

**STATE OF CALIFORNIA  
REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION**

**STAFF SUMMARY REPORT: Aidan Cecchetti  
MEETING DATE: August 13, 2025**

**ITEM: 7**

**Municipal Regional Stormwater NPDES Permit – Background and Update on New  
Development and Redevelopment (C.3) and Water Quality Monitoring (C.8)  
Provisions – Informational Item**

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**DISCUSSION**

This item provides background on the history of regulating stormwater discharges as part of the National Pollutant Discharge Elimination System (NPDES) permit program, and summarizes the development of the Municipal Regional Stormwater NPDES Permit (MRP) over time. In addition, it discusses the Permittees' implementation of changes to the MRP's New Development and Redevelopment (C.3) and Water Quality Monitoring (C.8) provisions in the current iteration of the MRP (Order No. [R2-2022-0018](#), [as amended](#) by Order No. R2-2023-0019; MRP 3). Finally, it describes upcoming steps as Water Board staff, the MRP Permittees, and other interested parties start the next MRP reissuance process in late 2025, leading to the planned consideration of a draft permit for MRP 4 by the Board in summer 2027.

**Background**

At its March 2025 meeting, the Water Board reviewed the structure and function of permits issued for wastewater discharges under the NPDES program. Established with the federal Clean Water Act (CWA) in 1972, the NPDES program originally focused on wastewater discharges, specifically excluding discharges of stormwater from regulation. However, the CWA recognized the significance of urban runoff discharges and included planning requirements to consider how to address them. In addition, recognizing that stormwater discharges associated with industrial sites and urban runoff were likely a significant contributor to pollution in receiving waters, the United States Environmental Protection Agency (U.S. EPA) created the Nationwide Urban Runoff Program (NURP) to investigate the problem. Between 1979 and 1983, NURP studied the quality of urban runoff, the extent it contributed to water quality problems, and the effectiveness of various management practices in controlling stormwater pollution.

NURP's findings informed the 1987 Water Quality Act (WQA), which added Section 402(p) to the CWA and expanded the NPDES program to require permits for discharges of stormwater from municipal separate storm sewer systems (MS4s) and industrial facilities, including construction sites. In 1990, U.S. EPA issued "Phase I" rules requiring municipalities and certain urbanized areas with populations over 100,000, as well as

industrial facilities and construction sites disturbing an area greater than 5 acres, to obtain coverage under an NPDES permit for their stormwater discharges. “Phase II” rules were issued in 1999 and extended the requirements to obtain coverage under a NPDES permit to stormwater discharges from small municipalities and urbanized areas (i.e., with populations less than 100,000), non-traditional systems, and construction sites disturbing an area between 1 and 5 acres.

Due to the significant differences between wastewater and stormwater discharges in terms of their quality, quantity, and the number of dischargers, the NPDES programs for stormwater and wastewater have key differences. Because wastewater has more consistent quality and quantity and is collected and treated at centralized facilities, NPDES permits for wastewater discharges prescribe numeric limits based on technological capabilities and water quality standards. In contrast, urban stormwater pollution originates from a range of sources spread broadly across the urban landscape and has highly variable quality and quantity within and across seasons. In the Bay Area, runoff is transported via disconnected MS4 networks originally designed for flood management and not intended to deliver stormwater to centralized treatment facilities. For those reasons, the kinds of water quality controls implemented for wastewater—centralized treatment plants—are difficult to implement for stormwater, and strict compliance with numeric effluent limitations can be difficult to achieve and enforce. Therefore, while NPDES stormwater permits can include numeric limits, they primarily are based on the implementation of best management practices (BMPs) to identify and control sources of pollution in stormwater to the maximum extent practicable (MEP), which is an evolving standard that becomes stricter over time as implementation experience, including knowledge of water quality control measures and their effectiveness, grows.

