

**A GUIDE TO
THE NEW
MS4 PERMIT**

MS4 PERMIT 101

This guide has been developed by the SGVCOG Water Policy Committee and Water Technical Advisory Committee (TAC) to help increase policy makers' understanding of the MS4 Permit.

UNDERSTANDING THE PERMIT

The Municipal Separate Storm Sewer System (MS4) Permit is adopted by the Los Angeles Regional Water Quality Control Board (Regional Board) approximately every five years to protect the water quality of the region's oceans, rivers, lakes, and other waterways. The MS4 Permit is required for compliance with the Federal Clean Water Act and State's Porter-Cologne Water Quality Control Act. The most recent MS4 Permit was adopted in mid-July 2021, replacing the Permit that was adopted in 2012.

THE MS4 PERMIT ESTABLISHES

NUMERIC LIMITS

for the amount of pollutants
that can enter and exit the
storm sewer system

TIMEFRAMES

in which these limits must be
met

THERE ARE TWO WAYS TO COMPLY WITH THE PERMIT:

MEET NUMERIC WATER QUALITY LIMITS

by monitoring pollutants at certain designated locations, to implementing specific measures to reduce pollution, and implementing other best practices to reduce pollutants.

OR

IMPLEMENT A WATERSHED MANAGEMENT PROGRAM (WMP)

that identifies and implements projects and practices that comply with pollutant limits within the required timelines.

WHAT IS A WMP?

Through the WMP, Permittees can work with their neighbors in the watershed to develop programs, strategies, and projects that allow them to meet the pollutant limits established by the Regional Board. This approach was designed to increase collaboration within watersheds and allow them the flexibility to implement the most efficient, effective approaches for the watershed to reduce pollutants.

The WMP approach was first introduced in the last MS4 Permit in 2012, and the vast majority of cities utilized this compliance option.

Permittees could collaborate to form watershed management groups or could develop their own individual WMP. Many San Gabriel Valley cities partnered with neighboring cities to develop WMPs.

Learn more: Watershed Management Programs in the SGV

East San Gabriel Valley Watershed Management Area

Claremont, La Verne, Pomona, San Dimas

Upper San Gabriel River

Baldwin Park, Covina, Glendora, Industry, La Puente, West Covina, LACFCD, LA County

Rio Hondo/San Gabriel River Watershed

Arcadia, Bradbury, Duarte, Monrovia, LA County, LACFCD, Sierra Madre

Upper Los Angeles River Watershed

Alhambra, Burbank, Calabasas, Glendale, Hidden Hills, La Canada Flintridge, Los Angeles, Montebello, Monterey Park, Pasadena, Rosemead, San Fernando, San Gabriel, San Marino, South El Monte, South Pasadena, Temple City, LA County, LAFCD

Cities with Individual WMPs

El Monte
Irwindale
Walnut

COMPLYING WITH THE PERMIT

To comply with MS4 Permit, WMPs must include several specific elements and establish interim milestones and timelines for implementation. By establishing and adhering to interim milestones and schedules, Permittees can demonstrate progress towards addressing water quality issues and can comply with their interim deadlines for pollutants.

WATERSHED CONTROL MEASURES

Projects and strategies that ensure the Permittees meet the numeric pollutant limits by the established timelines

MONITORING & REPORTING

Demonstrates the Permittees' progress on Permit compliance

MINIMUM CONTROL MEASURES

Baseline strategies and programs, like street sweeping, that must be implemented

ADAPTIVE MANAGEMENT

Process of re-evaluating data, costs, available funding, and more to ensure Permittees effectively meet targets

WATERSHED CONTROL MEASURES

Watershed Control Measures are the strategies, projects, control measures, and best management practices (BMPs) that will ensure that pollutants meet the numeric limits and timelines.

Each WMP must do the following:



Identity Pollutants

Permittees must identify the pollutants that pose the greatest water quality risks to the watershed, prioritizing the order in which they will be addressed.



