

**California Regional Water Quality Control Board  
San Francisco Bay Region  
Municipal Regional Stormwater NPDES Permit**

**Revised Tentative Order  
No. R2-2022-XXXX  
NPDES Permit No. CAS612008  
~~September 10, 2021~~**

**May 11, 2022**

Note: Revisions to the Tentative Order are shown in redline/strikeout.

**California Regional Water Quality Control Board  
San Francisco Bay Region  
Municipal Regional Stormwater NPDES Permit**

**ORDER No. R2-2022-XXXX  
NPDES PERMIT No. CAS612008**

**Issuing Waste Discharge Requirements and National Pollutant Discharge Elimination System (NPDES) Permit for the discharge of stormwater runoff from the municipal separate storm sewer systems (MS4s) of the following jurisdictions and entities, which are permitted under this San Francisco Bay Municipal Regional Stormwater Permit (MRP):**

**The cities of Alameda, Albany, Berkeley, Dublin, Emeryville, Fremont, Hayward, Livermore, Newark, Oakland, Piedmont, Pleasanton, San Leandro, and Union City, Alameda County, the Alameda County Flood Control and Water Conservation District, and Zone 7 of the Alameda County Flood Control and Water Conservation District, which have joined together to form the Alameda Countywide Clean Water Program (Alameda Permittees)**

**The cities of Antioch, Brentwood, Clayton, Concord, El Cerrito, Hercules, Lafayette, Martinez, Oakley, Orinda, Pinole, Pittsburg, Pleasant Hill, Richmond, San Pablo, San Ramon, and Walnut Creek, the towns of Danville and Moraga, Contra Costa County, the Contra Costa County Flood Control and Water Conservation District, which have joined together to form the Contra Costa Clean Water Program (Contra Costa Permittees)**

**The cities of Campbell, Cupertino, Los Altos, Milpitas, Monte Sereno, Mountain View, Palo Alto, San Jose, Santa Clara, Saratoga, and Sunnyvale, the towns of Los Altos Hills and Los Gatos, the Santa Clara Valley Water District, and Santa Clara County, which have joined together to form the Santa Clara Valley Urban Runoff Pollution Prevention Program (Santa Clara Permittees)**

**The cities of Belmont, Brisbane, Burlingame, Daly City, East Palo Alto, Foster City, Half Moon Bay, Menlo Park, Millbrae, Pacifica, Redwood City, San Bruno, San Carlos, San Mateo, and South San Francisco, the towns of Atherton, Colma, Hillsborough, Portola Valley, and Woodside, the San Mateo County Flood and Sea Level Rise Resiliency District, and San Mateo County, which have joined together to form the San Mateo Countywide Water Pollution Prevention Program (San Mateo Permittees)**

**The cities of Fairfield ~~and~~, Suisun City, Vallejo, and the Vallejo Flood & Wastewater District, which have joined together to form the Fairfield-Suisun Urban Runoff Management Program (Fairfield-SuisunSolano Stormwater Alliance (Solano) Permittees)**

~~The City of Vallejo and the Vallejo Sanitation and Flood Control District (Vallejo Permittees)~~

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**The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter referred to as the Water Board) finds that:**

**FINDINGS**

**Incorporation of Fact Sheet**

1. The Fact Sheet for the San Francisco Bay Municipal Regional Stormwater National Pollutant Discharge Elimination System (NPDES) Permit (Attachment A) includes cited regulatory and legal references and additional explanatory information in support of the requirements of this Permit. The Fact Sheet, including any supplements thereto, is hereby incorporated by reference.

