

Second Board Workshop on the Draft Regional Municipal Separate Storm Sewer System (MS4) Permit

Municipal Stormwater Unit
Santa Ana Region



September 13, 2024

Workshop Agenda

- Status of development of the new Santa Ana Regional MS4 Permit
- Review of the bases for MS4 Permits
- General types of requirements for MS4 Permits
- General strategies for developing Permit requirements for Permittees
- How strategies are used to meet requirements for MS4 Permits
- Frequent comment topics

Status of development of the Regional MS4 Permit

- Draft MS4 Permit was released for public review on March 1, 2024
- Public was provided 120 days to submit their comments; ended July 3, 2024
- 36 comment letters were received
- Staff is preparing a Response to Comments; expected completion in the 4th quarter 2024

Basis of MS4 Permit Requirements

- Clean Water Act section 402(p) and implementing federal regulations
- Water quality control plans: Basin Plan and state-wide plans
 - Water quality objectives (WQOs) and beneficial uses
 - Total maximum daily loads (TMDLs)
 - Anti-degradation policy
- Precedential orders from the State Water Resources Control Board
- California Water Code

General requirements for MS4 Permits

1. Permit must require permittees to have a program to effectively prohibit certain kinds of non-stormwater discharges to the MS4
2. Controls to reduce the discharge of pollutants to the maximum extent practicable, including best management practices, control techniques and system, design, and engineering methods (MEP)

General requirements for MS4 Permits

The MEP standard calls for minimum control measures:

- a. Public education and outreach
- b. Municipal inspections
- c. New development and significant redevelopment
- d. Construction site
- e. Municipal facilities and activities
- f. Illicit discharge detection and elimination

General requirements for MS4 Permits

3. Receiving Water Limitations: Permittees must not cause or contribute to exceedances of water quality objectives
 - Found in statewide water quality control plans and regional basin plans
4. Water quality-based effluent limitations (WQBELs)
 - must be consistent with the assumptions and requirements of any available waste load allocations from adopted TMDLs
 - WQBELs can be narrative (BMP-based) or numeric
5. Monitoring and reporting requirements

General Strategies for developing Permit requirements

- Best Management Practices (BMP)-based approach
- Numeric Effluent Limitations (NELs)
- Permit uses a combination of both strategies

What is a BMP-Based Strategy?

1. Permit outlines programs that the permittee must undertake
2. Permit requires permittee to propose a plan for approval
3. Permittee must implement the proposed plan
4. Permittee must iteratively modify the programs and projects

BMP-Based Approach

- Must be designed to:
 - attain WQOs through Receiving Water Limitations; and
 - waste load allocations through TMDL-based requirements (WQBELs)
- BMP-based plans must include a schedule of actions with clear milestones and deadlines
 - Plans alone don't constitute compliance with Receiving Water Limitations or WQBELs

TMDL-based Requirements: Numeric Effluent Limitations (NELs)

- Most TMDLs have compliance dates for waste load allocations for MS4 Permittees
- Compliance dates for Board adopted TMDLs are in the Basin Plan
- USEPA adopted TMDLs don't typically have compliance dates
- TMDLs may also include tasks to be completed before the compliance date
 - can be included in permits as interim BMP-based requirements

Numeric Effluent Limitations (NELs)

- Most TMDLs have final compliance dates for MS4 Permittees
 - Unless the Basin Plan indicates otherwise, these waste load allocations are interpreted as NELs, effective after the compliance date
 - The Board must implement the Basin Plan and secure attainment of the waste load allocation according to the TMDL timeline and the assumptions and requirements of the TMDL.
- In other cases, the TMDL doesn't specify a compliance date
 - Interpreted as NELs with compliance required immediately

TMDL-based Requirements: Numeric Effluent Limitations

- Permits must include requirements that result in attainment of the waste load allocation
 - NELs are the best method
- Exceedance of an NEL does not always result in assessment of civil liability
 - Water Code allows the Boards to issue Time Schedule Orders (TSOs) as a temporary measure
 - May result in Mandatory Minimum Penalty if compliance cannot be demonstrated
- Commenters object to being subject to TSOs and prefer a BMP-based approach after the compliance date has passed.