Identify Watershed Control Measures (WCMs)

Based on the prioritization of pollutants, Permittees must identify the strategies, best management practices, projects, and control measures that will will best achieve compliance.



Define Implementation Schedules & Milestones

The WMP must establish interim milestones and implementation schedules. The implementation schedules must identify what the projects and activities that each Permittee will complete and the timelines in which they will do so.

EXAMPLES OF WATERSHED CONTROL MEASURES



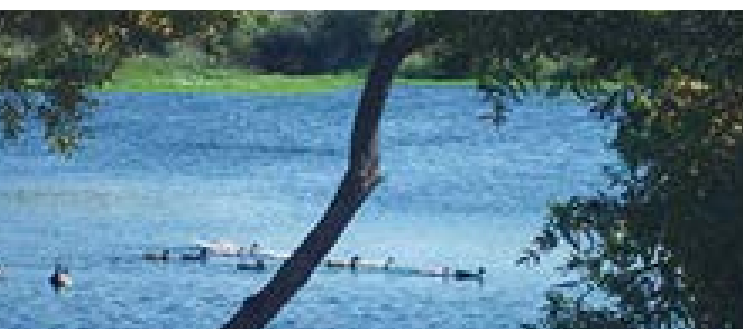
Constructed Wetlands:
[South Los Angeles Wetland Park](#)



Permeable Pavement allows stormwater runoff to filter through voids in the pavement surface into an underlying reservoir, where it is temporarily stored and/or infiltrated



Low Impact Development (LID) Design Features
[Water Cistern at Cal State-Northridge](#)



Stormwater Retention Basin & Infiltration Galleries
[Machado Lake \(Ken Malloy Regional Park\)](#)

Examples: Stormwater Management BMPs

- Low-impact development features
- Street sweeping
- Rainfall harvesting
- Green roofs
- Permeable pavements
- Retention basins
- Detention basins
- Silt fences
- Waste reduction and recycling
- Illegal dumping controls and enforcement
- Wind erosion controls
- Preservation of existing vegetation
- Public outreach and education

Watershed Control Measures include stormwater projects, Best Management Practices, and other controls that help Permittees meet their pollutant requirements.

MINIMUM CONTROL MEASURES

Permittees must incorporate certain baseline strategies and programs - called minimum control measures (MCMs) - and establish timelines for implementation. These are the MCMs that must be implemented:



PUBLIC INFORMATION & PARTICIPATION PROGRAMS

That educate the public on stormwater and build support for stormwater programs in a culturally competent way, including development of a website

PUBLIC AGENCIES ACTIVITIES PROGRAM

That inventories, regulates, and inspects public facilities - like fire stations, public restrooms, and swimming pools - to ensure that they are not discharging pollutants



PROGRESSIVE ENFORCEMENT & INTERAGENCY COORDINATION

To develop and implement a Progressive Enforcement Policy to ensure that illicit discharges from industrial and commercial facilities and construction sites are brought into Permit compliance



PLANNING & LAND DEVELOPMENT PROGRAM

To inventory, regulate, and inspect development projects to ensure they are implementing best management practices to mitigate and protect land development-related discharges

CONSTRUCTION PROGRAM

To inventory, regulate, and inspect construction projects to ensure they are implementing best management practices to mitigate and protect development-related discharges.



ILLICIT DISCHARGE DETECTION & ELIMINATION PROGRAM

To investigate illegal discharges into the municipal separate stormwater system (MS4)

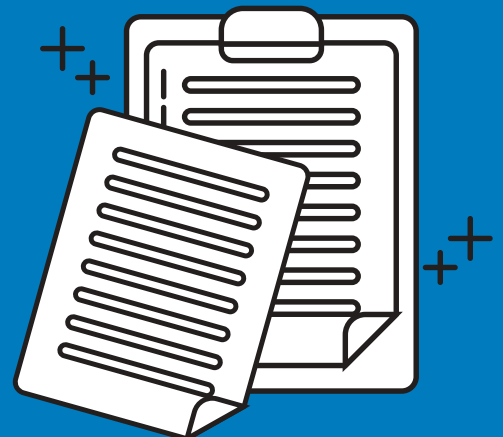


INDUSTRIAL/ COMMERCIAL FACILITIES PROGRAM

To inventory and inspect industrial and commercial facilities - like restaurants and gas stations - that may impact the water quality of stormwater runoff.

