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Industrial Stormwater and the 2021 Multi Sector General Permit

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Agenda

- Introductions
- What is new in the Multi Sector General Permit?
- Evaluating existing operations
- Facility improvements to meet benchmarks

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What is the Multi Sector General Permit

- Federal regulations at 40 CFR 122.26(b)(14)(i)-(xi)
- Stormwater discharges associated with specific categories of industrial activity must have permit coverage
  - material handling equipment and activities
  - industrial machinery
  - raw materials
  - intermediate and final products
  - by-products
  - waste products

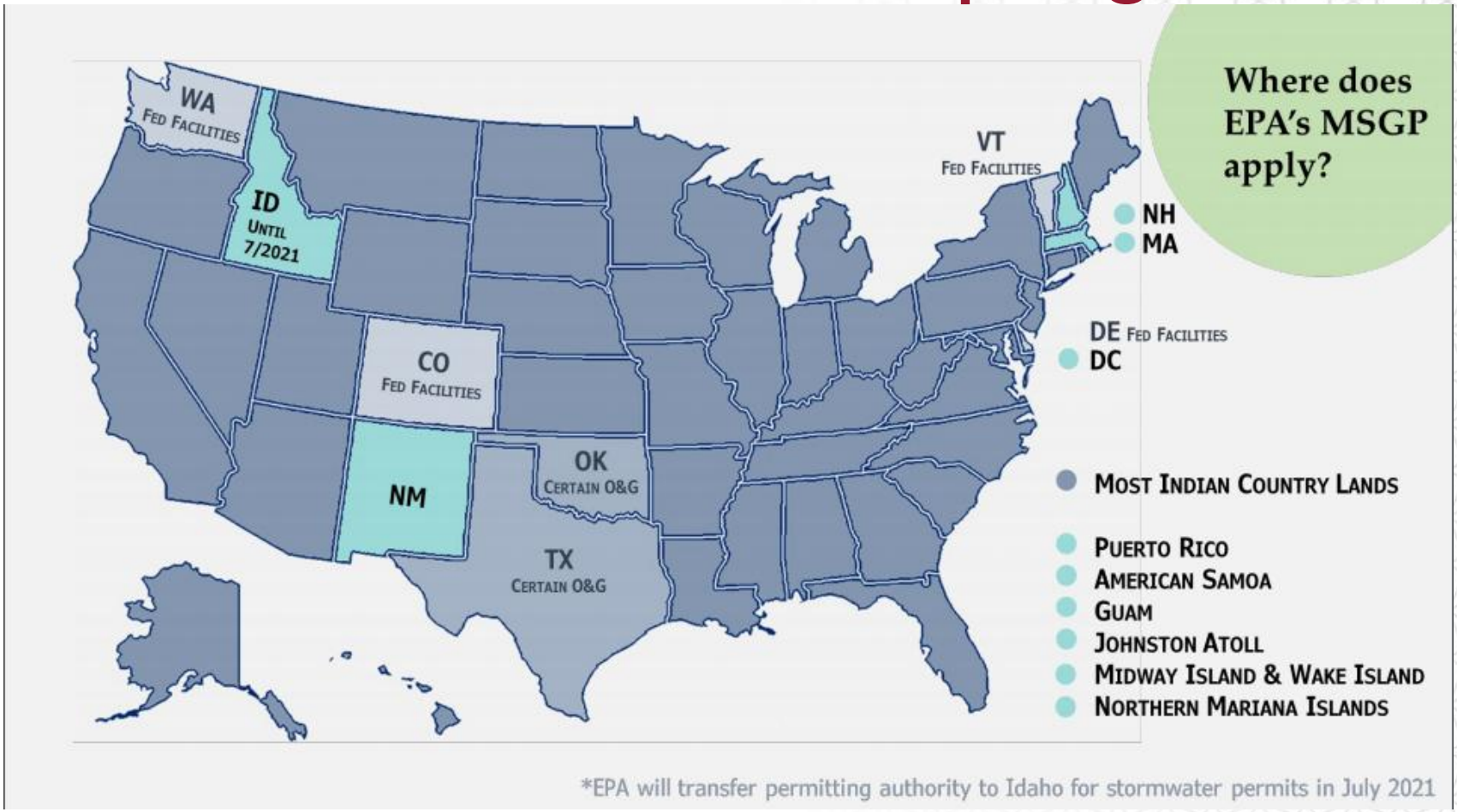
Sector Specific Requirements

- Industry sectors and benchmarks and pollution prevention are applied based on facility Standard Industrial Classification (SIC) codes
- Individual outfalls may have separate sets of benchmarks if multiple SIC codes apply to a facility

What is new in 2021

- The 2021 MSGP replaces the 2015 MSGP
- Facilities in EPA-administered locations would have to already submit Notice of Intent by May 30, 2021
- Other locations will have some time as requirements become incorporated into individual states stormwater permits.

