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

STAFF SUMMARY REPORT: Imtiaz-Ali Kalyan
MEETING DATE: December 10, 2025

ITEM: 8

Municipal Regional Stormwater NPDES Permit - Trash Load Reduction Update

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EXECUTIVE SUMMARY

All Permittees subject to the Municipal Regional Stormwater NPDES Permit (Order No. R2-2022-0018, as amended) (MRP), with the exception of flood control districts, are required to reduce discharges of trash to receiving waters through the municipal separate storm sewer system, or municipal storm sewer. Trash provisions were first included in the MRP in 2009, and, since then, Permittees have pioneered municipal storm sewer trash control actions in California. The Permittees developed studies to evaluate trash generation levels and identify prominent types of trash in stormwater, and methods to quantify trash. They have also installed and are operating and maintaining thousands of full trash capture devices; established a framework for understanding trash reductions; and developed a visual monitoring method to characterize the benefit of measures other than full trash capture devices. Permittees have achieved these accomplishments by coordinating regionally and across departments, and by securing funds for trash control activities, including U.S. EPA grants and cooperative projects with Caltrans.

A majority (91 percent) of the 74 Permittees subject to the MRP trash load reduction requirements were required to achieve the 100 percent trash load reduction benchmark by June 30, 2025. A subset of Permittees (9 percent) have until December 31, 2025. Sixty-four percent of Permittees with the June 30, 2025, deadline reported achieving 100 percent trash reduction by June 30, 2025, and an additional 24 percent of Permittees are expected to reach 100 percent trash reduction by early 2026. The remaining 12 percent of Permittees with the June 30, 2025, deadline require additional time and have submitted acceptable Trash Load Reduction Plans to demonstrate how they will comply with the 100 percent benchmark. Going forward, the focus of trash control will shift from achieving the 100 percent reduction benchmark, to maintaining it through the operation and maintenance of the installed full trash capture control devices and the ongoing implementation of other actions that achieve a low trash generation level in areas not addressed by these devices.

DISCUSSION

This item provides an update on the progress of Permittees covered by the Municipal Regional Stormwater NPDES Permit (Order No. R2-2022-0018, as amended) (MRP) to reduce discharges of trash to receiving water through the municipal storm sewer. The MRP was reissued by the Board on May 11, 2022, and maintained the previous order's compliance benchmarks for Permittees to install and maintain trash capture devices, or

implement other equivalent trash control measures, sufficient to reduce trash loads by 100 percent (or no adverse impact to receiving waters) by June 30, 2025. The reduction requirements apply to 74 of the 79 MRP Permittees, including municipalities in Alameda, Contra Costa, Santa Clara, and San Mateo counties, and the cities of Fairfield, Suisun City, and Vallejo in Solano County. The remaining five MRP Permittees are flood management districts that implement set trash control requirements.

Four of the 74 Permittees are controlling direct discharges of trash to creeks and the Bay under an approved Direct Discharge Control Plan, and are allowed an additional six months, until December 31, 2025, to achieve the 100 percent reduction requirement. The MRP's East Contra Costa Permittees, including Antioch, Brentwood, and Oakley, which were brought under the MRP in 2015, also have until December 31, 2025, to achieve the 100 percent reduction. Permittees that do not meet the 100 percent reduction by the December 31, 2025 deadline will submit a report of non-compliance and an updated Trash Load Reduction Plan (Plan) describing next steps and measures for getting to 100 percent trash reduction.

Permittees have done substantial work to control trash discharges and have pioneered municipal storm sewer trash control actions in California. For example, Permittees developed studies to evaluate trash levels and types and established a framework for understanding trash reductions. Permittees also developed the on-land visual trash assessment, a visual monitoring method to characterize the benefit of measures other than full trash capture which is now used throughout California. Permittees have installed, and are operating and maintaining, thousands of full trash capture devices, which can range from small devices installed in storm drain inlets to large hydrodynamic separators and multi-gross solid removal devices. Permittees have also collaborated internally and across agencies to achieve trash reduction requirements. For example, Permittees have been and continue to be partners with Caltrans on the planning, design, and construction of cooperative trash control projects. Permittees, especially larger municipalities, have increased coordination across departments to implement trash control actions. Permittees have also secured grants for trash control activities, including U.S. EPA funding.