INDUSTRIAL/ MODIFICATIONS/REVISIONS

Program that modifies its stormwater management programs, protocols, practices, and municipal codes to make them consistent with the requirements in the Permit.





MONITORING & REPORTING

Permittees must demonstrate through sampling and monitoring that they are making progress in addressing water quality and that pollutant limits are not being exceeded.

Permittees must report to the Regional Board on their progress with several forms:

- Annual Report
- WMP Progress Report
- Trash Report
- Monitoring Report
- Receiving Water Limitations Compliance Report.

The Coordinated Integrated Monitoring Program (CIMP) allows permittees to develop their own approaches for monitoring.

The CIMP, or if completed by an individual Permittee, the integrated monitoring program (IMP) establishes where and how monitoring will take place and how the Permittees will comply with discharge limits.

Most Permittees are already in an IMP or CIMP, and they will have 18 months to submit an updated monitoring program.

breaking it down

TMDLs & WQBELS

There is no one-size-fits-all solution for addressing pollutants. An area's land uses, drainage patterns, and proximity to water can cause differing levels of risk for pollutants. As such, for different watersheds, the Regional Board identifies different pollutant limits to meet these limits.

The San Gabriel Valley cities are located in the San Gabriel River and Los Angeles River watersheds. These areas have different TMDLs, Water Quality Based Effluent Limits (WQBELS), and timelines for achieving the required limits for each watershed, and even for sub-areas of each watershed. As such, not every city has the same water quality standards to meet.

TOTAL MAXIMUM DAILY LOADS (TMDLS)

Total Maximum Daily Loads (TMDLs) are established by the Regional Board, and they define how much of a pollutant can be in stormwater without an impact on water quality.

Permittees must meet the

1. Numeric limits established that define the amount of pollutants that can be found in stormwater; and
2. Timeframes in which these limits must be met.

The Regional Board establishes interim and final deadlines to meet the pollutant limits.



WATER QUALITY-BASED EFFLUENT LIMITATIONS (WQBELS)

TMDLs are not always sufficient at meeting water quality standards. In such cases, it is necessary to develop more stringent, water quality-based effluent limits (WQBELs) to ensure that water quality standards are met.

WQBELs are calculated for each watershed to ensure that the amount of pollutants entering the rivers and oceans does not exceed allowable limits.

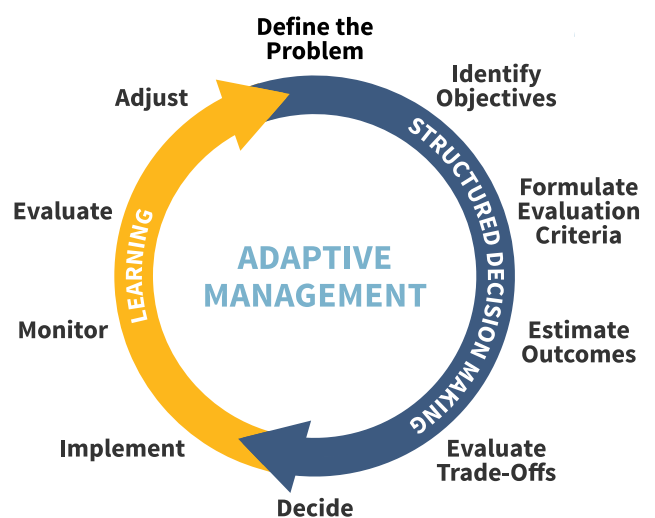


ADAPTIVE MANAGEMENT PROCESS

The Regional Board requires that Permittees adopt an adaptive management process to ensure that the watershed control measures become more effective over time.

Permittees must consistently evaluate and re-evaluate their progress towards achieving their interim targets, their monitoring data, the timelines for implementation of their watershed control measures, their water quality priorities, costs and available funding, and public participation processes.