EPA – administered programs



Source: EPA 2021

New MSGP Technical Requirements

- Changes to sampling and reporting frequency for indicators and benchmark pollutants
  - Many sectors will monitor quarterly for pH, TSS, and COD at each outfall
- Monitoring required in at least first year of coverage and fourth year of coverage
- More monitoring if a facility discharges to an impaired waterway or does not meet benchmarks
- Tiered corrective actions

New MSGP Administrative Requirements

- Stormwater Pollution Plan to be sent with Notice of Intent
- Public notification of corrective actions if serious benchmark exceedances occur
- Site signage requirements to indicate permit and SWPP coverage for the facility

Why the changes?

- 2015 lawsuit challenged the provisions of the existing MSGP
- 2016 settlement agreement directed EPA to make the MSGP more robust in terms of monitoring and enforcement
- 2021 final language is less restrictive than the 2020 draft permit

So what's the big deal?

- Historically, enforcement of stormwater has been mostly “toothless”
- Some states have narrative standards
- Other states have benchmarks, but only tied to “trying harder”
- Washington and California had provisions where exceedances triggered enforcement, similar to violation of a water quality standard
- 2021 EPA MSGP adds Additional Implementation Measures for benchmark exceedances

What are Additional Implementation Measures?

- AIMs are tied to a three-tiered approach to compliance monitoring
- Benchmark sampling (if required) is compared to sector specific values. If the annual average is below the benchmark after year 1, sampling can be discontinued until year 4.
- Benchmark exceedances trigger Additional Implementation Measures (AIMs) to try to correct the cause.

Example Benchmarks

Table 8.AA-2		
Subsector (You may be subject to requirements for more than one sector/subsector)	**Parameter**	**Benchmark Monitoring Concentration**
Subsector AA1. Fabricated Metal Products, except Coating (SIC 3411-3499; 3911-3915)	Total Recoverable Aluminum	1,100 µg/L
	Total Recoverable Zinc (freshwater)[2] Total Recoverable Zinc (saltwater)[1]	Hardness Dependent 90 µg/L
	Nitrate plus Nitrite Nitrogen	0.68 mg/L
Subsector AA2. Fabricated Metal Coating and Engraving (SIC 3479)	Total Recoverable Zinc (freshwater)[2] Total Recoverable Zinc (saltwater)[1]	Hardness Dependent 90 µg/L
	Nitrate plus Nitrite Nitrogen	0.68 mg/L

Example Benchmarks

Table 8.U-2.		
Subsector (You may be subject to requirements for more than one Sector / Subsector)	**Parameter**	**Benchmark Monitoring Concentration**
Subsector U1. Grain Mill Products (SIC 2041-2048)	Total Suspended Solids (TSS)	100 mg/L
Subsector U2. Fats and Oils Products (SIC 2074-2079)	Biochemical Oxygen Demand (BOD_5)	30 mg/L
	Chemical Oxygen Demand (COD)	120 mg/L
	Nitrate plus Nitrite Nitrogen	0.68 mg/L
	Total Suspended Solids (TSS)	100 mg/L

AIM Level 1

- When in baseline status, an annual average baseline is exceeded for one or more pollutants at one or more outfall.
- Facilities must:
  - Review adequacy of SWPP and stormwater quality control measures
  - Implement additional measures or take steps that original measures are being followed adequately
  - Continue monitoring until no exceedances
  - Complete within 14-45 days

AIM Level 2

- While in Level 1, another annual average exceedance occurs (or is mathematically certain)
- Facilities must:
  - Implement additional pollution prevention or good housekeeping measures
  - Continue monitoring until no exceedance
  - Complete within 14-45 days