Additionally, the expansion of the NPDES program to include stormwater dischargers significantly increased the number of Permittees within the program, with stormwater dischargers now accounting for approximately 80 percent of all NPDES dischargers. In part for this reason, NPDES stormwater permits tend to cover multiple entities on a regional or statewide basis. For example, the MRP, the Phase I municipal stormwater permit for the San Francisco Bay Region, covers 79 Permittees, regulating discharges from MS4s associated with municipalities located in the southern and eastern parts of our region (i.e., in San Mateo, Santa Clara, Alameda, and Contra Costa counties, as well as the cities of Vallejo, Fairfield, and Suisun City in Solano County). Additionally, California’s NPDES permit for Phase II municipalities covers small and non-traditional MS4s across the entire state. The Phase II permit is discussed in the Item 8 Staff Summary Report. Because these permits cover multiple entities, they tend to set more-general minimum requirements for Permittees’ stormwater programs. As the NPDES stormwater programs have developed over time, the programmatic elements of these permits have grown to include more detailed and prescriptive requirements, which are listed below with their analogous MRP 3 Provisions included in parentheses:

- Discharge Prohibitions (A. Discharge Prohibitions)
- Receiving Water Limitations (B. Receiving Water Limitations)

- Pollution Prevention and Good Housekeeping (C.2. Municipal Operations)
- Post-Construction Runoff Control (C.3. New Development and Redevelopment)
- Industrial Site Controls (C.4. Industrial and Commercial Site Controls)
- Illicit Discharge Detection and Elimination (IDDE) (C.5. Illicit Discharge Detection and Elimination)
- Construction Site Runoff Control (C.6. Construction Site Controls)
- Public Education and Outreach (C.7. Public Information and Outreach)
- Public Involvement and Participation (C.7. Public Information and Outreach)
- Monitoring for Program Effectiveness (C.8. Water Quality Monitoring)
- Pollutant-Specific Provisions and TMDLs (C.9 – C.14):
  - C.9. Pesticides Toxicity Controls
  - C.10. Trash Load Reduction
  - C.11. Mercury Controls
  - C.12. Polychlorinated Biphenyls (PCBs) Controls
  - C.13. Copper Controls
  - C.14. Bacteria Controls for Impaired Water Bodies

In the 1990s and early 2000s, before the MRP was developed, the Board issued Phase I stormwater permits in the San Francisco Bay Region on a countywide basis in San Mateo, Santa Clara, Alameda, and Contra Costa counties, and to Caltrans for its regional Bay Area MS4 discharges. The permits were relatively brief because most of the programmatic requirements were in Permittee-developed Stormwater Management Plans (SWMP). The early permits helped refine aspects of stormwater management that continue to be used today, such as the low impact development (LID) approach, which involves managing stormwater by minimizing disturbances and impervious cover during development and using natural processes to remove pollutants, reduce runoff, and mimic pre-development hydrology. To facilitate public review of the stormwater permits and create clearer requirements and better accountability, most permit requirements were moved from the SWMPs into the body of the permit with the MRP's issuance.

In 2009, the Board consolidated the countywide permits into a single region-wide permit with its adoption of the first MRP (MRP 1). MRP 1 incorporated many of the elements of the earlier SWMPs and established the structure that has continued through subsequent MRP reissuances. When the Board adopted MRP 2 in 2015, the MRP's provisions were updated based on lessons learned during implementation of MRP 1, with new provisions related to bacteria controls and discharges to Areas of Special Biological Significance (ASBSs), and to add Permittees in Eastern Contra Costa County that are outside Region 2, but which had long been part of the Contra Costa Clean Water Program. The Board adopted MRP 3 in 2022, continuing to build on the

development of stormwater programs during MRP 2 with new provisions related to non-stormwater discharges associated with unsheltered homelessness and control of sediment from coastal roads.

## **Key MRP 3 Changes**

The remaining discussion focuses on the initial outcomes of the Permittees' implementation of changes in MRP 3 to provisions related to post-construction stormwater controls (i.e., Provision C.3. New Development and Redevelopment) and water quality monitoring (i.e., Provision C.8. Water Quality Monitoring). It summarizes staff's initial review of Permittee reporting on those changes in their Fiscal Year (FY) 2023-2024 MRP Annual Reports.