The Adaptive Management Process can include modifications to compliance deadlines and interim requirements - provided that it doesn't impact the final compliance deadlines - and to watershed control measures.



Adaptive management is a continuous cycle where Permittees must revisit their watershed control measures, minimum control measures, and their WMPs as a whole based on updated monitoring, project funding, and other elements.

2012 PERMIT VS. CURRENT PERMIT

A major change from the 2012 MS4 Permit to the new MS4 Permit is that the County of Ventura and the City of Long Beach are now included in this Permit.

Previously, they both had their own permits. While the WMP approach had been included in the most recent City of Long Beach Permit. This is the first time that the watershed management approach has been implemented for Permittees in the County of Ventura.

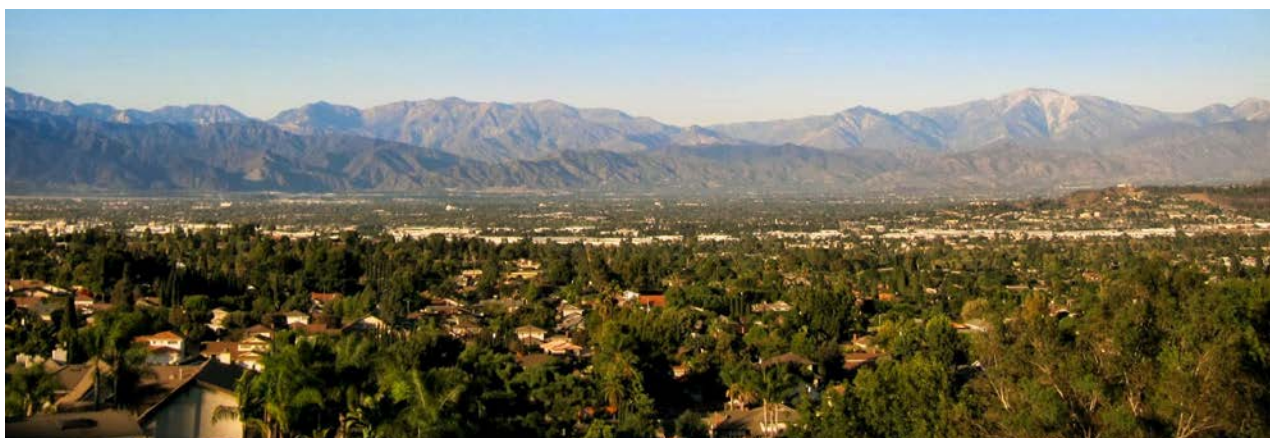
For Los Angeles County, the 2020 MS4 Permit has many similarities to the 2012 MS4 Permit. The 2012 MS4 Permit established the Watershed Management Program, and the current Permit extends that approach.



CHANGES FROM LAST PERMIT

1. Additional financial and other reporting requirements;
2. Additional training and requirements for staff and contractors that participate in stormwater programs.
3. Additional facility inspection requirements;
4. Additional community engagement requirements, including a webpage with specific elements

MS4 COMPLIANCE COSTS



It is extremely expensive to comply with the MS4 Permit.

There are a limited number of ways that Permittees can reduce pollutants. Permittees must implement programs and construct projects, which will be time-consuming and costly. It is expensive to remove pollutants from water as it requires advanced technology and construction. For large projects, as shown below, it takes several years of planning to develop a shovel-ready project and additional years for the procurement and construction itself. Cities are also dependent on outside contractors to construct these projects. As a result, the cost to Permittees to comply with the MS4 Permit remains a critical concern to the SGVCOG.