**Existing Permit**

2. **Alameda County**—The cities of Alameda, Albany, Berkeley, Dublin, Emeryville, Fremont, Hayward, Livermore, Newark, Oakland, Piedmont, Pleasanton, San Leandro, and Union City, Alameda County (Unincorporated area), the Alameda County Flood Control and Water Conservation District, and Zone 7 of the Alameda County Flood Control and Water Conservation District have joined together to form the Alameda Countywide Clean Water Program (hereinafter collectively referred to as the Alameda Permittees) and have submitted a permit application (Report of Waste Discharge), dated July 1, 2020, for reissuance of their waste discharge requirements under the NPDES permit to discharge stormwater runoff from storm drains and watercourses within the Alameda Permittees' jurisdictions. The Alameda Permittees are currently subject to NPDES Permit No. CAS612008 issued by Order No. R2-2015-0049 on November 19, 2015, and amended by Order No. R2-2019-0004 on February 13, 2019, to discharge stormwater runoff from storm drains and watercourses within their jurisdictions.
3. **Contra Costa County**—The cities of Antioch, Brentwood, Clayton, Concord, El Cerrito, Hercules, Lafayette, Martinez, Oakley, Orinda, Pinole, Pittsburg, Pleasant Hill, Richmond, San Pablo, San Ramon, and Walnut Creek, the towns of Danville and Moraga, Contra Costa County, and the Contra Costa County Flood Control and Water Conservation District have joined together to form the Contra Costa Clean Water Program (hereinafter collectively referred to as the Contra Costa Permittees) and have submitted a permit application (Report of Waste Discharge), dated July 1, 2020, for reissuance of their waste discharge requirements under the NPDES permit to discharge stormwater runoff from storm drains and watercourses within the Contra Costa Permittees' jurisdictions. The Contra Costa Permittees are currently subject to NPDES Permit No. CAS612008 issued by Order No. R2-2015-0049 on November 19, 2015, and amended by Order No. R2-2019-0004 on February 13, 2019, to discharge stormwater runoff from storm drains and watercourses within their jurisdictions.
4. **San Mateo County**—The cities of Belmont, Brisbane, Burlingame, Daly City, East Palo Alto, Foster City, Half Moon Bay, Menlo Park, Millbrae, Pacifica, Redwood City, San Bruno, San Carlos, San Mateo, and South San Francisco, the towns of Atherton,

Colma, Hillsborough, Portola Valley, and Woodside, the San Mateo County Flood and Sea Level Rise Resiliency District, and San Mateo County have joined together to form the San Mateo Countywide Water Pollution Prevention Program (hereinafter collectively referred to as the San Mateo Permittees) and have submitted a permit application (Report of Waste Discharge), dated July 2, 2020, for reissuance of their waste discharge requirements under the NPDES permit to discharge stormwater runoff from storm drains and watercourses within the San Mateo Permittees' jurisdictions. The San Mateo Permittees are currently subject to NPDES Permit No. CAS612008 issued by Order No. R2-2015-0049 on November 19, 2015, and amended by Order No. R2-2019-0004 on February 13, 2019, to discharge stormwater runoff from storm drains and watercourses within their jurisdictions.

5. **Santa Clara County**—The cities of Campbell, Cupertino, Los Altos, Milpitas, Monte Sereno, Mountain View, Palo Alto, San Jose, Santa Clara, Saratoga, and Sunnyvale, the towns of Los Altos Hills and Los Gatos, the Santa Clara Valley Water District, and the County of Santa Clara have joined together to form the Santa Clara Valley Urban Runoff Pollution Prevention Program (hereinafter collectively referred to as the Santa Clara Permittees) and have submitted a permit application (Report of Waste Discharge), dated July 2, 2020, for reissuance of their waste discharge requirements under the NPDES permit to discharge stormwater runoff from storm drains and watercourses within the Santa Clara Permittees' jurisdictions. The Santa Clara Permittees are currently subject to NPDES Permit No. CAS612008 issued by Order No. R2-2015-0049 on November 19, 2015, and amended by Order No. R2-2019-0004 on February 13, 2019, to discharge stormwater runoff from storm drains and watercourses within their jurisdictions.
6. **Fairfield-Suisun**—The cities of Fairfield and Suisun City have joined together to form the Fairfield-Suisun Urban Runoff Management Program (hereinafter referred to as the Fairfield-Suisun Permittees) and have submitted a permit application (Report of Waste Discharge), dated July 3, 2020, for reissuance of their waste discharge requirements under the NPDES permit to discharge stormwater runoff from storm drains and watercourses within the Fairfield-Suisun Permittees' jurisdictions. The Fairfield-Suisun Permittees are currently subject to NPDES Permit No. CAS612008 issued by Order No. R2-2015-0049 on November 19, 2015, and amended by Order No. R2-2019-0004 on February 13, 2019, to discharge stormwater runoff from storm drains and watercourses within their jurisdictions.
7. **Vallejo**—The City of Vallejo and ~~the~~ Vallejo Sanitary Flood & Wastewater District (hereinafter referred to as the Vallejo Permittees) have submitted permit applications (Report of Waste Discharge), dated June 25 and June 29, 2020, respectively, for reissuance of their waste discharge requirements under the NPDES permit to discharge stormwater runoff from storm drains and watercourses within the Vallejo Permittees' jurisdictions. The Vallejo Permittees are currently subject to NPDES Permit No. CAS612008 issued by Order No. R2-2015-0049 on November 19, 2015, and amended by Order No. R2-2019-0004 on February 13, 2019, to discharge stormwater runoff from storm drains and watercourses within their jurisdictions.
8. The cities of Fairfield, Suisun City, Vallejo, and the Vallejo Flood & Wastewater District have joined together to form the Solano Stormwater Alliance (hereinafter