### *Provision C.3. New Development and Redevelopment*

Urban development contributes significantly to water quality impacts by increasing the rate of runoff and pollutant loading to receiving waters. This occurs because impervious surfaces in urban areas do not absorb water or remove pollutants in the same way as pervious vegetated surfaces. Provision C.3 addresses this issue by requiring Permittees to use their planning and building review authority to mandate post-construction stormwater treatment and flow control facilities for specific categories of new development and redevelopment projects, known as Regulated Projects, when they exceed a certain size. Provision C.3 mandates the use of LID stormwater control facilities that maximize infiltration, storage and detention, evapotranspiration, and biotreatment of stormwater runoff. Those facilities may include bioretention systems and flow-through planters, green roofs, permeable pavement systems, and other similar facilities. The requirements are intended to reduce impacts to receiving waters caused by the impervious surfaces and pollutants associated with impervious surfaces.

Provision C.3 has evolved over time to more fully address stormwater pollution associated with impervious surfaces from urban development. With the adoption of MRP 3 in 2022, Provision C.3's updates included:

- Changes to the C.3.b. Regulated Projects provisions, including:
  - The addition of two new categories of Regulated Projects: "Road Reconstruction Projects" and "Large Detached Single-Family Homes", and
  - A reduction in the impervious surface thresholds that trigger stormwater control requirements (i.e., from 10,000 square feet in MRP 2 to 5,000 square feet in MRP 3) for most other categories of Regulated Projects.
- Numeric retrofit requirements were added to Provision C.3.j for Permittees to implement green stormwater infrastructure (GSI) retrofit projects that were identified by the Permittees in the GSI Plans they developed during MRP 2. The required level of effort for each Permittee over the permit term was determined based on population. MRP 3 requires a specified number of acres of existing impervious surface be controlled by implemented GSI retrofit projects. This is

also known as the “greened acres” requirement, with the idea that Permittees are gradually shifting the existing “gray” storm drainage system to a “green” one. MRP 3 gives the Permittees the option to meet the GSI retrofit requirements individually or on a countywide basis, with all Permittees required to implement a minimum of 0.2 acres within their own jurisdiction.

- To help guide GSI requirements and implementation in future permit terms, MRP 3 gives the Permittees the option to form a Technical Working Group (TWG) to discuss long-term green infrastructure goals, review GSI BMPs and performance metrics, and prepare a report for submittal with the 2025 Annual Reports proposing how to address GSI moving forward (i.e., in future iterations of the MRP).

The following sections discuss Permittees’ reporting on the implementation of each of these requirements.

New Regulated Project Categories and Thresholds: Due to concerns among Permittees that they may need additional time to overcome administrative burdens associated with the changes to the Regulated Project categories and thresholds outlined above, MRP 3 delayed by one year to July 1, 2023, the effective date of those changes. For that reason, while MRP 3’s effective date was July 1, 2022, only one fiscal year (FY) of reporting (i.e., FY 2023-2024) has been submitted by the Permittees with the changes implemented.

Staff reviewed the Permittees’ FY 2023-2024 Annual Reports to evaluate whether, and how, the changed requirements had resulted in changes to the number of Regulated Projects or the area of impervious surface treated using water quality controls. The Permittees have completed work, such as updating their countywide technical guidance manuals and individual internal review procedures, to implement the changed requirements. The Permittees’ reporting suggests that the additional effort and project review to implement these changes has been modest, but that the benefits have been noteworthy.

During FY 2023-2024, the Permittees reported 284 Regulated Projects region-wide with approximately 820 acres of new or replaced impervious surfaces across those projects. Of the Regulated Projects reported by the Permittees, there were 4 regulated Road Reconstruction Projects, 20 Large Detached Single-Family Homes, and 9 new development or redevelopment projects in other categories falling between the impervious surface thresholds for MRP 2 and MRP 3. These projects accounted for approximately 11.6 percent of Regulated Projects reported during FY 2023-2024 and approximately 2.3 percent of new and replaced impervious surfaces associated with Regulated Projects.