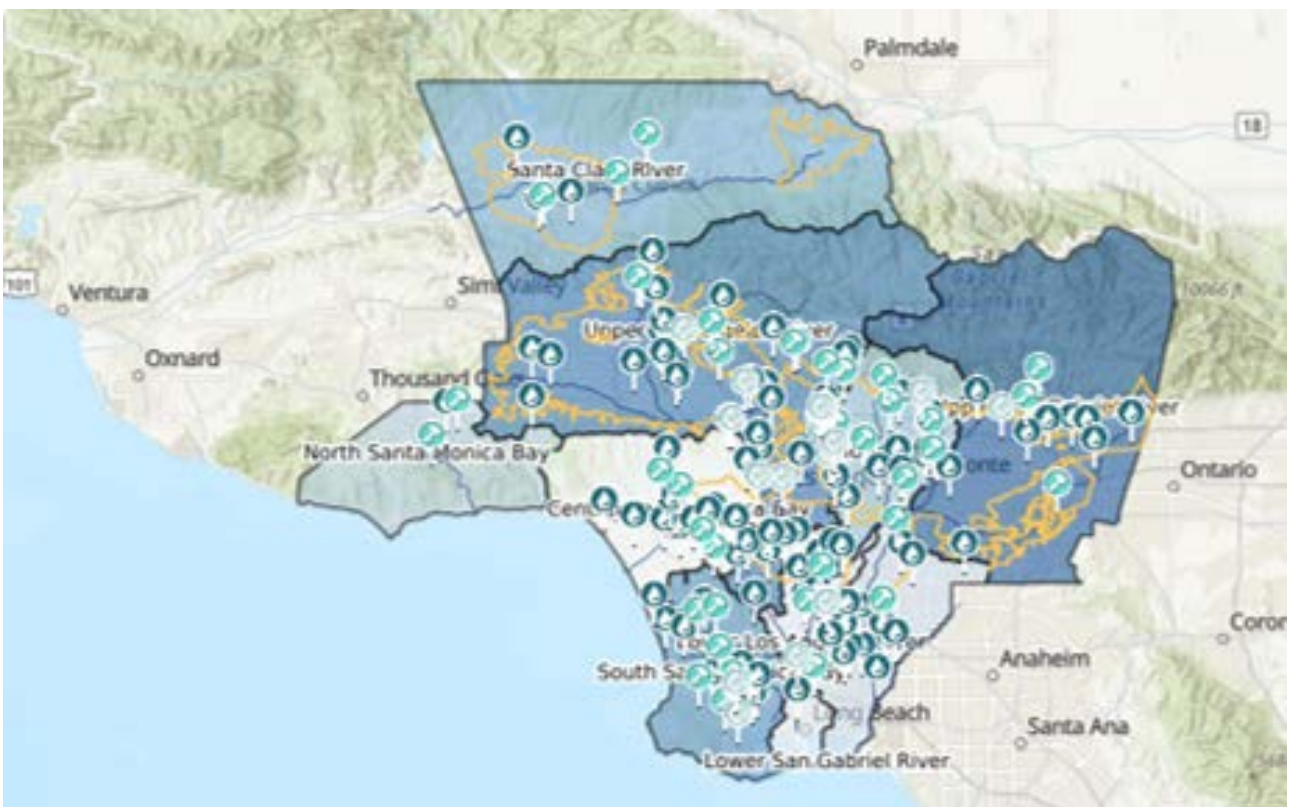
It is extremely expensive to comply with the MS4 Permit. The costs of completing projects is becoming more clear as Permittees are better-defining their projects.

SAFE CLEAN WATER PROGRAM

One funding source for Permittees is the Safe Clean Water Program (SCWP). The Program is a parcel tax measure passed by voters in 2018, as Measure W. **Measure W created special parcel tax of 2.5 cents per square foot of impermeable surface area on private property in the LA County Flood Control District.**

The Safe, Clean Water Program provides local, dedicated funding to increase local water supply, improve water quality, and protect public health.

The Safe Clean Water Program (SCWP) produces approximately \$285 million annually for stormwater projects.



Projects across LA County have been awarded SCWP funding. Awarded projects can be reviewed at <https://portal.safecleanwaterla.org/scw-reporting/map>


The Safe Clean Water Program allocates funds between 3 different funding categories:



40%

MUNICIPAL PROGRAM

Municipalities receive direct funding proportional to the revenues generated within its boundaries. Funding can be used for project development, design, construction, effectiveness monitoring, operations and maintenance for projects and programs with a water quality benefit.