AIM Level 3

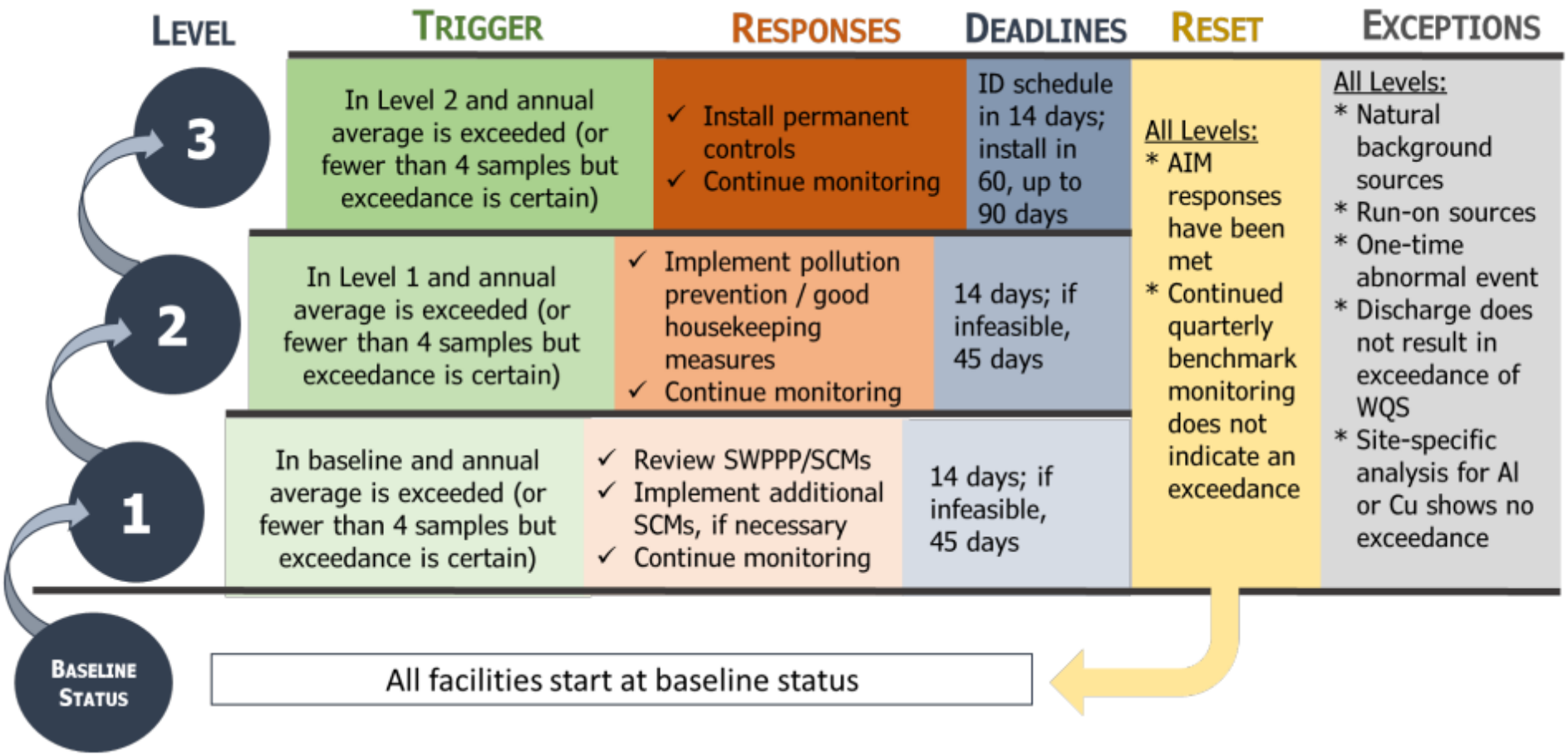
- While in Level 2, another annual average exceedance occurs (or is mathematically certain)
- Facilities must:
  - Install permanent structural changes to reduces sources and/or install stormwater treatment
  - Continue monitoring until no exceedance
  - Identify proposed facility improvements, install in 60-90 days

AIM Reset

- If all AIM level responses have been performed
- Quarterly monitoring is below benchmarks
- Return to baseline. Continued benchmark exceedances will proceed through level 1,2, and 3 as needed.

Exceptions to the AIM Levels

- Natural background pollutant sources
- Run-on from other sites
- One-time events that are demonstrable outliers
- Discharges that do not result in a violation of a water quality standard
  - Primarily where discharges are to larger perennial streams



Source: USEPA

What should you do to Prepare?

- Look at the 2021 MSGP, even if your state has their own permit.
- Look for your sector and the requirements associated with it
- Start working towards compliance now!

How much time do facilities have to prepare?

- States without benchmarks and/or corrective actions will likely implement with the next stormwater general permit cycle – 3-8 years
- This may seem long, but time flies!
- Starting early can make potential capital expenditures easier to absorb

First Steps

- Start looking at your stormwater quality now - begin sampling for benchmarks
- If you are in compliance, keep up the good work!
- If you are not in compliance, start looking for the source

Source Identification

- Look at your sampling procedure
  - Is your outfall accessible?
  - Are you stirring up sediment while collecting your sample?
  - Do you have off-site flows comingling with your stormwater?
  - Are you sampling the right type of storm event, and collecting your sample at the right time?
- Improving your outfall accessibility can quickly and cheaply enhance sample quality, as well as worker safety

Second Steps

- Begin working upstream from your sample point
- Collect samples from manholes / swales within the major sub-basins of your facility
- Try to correlate significant activity locations with high pollutant loads
  - Stockpiles
  - Material handling
  - Roof vents / stacks
- Consider biological sources

I found my sources, what next?

- Look for ways to reduce your sources – generally quickest and cheapest answer

Source Reduction

- Improved housekeeping / inspections
- Check performance of air pollution control equipment
- Move loading and stockpile areas under roof
- Summaries of sector specific requirements as well as suggestions for common Best Management Practices (BMPs) are found at: https://www.epa.gov/npdes/industrial-stormwater-fact-sheet-series

What do you do if you end up in AIM Level 3?

- Source reduction, housekeeping, training, and improved sampling will address many AIM 1 or AIM 2 situations
- Many industries will have difficulty complying with the benchmarks and will wind up in AIM Level 3.
- By starting early, you can minimize the cost of facility improvements under AIM 3

Select the right treatment systems

- Look for ways to reduce the volume of stormwater
- Match your treatment systems to your site
- Are your pollutants dissolved, or particulate?
- Are your pollutants organic or inorganic?
- The best treatment options combine aspects of equalization and treatment.

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Thank You!

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