Most Permittees did not report any projects resulting from the permit’s changed requirements. Only 4, 14, and 11 percent of Permittees reported projects in the new categories (i.e., Road Reconstruction Projects or Large Detached Single-Family Homes) or falling between the MRP 2 and MRP 3 thresholds, respectively. In the first year of reporting, the new Regulated Project categories and reduced thresholds appear

to have constituted a relatively modest burden for a limited number of Permittees, while still addressing a sizeable area (i.e., 19 acres) of new and replaced impervious surfaces.

As a point of comparison, prior to implementation of the new MRP 3 Regulated Project categories and impervious surface thresholds, the Permittees reported an average of 314 Regulated Projects per year over the preceding 5 years (i.e., FYs 2018-2019 through 2022-2023), ranging from 275 to 361 projects per year. The Permittees reported an annual average of approximately 840 acres of new or replaced impervious surface treated, ranging from 671 to 964 acres per year. The number of projects and acreage of new and replaced impervious surfaces reported in FY 2023-2024 were within 10 percent and 2 percent, respectively, of those 5-year averages and were well within the expected variation based on previous reporting. The modest changes in the number of reported Regulated Projects with the implementation of these changes are evidence that MRP 3 imposes reasonable changes that are within the Permittees' capacity to implement.

In some cases, such as for Large Detached Single-Family Homes, the changes were incremental rather than new, in that the MRP had previously required Permittees to implement some form of water quality controls for such projects, where feasible. However, the previous requirement was more qualitative, because it did not require treatment control sizing and project reporting as a Regulated Project. With the MRP 3 changes, treatment controls now must be implemented, appropriately sized, and the projects reported. The result is that Permittees such as Atherton, which previously had been implementing the narrative requirement, are now implementing the quantitative sizing requirement and reporting for their Large Detached Single-Family Homes (i.e., homes with 10,000 square feet or more of new or redeveloped impervious surface).

GSI Retrofit Progress on Numeric Requirements: With MRP 3, the Water Board included requirements for Permittees to address runoff from existing impervious surfaces by implementing GSI retrofits to meet numeric requirements. The Permittees have demonstrated significant progress towards meeting the overall GSI numeric retrofit requirements as of the FY 2023-2024 reporting.

The MRP's requirements for "Regulated Projects" to implement stormwater controls address new development and redevelopment projects. However, they do not address the substantial impacts from the Bay Area's existing impervious surfaces, including public roads and existing urban areas that are not being redeveloped. MRP 3 followed the lead of permits issued by U.S. EPA and the Washington State Department of Ecology in establishing requirements to start to address polluted runoff from these existing impervious surfaces. This was done by expanding the LID treatment requirements to include deployment of GSI retrofit projects. GSI retrofit projects include projects like "green streets" that implement LID stormwater controls to treat runoff from areas of existing development or in projects that would not otherwise be regulated under Provision C.3. The MRP sets the expectation that the Permittees' work to implement GSI retrofit projects will increase over time as the Permittees develop staff

expertise through implementing retrofit projects and develop funding sources, progressively increasing their capacity to accelerate implementation.

Generally, staff have heard from Permittees that the decreasing impervious surface thresholds in MRP 3 and the new Regulated Project categories make it more difficult to meet the GSI retrofit requirements because that decreases the number of non-regulated projects that could be claimed for GSI retrofits. However, with only a couple years of reporting so far in the MRP 3 permit term, the Permittees have reported GSI retrofits that control stormwater from approximately 89 acres of existing impervious surfaces – corresponding to approximately 41 percent of the 217 acres required. Additionally, nearly one-third of Permittees have reported meeting their total retrofit requirements already, notably with the Contra Costa County Permittees meeting their requirements already on a county-wide basis. Similar progress has been made toward the 0.2-acre individual minimum acreage for GSI retrofits, with 29 percent of Permittees already meeting this requirement as of FY 2023-24.