50%

REGIONAL PROGRAMS

Funding is allocated to each watershed area to complete infrastructure projects, provide technical resources, and complete scientific studies that will support future project implementation. Applications can be submitted each year, and they are subsequently reviewed by a committee of stakeholders from each region – made up of city staff, elected officials, non-government organization representatives, and other stakeholders – deliberates and determines what projects to fund.



10%

Administration

The Los Angeles County Flood Control District is responsible for administering the Safe Clean Water Program, and they retain a portion of the funds for those efforts.

UNDERSTANDING REGIONAL PROGRAMS: WASCS AND SIPS

The Regional Programs are administered by convening stakeholders from each watershed who are then responsible for determining the most effective projects in the region. These regional groups are called Watershed Area Steering Committees (WASCs).

Each year, each WASC is responsible for developing a Stormwater Investment Plan (SIP), which identifies the programs that will be funded during that fiscal year. The SIP for each watershed area is ultimately approved by the LA County Board of Supervisors, which allows for funding to be disbursed to the recommended projects.

SGVCOG ADVOCACY

The SGVCOG has consistently advocated throughout the development of the MS4 Permit to support cities in their compliance efforts. While the Permit has been adopted, it is important to highlight these concerns that the SGVCOG continues to have with regards to the Permit. The SGVCOG will continue to advocate for these concerns.



FISCAL RESOURCES

It is extremely costly for cities to comply with the MS4 Permit, and the MS4 Permit over represents the amount of funding available to do so. In addition to the Safe Clean Water Program (SCWP), the MS4 Permit highlights federal and state grants and financing opportunities. These competitive funding sources are not easy to obtain and are a significant time and administrative expense.



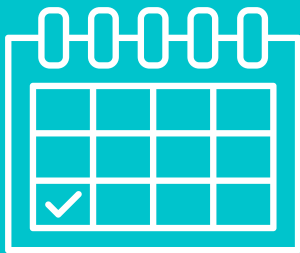
MONITORING & REPORTING

The MS4 Permit has increased the monitoring and reporting requirements, which places a significant burden on Permittees. The SGVCOG has and will continue to advocate for more streamlined reporting and monitoring processes that ensure that there is limited duplication of efforts in reporting.



COMPLIANCE ATTAINMENT

Permittees do not have many alternatives for final compliance with the Permit. Permittees can implement their WMP as written for interim compliance. However, there is only one option for final compliance. Permittees need clearer metrics and more alternatives for final compliance.



COMPLIANCE SCHEDULES

With the existing funding gaps, it is extremely challenging for Permittees to meet their compliance deadlines. The Regional Board allows Permittees to submit “time schedule order” requests to extend schedules. Rather than this burdensome process, the Regional Board should evaluate the financial capability of Permittees to comply with the Permit and to pursue reasonable TMDL extensions.

GLOSSARY OF KEY TERMS



Best Management Practices (BMPs): BMPs are practices or physical devices or systems designed to prevent or reduce pollutant loading from stormwater or non-stormwater discharges to receiving waters.

Effluent Limitation: Any restriction imposed on quantities, discharge rates, and concentrations of pollutants, which are discharged from point sources to waters of the U.S.

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.