referred to as the Solano Permittees). The Alameda, Contra Costa, San Mateo, Santa Clara, ~~Fairfield-Suisun~~, and ~~Vallejo~~Solano Permittees are hereinafter referred to in this Order as the Permittees.

## Applicable Federal, State and Regional Regulations

9. Section 402(p) of the federal Clean Water Act (CWA), as amended by the Water Quality Act of 1987, requires NPDES permits for stormwater discharges from municipal separate storm sewer systems (MS4s), stormwater discharges associated with industrial activity (including construction activities), and designated stormwater discharges, which are considered significant contributors of pollutants to waters of the United States. On November 16, 1990, U.S. EPA published regulations (40 CFR Part 122), which prescribe permit application requirements for MS4s pursuant to CWA 402(p). On May 17, 1996, U.S. EPA published an Interpretive Policy Memorandum on Reapplication Requirements for Municipal Separate Storm Sewer Systems, which provided guidance on permit application requirements for regulated MS4s.
10. The Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) is the Water Board's master water quality control planning document. It designates beneficial uses and water quality objectives for waters of the State, including surface waters and groundwater. It also includes programs of implementation to achieve water quality objectives. The Basin Plan was duly adopted by the Water Board and approved by the State Water Resources Control Board (State Water Board), Office of Administrative Law, and U.S. EPA, where required.
11. The Water Board finds stormwater discharges from urban and developing areas in the San Francisco Bay Region to be significant sources of certain pollutants that cause or may be causing or threatening to cause or contribute to water quality impairment in waters of the Region. Furthermore, as delineated in the CWA section 303(d) list, the Water Board has found that there is a reasonable potential that municipal stormwater discharges cause or may cause or contribute to an excursion above water quality standards for the following pollutants: mercury, PCBs, furans, dieldrin, chlordane, DDT, trash, and selenium in San Francisco Bay segments; pesticide associated toxicity, and trash in urban creeks; and trash and low dissolved oxygen in Lake Merritt, in Alameda County. In accordance with CWA section 303(d), the Water Board is required to establish Total Maximum Daily Loads (TMDLs) for these pollutants to these waters to gradually eliminate impairment and attain water quality standards. Therefore, pollutant control actions and further pollutant impact assessments by the Permittees are warranted and required pursuant to this Order.
12. Under section 13389 of the California Water Code, this action to adopt an NPDES permit is exempt from the provisions of Chapter 3 of the California Environmental Quality Act (CEQA).

## Nature of Discharges and Sources of Pollutants

13. Stormwater runoff is generated from various land uses in all the hydrologic sub-basins in the Basin and discharges into watercourses, which in turn flow into Central, Lower and South San Francisco Bay, and Suisun and San Pablo Bays.