Long-Term GSI Technical Working Group (TWG): MRP 3 Provision C.3.j gives the Permittees the option to form a TWG to discuss long-term goals for GSI implementation. The purpose of the optional TWG was to discuss “long-term green infrastructure goals and recommend long-term percentage reductions in Permittees’ impervious surfaces at individual, countywide, and regional scales.” When MRP 3 was adopted, it was envisioned that the TWG, if Permittees chose to form one, would meet at least biannually to investigate BMPs, performance metrics, and linkages between GSI implementation and efforts related to climate change impacts and resiliency, with a report submitted with the 2025 Annual Reports summarizing the group’s recommendations.

The Permittees chose to form the Long-Term GSI TWG in the fall of 2024 with representation from the Permittees, countywide stormwater programs, Water Board staff, and other technical experts. Since then, the TWG has met four times—in September 2024, December 2024, March 2025, and June 2025—and has discussed various aspects of GSI implementation, including: (1) drivers and constraints for GSI, (2) considerations for GSI implementation at different scales, and (3) ideas for how to increase the flexibility and effectiveness of crediting for GSI retrofits. The result of these efforts is a developing proposal for potential new crediting schemes for GSI retrofits that could be used to recognize the water quality benefits of efforts that would not traditionally be considered GSI, but may have similar or comparable benefits (e.g., stream restoration) and that encourage implementation of GSI in conjunction with other municipal efforts (e.g., urban forestry) by acknowledging the value and strategic importance of multi-benefit projects. The Permittees are currently preparing a report on the TWG’s proposals for how to address GSI moving forward for submittal before the end of 2025. These ongoing efforts are expected to shape and inform updates to Provision C.3.j to be implemented in the next iteration of the MRP.



### *Provision C.8. Water Quality Monitoring*

MRP Provision C.8 requires Permittees to monitor or contribute to monitoring efforts regionally, such as ambient monitoring and monitoring in receiving waters. These monitoring efforts are intended to measure the effectiveness of Permittees' stormwater management actions and assist Water Board efforts to assess permit compliance.

During MRP 1 and MRP 2, to address these objectives, the Permittees completed substantial biological and physical monitoring of receiving water bodies (i.e., creeks, rivers, and tributaries) to evaluate the impacts of stormwater discharges from their MS4s into those waterbodies. As part of the permit reissuance effort leading to MRP 3, it was determined that ongoing monitoring efforts of this type would not generate substantial new actionable information, and that previous monitoring could serve as a baseline without any near-term expectations for those conditions to change. Therefore, MRP 3 eliminated creek status monitoring and stressor source identification monitoring so Permittees could shift resources to monitoring of LID systems and trash control effectiveness, which are high priorities due to the substantial efforts and costs Permittees have invested in implementing those control measures to comply with Provisions C.3 and C.10, respectively.

LID Monitoring: Provision C.3 continues to require Permittees to use their planning and building review authority to require all Regulated Projects to implement LID facilities to control runoff from new and replaced impervious surfaces. The Permittees are also required to implement GSI retrofits within their jurisdictions to control runoff from a certain acreage of existing development. Accordingly, the Permittees have constructed a significant number of LID and GSI stormwater control facilities regionwide, the majority of which are bioretention-type systems (Figure 1). The LID Monitoring requirements in MRP 3 are intended to assess compliance and effectiveness of those LID controls implemented by the Permittees, and to identify opportunities for improvement.

Following MRP 3's adoption, the Permittees developed a systematic approach for monitoring LID facilities and are now implementing that approach. In accordance with Provision C.8.d, the Permittees convened an LID Technical Advisory Group (TAG) consisting of Water Board staff and impartial science advisors to assist with the development and implementation of technically-sound LID monitoring plans. The TAG met in December 2022, March 2023, and April 2024 to provide input on the LID Monitoring Plans and Quality Assurance Project Plan (QAPP) that were developed by the Permittees. These plans were finalized in October 2024, identifying: (1) monitoring goals and objectives, (2) facilities to be monitored, (3) the sampling design (including the number of storm events to be monitored), and (4) data management quality assurance and quality control (QA/QC) procedures.