As a result of trash control actions implemented by Permittees over the past 16 years (2009 to 2025), approximately 113,000 acres of previously moderate, high, and very high trash generating land areas have been converted to low trash generating areas. The estimated trash loading rate in 2009, before trash control measures were implemented, was approximately 2,000,000 gallons per year. Due to trash control actions implemented thus far, the estimated trash loading rate in 2025 has decreased to approximately 310,000 gallons per year. The remaining uncontrolled areas consist largely of moderate (approximately 14,000 acres) and some high (approximately 4,600 acres) trash generating areas.

The remainder of this report summarizes the Permittees that have successfully achieved the 100 percent trash reduction requirement, describes the trash control measures Permittees are implementing to control discharges of trash from their MS4 to receiving waters, and summarizes next steps with respect to trash control.

Reported Trash Reduction Achieved

Collectively, Permittees have devoted significant resources to control trash transported through municipal storm sewers. The Permittees reported on their compliance with the 100 percent trash load reduction benchmark within their fiscal year 2024-2025 annual reports, submitted on September 30, 2025. Appendix A summarizes each Permittee's reported trash reduction and how it was achieved.

Based on information submitted in the annual reports, 43 out of the 67 Permittees with the June 30, 2025 deadline reported achieving 100 percent trash reduction. The remaining 24 Permittees have all submitted a report of non-compliance and an acceptable Plan describing next steps and control measures that will bring them to 100 percent trash reduction within a reasonable timeframe. The accepted Plans include a description of the remaining uncontrolled areas; locations of planned full trash capture devices or other trash control measures; a description of those locations; and an approximate implementation timeframe. Sixteen of the 24 Permittees that submitted an acceptable Plan are expected to reach 100 percent trash reduction by early 2026. The remaining Permittees require additional time to achieve 100 percent trash reduction. Two of these Permittees are at 95 percent trash reduction or greater and are working with Caltrans on a cooperative project that will bring them to 100 percent trash reduction within a reasonable timeframe. For the remaining six Permittees, the Water Board will consider cease and desist orders at its December 10, 2025, Board meeting.

Trash Control Methods

Permittees primarily use two methods to control trash. One is the installation and appropriate operation and maintenance of full trash capture devices certified by the State Water Resources Control Board. The other is the implementation of source control, pollution prevention, and cleanup actions equivalent to full trash capture. For MRP Permittees, full trash capture devices currently account for about 65 percent of the total area controlled to a low trash generation rate.

Operation and maintenance are crucial to ensure the effectiveness of full trash capture devices. The MRP requires a minimum inspection and maintenance frequency of once or twice per year for moderate or high/very high trash generation rate areas, respectively. Additionally, the MRP requires Permittees to inspect and maintain full trash capture devices as frequently as needed to ensure they are functioning effectively. For example, trash and organic debris tend to clog the screens on small inlet-based devices, which can result in devices being less effective in intercepting trash (due to overflowing) and increasing the potential for localized flooding. Typically, smaller devices require more-frequent maintenance than large devices. Larger full capture devices, such as hydrodynamic separators, can control trash generated in larger areas and may have sufficient reservoir space to hold relatively larger amounts of trash, reducing their needed maintenance frequency.

The second acceptable method to achieve trash load reduction is the implementation of trash control actions that are equivalent to full trash capture. These actions typically include source controls like single-use plastic bag bans; street sweeping; installing and maintaining trash receptacles; trash inspections and enforcement procedures on private

properties; and regular litter and trash cleanups. The effect of these actions must be documented by conducting on-land visual trash assessments at a frequency sufficient to confirm full trash capture equivalence. Ten of the 74 Permittees, mostly smaller towns and cities, claimed a relatively high trash reduction (more than 60 percent) associated with control measures other than full trash capture devices, as verified by on-land visual trash assessments.