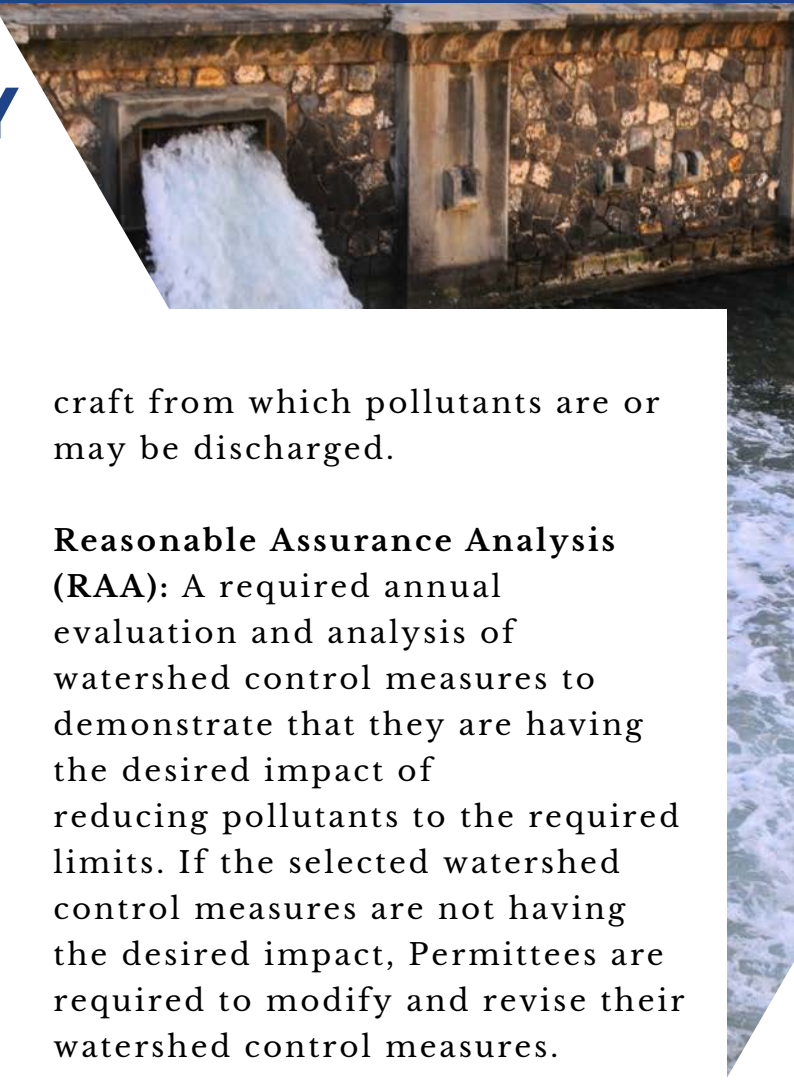
Green Roof: A low-impact development best management practice using planter boxes and vegetation to intercept rainfall on a roof surface. Rainfall is intercepted by vegetation leaves and through evapotranspiration.

Illicit Discharge: Any discharge into the MS4 that is prohibited under local, state, or federal statutes, ordinances, codes, or regulations. The term illicit discharge includes any non-stormwater discharge, except authorized non-stormwater discharges; conditionally exempt non-stormwater discharges; and non-stormwater discharges resulting from natural flows specifically identified in the Order.

Impermeable Area: A Parcel area covered by materials or constructed surfaces such as buildings, roofs, paved roadways, sidewalks, driveways, parking lots, brick, asphalt, concrete, pavers, covers, slabs, sheds, pools, and other constructed surfaces or hardscape features.

Infiltration: A low-impact development best management practice that reduces stormwater runoff by capturing and infiltrating the runoff into soils or amended on-site soils. Examples of infiltration BMPs include

GLOSSARY OF KEY TERMS



infiltration basins, dry wells, and pervious pavement.

Low Impact Development (LID): The implementation of systems and practices that use or mimic natural processes to: 1) infiltrate and recharge, 2) evapotranspire and/or 3) harvest and use precipitation near to where it falls to earth.

National Pollutant Discharge Elimination System (NPDES): The national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under the Clean Water Act.

Non-Stormwater Discharge: Any discharge into the MS4 that is not composed entirely of stormwater.

Point Source: Any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating

craft from which pollutants are or may be discharged.

Reasonable Assurance Analysis (RAA): A required annual evaluation and analysis of watershed control measures to demonstrate that they are having the desired impact of reducing pollutants to the required limits. If the selected watershed control measures are not having the desired impact, Permittees are required to modify and revise their watershed control measures.