Figure 1: A bioretention system in the City of Burlingame designed to treat runoff from surrounding parking lots and other impervious surfaces. Bioretention systems function by allowing runoff collected from impervious surfaces during storms to pond to a specified depth and percolate through soil treatment layers before discharging to the MS4. This achieves pollutant removal via filtration and other removal processes, and reduces the rate that stormwater is discharged to receiving waters to reduce erosive flows and other physical impacts of hydrological cycle modifications due to urbanization. Source: *C.3 Regulated Project Guide*, Version 2.0, November 2023, San Mateo Countywide Water Pollution Prevention Program.

The LID Monitoring Plans identified two key management questions as the studies' focus:

- 1) What are the pollutant removal and hydrologic benefits of different types of LID facilities, systems, components, and design variations, at different spatial scales and how do they change over time?
- 2) What are the minimum levels of O&M necessary to avoid deteriorated LID facilities, systems, and components that reduce pollutant removal and hydrologic performance?

Eight LID bioretention facilities were selected for monitoring, including two each in Alameda, San Mateo and Santa Clara counties, and one each in Contra Costa and Solano counties. Monitoring commenced at five of those facilities, including two adjacent facilities in Alameda County, and one facility each in San Mateo, Santa Clara, and Contra Costa counties, during the 2024 Water Year (WY 2024; i.e., October 2023 through September 2024). For selected storm events, monitoring involved measurement of precipitation characteristics, continuous flow measurements at the LID inflow and outflow locations, and collection and analysis of LID influent and effluent samples collected throughout the precipitation event. The water samples collected were analyzed for a variety of water quality parameters and pollutants, such as pH, total

suspended solids (TSS), total petroleum hydrocarbons, total and dissolved mercury (Hg), copper, and other selected metals, PCBs, and PFAS.

During WY 2024 monitoring, the Permittees overcame significant challenges such as inconsistent functioning of flow measurement equipment and hydrologic issues. For example, at the Oakland Army Base (OAB) site in Alameda County, a lack of hydrologic separation between the two adjacent LID facilities led to overflow from one side of the site to bias the flow monitoring in the other side. To address these issues at the OAB site, a concrete barrier was installed to ensure the adjacent facilities would function independently. Despite these challenges, the first year of monitoring yielded useful results that suggest LID facilities can achieve significant effectiveness in reducing pollutant loads (notably including PCBs and mercury) and peak discharges. In addition, the first year of monitoring identified lessons learned regarding how facilities are designed and constructed, which may result in changes to design and construction, including inspection and testing during construction, leading to better water quality outcomes from future facilities over time.

Based on lessons learned during their WY 2024 LID monitoring experiences, the Permittees have updated their monitoring plans for subsequent monitoring years. Future monitoring across all identified LID facilities is expected to provide additional information on the water balance in individual LID facilities, the effectiveness of LID in removing pollutants, and the impact of maintenance on LID performance.

Trash Monitoring: Provision C.10 requires the Permittees to continue to implement actions that would or will result in a reduction in trash discharges from 2009 levels to receiving waters by:

- 90 percent by June 30, 2023, and
- 100 percent by June 30, 2025 (an extension of the previous deadline of July 1, 2022, established under MRP 1).

Specifically, Provision C.10 continues to require the Permittees to implement trash generation prevention and control actions, such as the deployment of full trash capture devices (FTCD), to reduce trash generation within their jurisdictions to a low trash generation rate (i.e., 5 gallons per acre per year) or better. Throughout the MRP 3 permit term, the Permittees have expended significant effort and investments to achieve compliance with these requirements. The Trash Monitoring requirements implemented in MRP 3 are intended to: (1) measure the effectiveness of those actions, (2) help evaluate whether the Permittees have effectively prevented trash from their jurisdictions from discharging to receiving waters, and (3) potentially identify a need for subsequent adaptive management to ensure trash is effectively controlled.

In accordance with Provision C.8.e, the Permittees convened a Technical Advisory Group (TAG), consisting of impartial science advisors and Water Board Staff, to assist with development and implementation of technically sound Trash Monitoring Plans. Apart from TAG, input on Trash Monitoring Plans was also received from other interested parties and scientific experts. With input from the TAG and others, the

Permittees developed monitoring plans aimed at addressing the following key management and monitoring questions:

### *Management Questions*

- 1) Have Permittees' trash management actions effectively prevented trash from their jurisdictions from discharging to receiving waters?
- 2) Are discharges of trash from areas within Trash Management Areas controlled to a low trash generation level causing and/or contributing to adverse trash impacts in receiving waters?