Permittee Achievements

Full Trash Capture – As noted above, 43 Permittees with the June 30, 2025, deadline reported 100 percent trash reduction in their fiscal year 2024-2025 annual reports. This was largely accomplished through the installation of full trash capture devices or implementing other measures equivalent to full trash capture and verified by on-land visual assessments. In some cases, Permittees have also successfully partnered with Caltrans for the installation of full trash capture devices that control trash from both Caltrans and the municipality's right-of-way. Caltrans staff is continuing efforts to identify potential MRP municipal partners for the implementation of trash control cooperative projects to control trash from both Caltrans and municipal rights-of-way, and to keep current projects on schedule to meet its projection of treating approximately 2,045 acres of Caltrans' right-of-way via cooperative projects. Additional information about Caltrans' efforts to control trash, including through partnership projects with municipalities, is further discussed in Item 9.

Direct Discharge Control Programs (DDCPs) – Some Permittees are faced with the challenge that large amounts of trash are discharged directly to receiving waters from homeless encampments and as a result of direct dumping. These trash discharges are separate from and in addition to discharges from Permittee storm drain systems. Proper management of such direct discharges is important to prevent adverse water quality impacts and ensure attainment of water quality standards in receiving waters. Within Provision C.10, Permittees with an approved comprehensive DDCP that describe actions including, but not limited to, the provision of temporary and permanent housing, sanitation services, and dumping vouchers qualify for up to a 15 percent offset and have until December 31, 2025, to attain 100 percent trash load reduction via full trash capture or equivalent measures. Direct discharge control credits will no longer be applicable after December 31, 2025; therefore, as part of their Trash Load Reduction Plan, Permittees with an approved DDCP must describe future trash control implementation measures to get 100 percent trash reduction after December 31, 2025, without these offsets. In addition to C.10 DDCP work, Permittees are identifying and implementing appropriate best management practices (BMPs) to address impacts from non-stormwater discharges associated with homeless encampments, as required by MRP Provision C.17. The Provision C.17 requirements are intended to encourage regional coordination between cities, Caltrans, sanitary sewer agencies, flood control districts, and other agencies (e.g., railroads, non-governmental organizations) for the development and implementation of appropriate BMPs. A BMP report that identifies effective practices to address municipal storm sewer discharges associated with unsheltered homelessness that impact water quality was submitted by Permittees in September 2024, consistent with Provision C.17.

Private land drainage areas (PLDAs) – In addition to public lands, private lands can discharge trash to the municipal storm sewer, and the MRP requires Permittees to appropriately control such discharges. Private lands can include, but are not limited to, commercial, industrial, and residential projects, including private streets and parking lots that contribute trash to Permittee storm drains. To address trash contributions to municipal storm sewers from these private properties, Permittees are required to either ensure that appropriate full trash capture devices are installed and being operated and maintained within the stormwater conveyance system on-site, or downstream of the private parcel and prior to discharging to receiving waters, or that the private parcels are managed by control actions equivalent to or better than full trash capture, as verified through visual assessment. Most Permittees have identified these PLDAs and have mandated property owners and/or managers to implement additional trash control measures and achieve low trash generation through a phased approach, including active business outreach, code enforcement, and ordinance revision. Based on the submitted Plans, some Permittees that have not yet achieved 100 percent trash control anticipate achieving additional cumulative trash reduction once their PLDAs are fully controlled to a low trash generation level. We intend to work with these Permittees as they evaluate and implement, or cause to be implemented, controls to address trash generated on these areas.

Conclusion

Permittees have made significant progress controlling discharges of trash from their storm drain systems to receiving waters since 2009 when Provision C.10 was first required under the first MRP. Permittees have controlled trash through the installation of full trash capture devices and through the implementation of other controls (e.g., source control ordinances, street sweeping, and on-land cleanups) equivalent to full trash capture and verified through visual assessments.

Sixty-four percent of Permittees with the June 30, 2025, deadline reported achieving 100 percent trash reduction, and an additional 24 percent of Permittees are expected to reach 100 percent trash reduction by early 2026. The remaining 12 percent of Permittees with the June 30, 2025, deadline require additional time and have submitted acceptable Plans and associated time schedules that demonstrate how they will fully address the 100 percent trash load reduction benchmark within a reasonable timeframe. In addition, Water Board staff will continue to work closely with all Permittees to ensure that installed full trash capture devices are adequately operated and maintained, and low trash generation areas remain low. Water Board staff are also working closely with Permittees that reported using credits and offsets in fiscal year 2024-2025 to ensure these Permittees maintain 100 percent trash load reduction going forward; the MRP does not allow use of credits and offsets beyond June 30, 2025.

