measure Checklists

EPA created Appendix Q for the proposed 2020 MSGP sector-specific stormwater control measure checklists. Implementing the controls in the checklists is required per proposed Part 5.2.2.2 for AIM Tier 2 responses.

EPA updated the tables containing potential pollutant sources and corresponding stormwater control measures (Table 2) in the sector-specific fact sheets available at <https://www.epa.gov/npdes/industrial-stormwater-fact-sheet-series>. EPA agreed in the Settlement Agreement to update the factsheets to incorporate emerging stormwater control measures that reflect best available technology economically achievable (BAT) and best conventional pollutant control technology (BCT), as revealed by current industry practice and as recommended by the NRC Study. These updates are provided in Appendix Q (Stormwater Control Measures) in the form of checklists. For the final permit, EPA will consider comments received and replace the current Table 2 contained in each of the sector-specific factsheets with the updated information in the checklists.

In updating the checklists, EPA reviewed potential pollutants from common industry activities, pollutant sources, and practices that could reduce pollutant discharges. For example, materials handling and storage was added as a pollutant source in the Sector G, H, J, W, and AB factsheets. Factsheets that had any vehicle-related pollutant sources now contain all three of the following pollutant sources and corresponding stormwater control measures: Vehicle and Equipment Storage, Vehicle and Equipment Maintenance, and Vehicle and Equipment Parking and Storage.