Pros and Cons of the BMP-based approach

- Provides permittees with more flexibility and control to identify specific actions, schedules, and levels of effort
- Relies on objective measures of receiving water quality to assess the performance of BMPs and make iterative improvements

Pros

- Creates a disincentive for Permittees to specify actions and levels of effort in ways that are enforceable
- Relies on a clear process for analyzing and interpreting receiving water monitoring; ambiguities in the process may lead to conflicting interpretations
- Programs may not be responsive to monitoring results that show exceedances of receiving WQOs; instead, suggest that other sources/factors are the cause
- Permits have lacked a process for substantiating other sources/factors and accepting Permittees' claims

Cons

Pros and Cons of the BMP-based approach

- BMP violations are more easily and quickly discerned; don't have to wait for results of monitoring effluent or receiving water

Pros

Cons

- There is little information to inform what actions and levels of effort can attain receiving WQOs

Pros and Cons of the NEL Approach

- Compliance is determined on objective measures of water quality or other methods authorized by the Permit

} Pros

Cons

- Water quality may be influenced by other sources/factors
- Monitoring method may not be representative of the discharger's contribution
- Monitoring data may be subject to conflicting interpretations that confound determinations of compliance
- Permits have lacked a process for substantiating other sources/factors and resolving conflicting interpretations

Strategies to Implement the Effective Prohibition on Non-Stormwater Discharges

- BMP-based strategy
- Not an absolute prohibition
- Permittees must have a program to identify illicit connections that includes methods for detecting and preventing illicit discharges

Strategies to Implement the MEP Standard

- Permits must require controls to reduce the discharge of pollutants to the maximum extent practicable (MEP)
- BMP-based strategy
- Includes an iterative process to improve BMPs that relies on performance metrics to assess and improve the effectiveness of programs and projects
 - Performance metrics are established by the Permittees, or
 - Established by the Permit

Strategies to Implement the Receiving Water Limitations

- Permittees must not cause or contribute to exceedances of WQOs (Receiving Water Limitations)
- Receiving water limitations apply immediately
- Hybrid: enforces both an outcome (WQO) and a process (iterative process)
- BMP-based strategy to meet numeric receiving water limitations
- Iterative process to improve BMPs that relies on monitoring to demonstrate attainment of WQOs
- Subject to discretionary enforcement

Strategies to Implement TMDLs

Water quality-based effluent limitations must be consistent with the assumptions and requirements of any available waste load allocations from adopted TMDLs

If TMDL compliance date has not passed:

- BMP-based approach
- Numeric effluent limit after the compliance date passes

If TMDL compliance date has passed or no compliance date:

- Waste load allocation is used to determine a numeric effluent limit

Watershed Management Plan Strategy

- An option for the permittees to choose to comply with Receiving Water Limitations and with WQBELs where the compliance date *has not passed or there is no compliance date* (i.e. USEPA-adopted TMDLs)
- Requirements for this strategy follow criteria in precedential State Water Board WQ Order 2015-0075

Watershed Management Plan Strategy

- Similar to the BMP-based strategy with some differences:
 - Supported by a Reasonable Assurance Analysis – provide a higher level of confidence that the suite of pollution controls will attain WQOs and/or waste load allocations
 - May plan and construct facilities that retain all stormwater runoff from the 85th percentile, 24-hour storm
 - this does not require a Reasonable Assurance Analysis but requires verification monitoring and adaptive management
 - Permittees are deemed in compliance with Receiving Water Limitations and waste load allocations while both developing and implementing the Plan

Frequent Comment Topics

Trash Provisions and monitoring requirements

Green Streets “exemption”

Interpretation of TMDLs into Permit requirements

WMPs and “deemed compliance”

Credit Program and the Watershed of the nearest receiving waters

Inspection frequency for commercial, industrial, and construction sites

Cost of compliance

Trash Provisions and Monitoring

- Draft MS4 Permit includes new Trash control requirements based on Trash Provisions adopted by the State Water Resources Control Board.
- Draft Permit includes Trash monitoring requirements that are optional under the Trash Provisions; some commenters have objected to Trash monitoring.
- Santa Ana Water Board staff is reconsidering the benefits of the monitoring requirement.