We will provide a future update to the Board based on our ongoing evaluation of Permittees' actions and plans to meet the 100 percent trash load reduction requirement.

Appendix A

Permittee-Reported Trash Load Reduction as of June 30, 2025

Alameda County					
Permittee	Full Trash Capture Systems	Other Control Measures (verified by on-land Visual Assessment	Source Control Actions	Optional Trash Offsets (creek and shoreline cleanup/ DDCP)	Total (Jurisdictional-wide) % Trash Load Reduction through FY 2024-25
Alameda County (unincorp.)	74	7	0	10	91
Alameda	84	12	0	0	96
Albany	**59**	**41**	**0**	**0**	**100**
Berkeley	74	17	0	9	100
Dublin	91	5	0	0	96
Emeryville	**63**	**37**	**0**	**0**	**100**
Fremont	**80**	**20**	**0**	**0**	**100**
Hayward	**100**	**0**	**0**	**0**	**100**
Livermore	54	24	0	0	78
Newark	76	23	1	0	100
Oakland	23	56	0	25	>100*
Piedmont	33	64	3	0	100
Pleasanton	**0**	**100**	**0**	**0**	**100**
San Leandro	77	0	0	0	77
Union City	78	0	0	0	78

Astrerisk (*) - Permittees that have until December 31, 2025 to report 100 percent trash load reduction.
Bold – Permittees that reported achieving 100% trash load reduction benchmark by June 30, 2025 without source control credits or creeks and shoreline cleanup offsets.
Yellow Highlight – Permittees that submitted an approved Plan and will achieve the 100 percent trash load reduction benchmark, via full trash capture or equivalent measures, in a reasonable timeframe.
Blue Highlight – Permittees that submitted an approved Plan and will need additional time to achieve the 100 percent trash load reduction benchmark and will be issued a cease and desist order by the Board.

Contra Costa County					
Permittee	Full Trash Capture Systems	Other Control Measures (verified by on-land Visual Assessment	Source Control Actions	Optional Trash Offsets (creek and shoreline cleanup/ DDCP)	Total (Jurisdictional-wide) % Trash Load Reduction through FY 2024-25
Contra Costa County (unincorp.)	40	47	0	9	96*
Antioch	46	0	0	10	56*
Brentwood	0.1	0	0	0	0.1*, **
Clayton	**100**	**0**	**0**	**0**	**100**
Concord	90	0	0	0	90
Danville	**29**	**71**	**0**	**0**	**100**
El Cerrito	66	24	0	10	100
Hercules	94	0	0	0	94
Lafayette	66	31	0	0	97
Martinez	**100**	**0**	**0**	**0**	**100**
Moraga	92	0	0	0	92
Oakley	**100**	**0**	**0**	**0**	**100***
Orinda	**2**	**98**	**0**	**0**	**100**
Pinole	80	0	0	0	80
Pittsburg	61	33	0	0	94
Pleasant Hill	87	0	0	0	87
Richmond	54	12	0	0	66
San Pablo	73	17	0	15	>100*
San Ramon	**0**	**100**	**0**	**0**	**100**
Walnut Creek	**22**	**78**	**0**	**0**	**100**

** The City of Brentwood paused conducting on-land visual trash assessments and, therefore, their reported trash load reduction in FY 2024-25 was less than what was reported by the City in FY 2023-24 (i.e., 99 percent). Brentwood resumed visual assessments in FY 2025-26 and anticipates achieving the 100 percent trash load reduction benchmark by December 31, 2025.

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Bold – Permittees that reported achieving 100% trash load reduction benchmark by June 30, 2025 without source control credits or creeks and shoreline cleanup offsets.
Yellow Highlight – Permittees that submitted an approved Plan and will achieve the 100 percent trash load reduction benchmark, via full trash capture or equivalent measures, in a reasonable timeframe.
Blue Highlight – Permittees that submitted an approved Plan and will need additional time to achieve the 100 percent trash load reduction benchmark and will be issued a cease and desist order by the Board.