### *Monitoring Questions*

- 1) What is the trash condition and approximate level of trash (volume, type, and size) within and discharging into receiving waters in areas that receive MS4 runoff controlled to a low trash generation via the installation of full trash capture devices, or the implementation of other trash management actions equivalent to full trash capture systems?
- 2) Does the level of trash in the receiving water correlate strongly with the conditions of the tributary drainage area of the MS4?

The Permittees chose to address the questions above with two regional monitoring plans. The first – a Trash Outfall Monitoring Plan – was developed to address questions related to discharges from outfalls (i.e., the first question in each section above), while the second – a Receiving Water Trash Monitoring plan – is intended to address the questions related to receiving water impacts (i.e., the second question of each type). Each monitoring plan was developed with an associated QAPP that outlines QA/QC procedures. Each monitoring plan outlines: (1) monitoring goals and objectives, (2) sites to be monitored, (3) the sampling design (including sampling frequency, trash characterization, etc.), (4) field methods and procedures, and (5) data evaluation methods. Eleven outfall locations (including three each in Alameda and Santa Clara counties, two each in Contra Costa and San Mateo counties, and one in Solano County) and six receiving water monitoring sites (including two each in Alameda and Santa Clara counties, and one each in Contra Costa and San Mateo counties) were selected for trash monitoring.

Outfall monitoring commenced in WY 2024 with a minimum number of wet weather monitoring events per year was set at three and monitoring parameters to include: (1) storm and runoff characteristics (e.g., storm duration, total rainfall, peak flows, etc.), (2) trash collection volumes, and (3) trash characteristics (e.g., categories of plastic and non-plastic trash items). During WY 2024 outfall monitoring, the Permittees overcame significant challenges, such as backing up of water into the monitored outfalls and detachment of nets (Figure 2) during heavy storm events. Despite these challenges, the first year of outfall monitoring yielded useful results, including preliminary estimates of trash volumes, which varied significantly between sites, and initial insights about trash composition and the effectiveness of management actions.



Figure 2: Example of the netting devices used to collect trash during outfall monitoring. This trash net was installed at the Grayson Creek outfall in Contra Costa County. Source: “*Trash Outfall Monitoring Progress Report, Water Year 2024*,” Watching Our Watersheds Regional Trash Monitoring Project, March 31, 2025.

Based on lessons learned during their WY 2024 outfall monitoring experiences, the Permittees have updated their Trash Outfall Monitoring plan and QAPP for subsequent monitoring years. Future monitoring is expected to provide additional insights regarding trash discharge volumes and the observed variation in results, as well as the effectiveness of trash management actions. Additionally, significant insights regarding the impact of trash discharges on receiving waters are expected to be gained from receiving water trash monitoring that commenced during the current water year, WY 2025 (i.e., October 2024 through September 2025).

### **Next Steps and MRP Reissuance**

Staff will continue to review the Permittees’ implementation of MRP 3, including Provisions C.3 and C.8, throughout the remainder of the permit term. Previous progress made by the Permittees toward the Provision C.3.j GSI retrofit requirements is a promising indicator of their ability to meet those numeric targets over the permit term. We also expect to continue to gain significant insights into the effectiveness of LID treatment facilities and trash management actions, as well as impacts on receiving waters, through the Permittees’ ongoing Provision C.8 monitoring efforts.

In addition, staff and Permittees have begun to plan the reissuance process for the MRP. NPDES permits are issued for five-year terms and, therefore, MRP 3’s five-year term will end in June 2027. Thus, the reissuance process for MRP 4 will begin at the

end of this year. Starting in fall 2025, staff will initiate engagement with the Permittees, communities of interest, and other interested parties. That engagement will continue throughout 2026 and into early 2027, and will inform the development of the next version of the MRP, slated for Board consideration in summer 2027.