Green Streets “Exemption”

- Public roadway projects in current San Bernardino and Riverside County MS4 Permits use USEPA Green Streets guidance to select source controls and treatment controls.
 - Must produce documents are functionally equivalent to project WQMPs that are required for other projects
 - Eligibility of projects is defined by criteria in guidance documents that were submitted for approval
- Draft Permit changes requirements for this process by defining eligibility in the permit
- Orange County MS4 Permit effectively exempted public roadway projects from documented analysis in favor of more qualitative Green Streets guidance
 - Draft Permit causes Orange County Permittees’ projects to go through same process as San Bernardino and Riverside Counties

Interpretation of TMDLs in Permit Requirements

- Board-adopted TMDLs include compliance dates for waste load allocations
- USEPA TMDLs have no compliance dates
- The Draft Permit is based on an interpretation that compliance dates are dates by which dischargers must comply with the waste load allocations
 - Unless Permittees' programs are attaining the waste load allocations and can reliably continue to do so under a BMP-based approach, waste load allocations are used as numeric effluent limitations
- TMDLs without compliance dates require compliance immediately

Interpretation of TMDLs in Permit Requirements

- If compliance cannot be attained, Permittees may apply for a Time Schedule Order
- Basin Plan amendments may also be pursued to support future modification of the Permit's requirements.

Watershed Management Plan's and “safe harbor”

- Some commenters have objected to deeming Permittees in compliance with Receiving Water Limitations and waste load allocations while developing and implementing Watershed Management Plans: “safe harbor”
- The Draft MS4 Permit follows the criteria for deemed compliance in WQ Order 2015-0075
- Some commenters have objected to allowing deemed compliance later during the Permit term after evidence of exceedances of WQOs or waste load allocations demonstrates a violation.
- The Draft MS4 Permit provides a narrow window (90 days) to initiate the process to be deemed in compliance.
- Characterizing deemed compliance as a “safe harbor” after WMPs are approved is misleading. The process subjects Permittees to enforcement for BMP-based violations.

Credit Program

- Credit programs apply to the development of structural treatment controls for new development and significant redevelopment.
- Draft MS4 Permit limited the size of the credit program to the watershed of the nearest receiving water of the U.S.
- Commenters have pointed out a risk that changing definitions to ‘waters of the U.S.’ may create instability in credit markets
- Staff is considering other methods to define the credit trading market

Inspection Program Frequency

- The Draft MS4 Permit prescribes a method for prioritizing commercial, industrial, and construction sites in their jurisdictions and an inspection frequency.
- The prescribed inspection prioritization is new for Riverside and San Bernardino Counties.
- The inspection prioritization is a slight modification for Orange County.
- Follows a Pareto distribution (80-20 Rule) as an expected theoretical distribution.
- Many Permittees have distributions that resemble a Pareto distribution.
- Permittees may propose an alternative distribution that fits their field observations and land uses.
- Commenters have objected to the proposed distribution and review and approval of alternatives.

Cost of compliance

- Commenters have raised concerns about the cost of compliance.
- Some commenters have offered estimates of certain costs of compliance.
- Many commenters have noted the difficulty of arriving at accurate cost estimates.
- The Permit's objectives to attain Receiving Water Limitations and waste load allocations cannot be set aside due to cost
- Staff is being mindful of the added value of the Permit's requirements and providing flexibility to meet objectives with least cost methods

Questions?