San Mateo County					
Permittee	Full Trash Capture Systems	Other Control Measures (verified by on-land Visual Assessment	Source Control Actions	Optional Trash Offsets (creek and shoreline cleanup/ DDCP)	Total (Jurisdictional-wide) % Trash Load Reduction through FY 2024-25
San Mateo County	84	10	0	0	94
Atherton	**0**	**100**	**0**	**0**	**100**
Belmont	**91**	**9**	**0**	**4**	**100**
Brisbane	**97**	**3**	**0**	**0**	**100**
Burlingame	**87**	**13**	**0**	**0**	**100**
Colma	85	14	0	0	99
Daly City	63	30	0	0	93
East Palo Alto	80	15	0	0	95
Foster City	**76**	**24**	**0**	**0**	**100**
Half Moon Bay	**90**	**10**	**0**	**0**	**100**
Hillsborough	**0**	**100**	**0**	**0**	**100**
Menlo Park	**56**	**44**	**0**	**0**	**100**
Millbrae	**100**	**0**	**0**	**0**	**100**
Pacifica	**25**	**75**	**0**	**0**	**100**
Portola Valley	**0**	**100**	**0**	**0**	**100**
Redwood City	60	31	0	0	91
San Bruno	**92**	**8**	**0**	**0**	**100**
San Carlos	**80**	**20**	**0**	**0**	**100**
San Mateo	**60**	**40**	**0**	**0**	**100**
South San Francisco	84	13	0	0	97
Woodside	**0**	**100**	**0**	**0**	**100**

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Yellow Highlight – Permittees that submitted an approved Plan and will achieve the 100 percent trash load reduction benchmark, via full trash capture or equivalent measures, in a reasonable timeframe.
Blue Highlight – Permittees that submitted an approved Plan and will need additional time to achieve the 100 percent trash load reduction benchmark and will be issued a cease and desist order by the Board.

Santa Clara County					
Permittee	Full Trash Capture Systems	Other Control Measures (verified by on-land Visual Assessment	Source Control Actions	Optional Trash Offsets (creek and shoreline cleanup/ DDCP)	Total (Jurisdictional-wide) % Trash Load Reduction through FY 2024-25
Santa Clara County	36	53	0	0	89
Campbell	**73**	**27**	**0**	**0**	**100**
Cupertino	**56**	**44**	**0**	**5**	**100**
Los Altos	**94**	**6**	**0**	**0**	**100**
Los Altos Hills	**0**	**100**	**0**	**0**	**100**
Los Gatos	**66**	**34**	**0**	**0**	**100**
Milpitas	**76**	**24**	**0**	**0**	**100**
Monte Sereno	**0**	**100**	**0**	**0**	**100**
Mountain View	**30**	**70**	**0**	**0**	**100**
Palo Alto	29	67	0	0	96
San Jose	60	38	0	25	>100*
Santa Clara (city)	**75**	**25**	**0**	**0**	**100**
Saratoga	**33**	**67**	**0**	**0**	**100**
Sunnyvale	**53**	**47**	**0**	**0**	**100**

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Blue Highlight – Permittees that submitted an approved Plan and will need additional time to achieve the 100 percent trash load reduction benchmark and will be issued a cease and desist order by the Board.

Solano County					
Permittee	Full Trash Capture Systems	Other Control Measures (verified by on-land Visual Assessment	Source Control Actions	Optional Trash Offsets (creek and shoreline cleanup/ DDCP)	Total (Jurisdictional-wide) % Trash Load Reduction through FY 2024-25
Fairfield	96	0	4	0	100
Suisun	98	2	0	0	100
Vallejo & VFWD	70	16	0	10	96

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Yellow Highlight – Permittees that submitted an approved Plan and will achieve the 100 percent trash load reduction benchmark, via full trash capture or equivalent measures, in a reasonable timeframe.
Blue Highlight – Permittees that submitted an approved Plan and will need additional time to achieve the 100 percent trash load reduction benchmark and will be issued a cease and desist order by the Board.