Runoff (Urban Runoff): Any runoff including stormwater and non-stormwater from a drainage area that reaches a receiving water body.

Safe Clean Water Program: The program established by Los Angeles County by Ordinance, including the administration of revenues from the Special Parcel Tax levied pursuant to the Los Angeles County Flood Control District Code, and the criteria and procedures for selecting and implementing Projects and Programs and allocating revenues among the Municipal,

GLOSSARY OF KEY TERMS



Regional, and District Programs.

Stormwater Management

Program: A Permittees' stormwater management program includes all actions, activities and projects that it implements individually or in conjunction with other Permittees or partners in fulfillment of the requirements of the Order, including those pursuant to an approved Watershed Management Program in which the Permittee is participating.

Storm Water (or Stormwater):

Storm water runoff, snow melt runoff, and surface runoff related to a rainfall event.

Total Maximum Daily Load

(TMDL): The sum of the individual waste load allocations for point sources and load allocations for nonpoint sources and natural background such that the cumulative pollutant load from all sources does not exceed the loading (assimilative) capacity of the waterbody.

Water Quality-Based Effluent

Limitation (WQBEL): Any restriction imposed on quantities, discharge rates, and concentrations of pollutants, which are discharged from point sources to waters of the U.S. necessary to achieve a water quality standard.

Watershed Management Program

(WMP): A voluntary, alternative compliance pathway where a Permittee or group of Permittees develops a comprehensive program on a watershed or subwatershed scale to achieve compliance with the requirements of the Order, including complying with Receiving Water Limitations, Total Maximum Daily Load Provisions, Discharge Prohibitions, and Minimum Control Measures in a collaborative and holistic manner.

Watershed Area:

An area of land that drains all the streams and rainfall to a common outlet such as the outflow of a reservoir, mouth of a bay, or any point along a stream channel.

RESOURCE GUIDE

Website resources:

- [Southern California Water Coalition: Stormwater](#)
- [Water Education Foundation: Stormwater](#)
- [Heal the Bay: The Secret of LA Stormwater](#)
- [PPIC: Urban Stormwater](#)

Videos:

- [Stormwater Workshop 2021 \(August 12, 2021\)](#)
- [Where does stormwater go? \(November 3, 2020\)](#)
- [Stormwater Management YouTube \(December 17, 2018\)](#)
- [Innovative Stormwater Management at the Property Scale \(February 19, 2014\)](#)
- [NACTO's Urban Street Stormwater Guide \(June 29, 2017\)](#)

White pages:

- [California Stormwater Quality Association: Vision for Sustainable Stormwater Management \(October 2020\)](#)
- [Southern California Water Coalition: Innovations in Stormwater Capture \(September 2019\)](#)
- [State Water Resources Control Board: Enhancing Urban Runoff Capture and Use \(April 10, 2018\)](#)
- [Southern California Water Coalition: Stormwater Capture: Enhancing Recharge & Direct Use Through Data Collection \(April 2018\)](#)
- [Pacific Institute: Stormwater Capture in California: Innovative Policies and Funding Opportunities \(June 2018\)](#)

MS4 Permit Information

Website resources:

- [The Stormwater Program in the Los Angeles Region](#)
- [Los Angeles County MS4 Permit](#)
- [Industrial General Permit Workshop for Permittees \(video recording\)](#)
- [Stormwater Grant Program \(SWRP\)](#)

Videos:

- [Stormwater Permit Update: What's New in California, featuring Pushpa Zachariah, Water Resources Control Engineer, State Water Resources Control Board \(September 21, 2020\)](#)

Stormwater Project Examples

Local examples:

- [LA County Department of Public Works: Dominguez Gap Wetlands](#)
- [Stormwater Solutions: Stormwater Management System Helps Filtration Efforts](#)
- [The San Fernando Valley Stormwater Capture Project, Los Angeles CA \(video\)](#)
- [LADWP: Tujunga Spreading Grounds Enhancement Project](#)

Other examples:

- [Southern California Water Coalition: Historic Fourth Ward Park | Atlanta](#)