14. The quality and quantity of runoff discharges vary considerably and are affected by hydrology, geology, land use, season, and sequence and duration of hydrologic events. Pollutants of concern in these discharges are certain heavy metals; excessive sediment production from erosion due to anthropogenic activities; petroleum hydrocarbons from sources such as used motor oil; microbial pathogens of domestic sewage origin from illicit discharges; certain pesticides associated with acute aquatic toxicity; excessive nutrient loads, which can cause or contribute to the depletion of dissolved oxygen and/or toxic concentrations of dissolved ammonia; trash, which impairs beneficial uses including, but not limited to, support for aquatic life; and other pollutants that can cause aquatic toxicity in the receiving waters.
15. Federal, State or regional entities within the Permittees' boundaries, not currently named in this Order, operate storm drain facilities and/or discharge stormwater to the storm drains and watercourses covered by this Order. The Permittees may lack jurisdiction over these entities. Consequently, the Water Board recognizes that the Permittees should not be held responsible for such facilities and/or discharges. The Water Board will consider such facilities for coverage under its NPDES permitting scheme pursuant to U.S. EPA stormwater regulations.
16. Certain pollutants present in stormwater and/or urban runoff can be derived from extraneous sources over which the Permittees have limited or no direct jurisdiction. Examples of such pollutants and their respective sources are polycyclic aromatic hydrocarbons (PAHs), which are products of internal combustion engine operation and other sources; heavy metals, such as copper from vehicle brake pad wear and zinc from vehicle tire wear; dioxins as products of combustion; polybrominated diphenyl ethers that are incorporated in many household products as flame retardants; mercury resulting from atmospheric deposition; and naturally occurring minerals from local geology. All these pollutants, and others, can be deposited on paved surfaces, rooftops, and other impervious surfaces as fine airborne particles—thus yielding stormwater runoff pollution that is unrelated to the activity associated with a given project site.
17. The Water Board will notify interested agencies and interested persons of the availability of reports, plans, and schedules, including Annual Reports, and will provide interested persons with an opportunity for a public hearing and/or an opportunity to submit their written views and recommendations. The Water Board will consider all comments and may modify the reports, plans, or schedules or may modify this Order in accordance with applicable law. All submittals required by this Order conditioned with acceptance by the Water Board will be subject to these notification, comment, and public hearing procedures.
18. The Water Board notified the Permittees and interested agencies and persons of its intent to adopt this Order and provided an opportunity to submit written comments and recommendations.
19. The Water Board, in a public meeting, heard and considered all comments pertaining to the discharge.
20. This Order supersedes and rescinds Order Nos. R2-2015-0049 as amended by R2-2019-0004.



21. This Order serves as a NPDES permit, pursuant to CWA section 402, or amendments thereto, and shall become effective July 1, 2022, provided the Regional Administrator, U.S. EPA, Region 9, has no objections.

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**THEREFORE, IT IS HEREBY ORDERED** that Order No. R2-2015-0049, as amended by Order No. R2-2019-0004, is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions of Water Code division 7 (commencing with § 13000) and regulations adopted thereunder, and the provisions of the CWA and regulations and guidelines adopted thereunder, the Permittees shall comply with the following requirements in this Order. This action in no way prevents the Water Board from taking enforcement action for past violations of the previous order.

## **A. DISCHARGE PROHIBITIONS**

- A.1.** The Permittees shall, within their respective jurisdictions, effectively prohibit the discharge of non-stormwater (materials other than stormwater) into storm drain systems and watercourses. NPDES-permitted discharges are exempt from this prohibition. Provision C.15 describes a tiered categorization of non-stormwater discharges based on potential for pollutant content that may be discharged upon adequate assurance that the discharge contains no pollutants of concern at concentrations that will impact beneficial uses or cause exceedances of water quality standards.
- A.2.** It shall be prohibited to discharge rubbish, refuse, bark, sawdust, or other solid wastes into surface waters or at any place where they would contact or where they would be eventually transported to surface waters, including flood plain areas. Permittees are also subject to the trash discharge prohibition in the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California and the Water Quality Control Plan for Ocean Waters of California.

## **B. RECEIVING WATER LIMITATIONS**

- B.1.** The discharge shall not cause the following conditions to create a condition of nuisance or to adversely affect beneficial uses of waters of the State:
- B.1.a.** Floating, suspended, or deposited macroscopic particulate matter, or foam;
  - B.1.b.** Bottom deposits or aquatic growths;
  - B.1.c.** Alteration of temperature, turbidity, or apparent color beyond present natural background levels;
  - B.1.d.** Visible, floating, suspended, or deposited oil or other products of petroleum origin; and
  - B.1.e.** Substances present in concentrations or quantities that would cause deleterious effects on aquatic biota, wildlife, or waterfowl, or that render any of these unfit for human consumption.
- B.2.** The discharge shall not cause or contribute to a violation of any applicable water quality standard for receiving waters. If applicable water quality objectives are

adopted and approved by the State Water Board after the date of the adoption of this Order, the Water Board may revise and modify this Order as appropriate.

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## **C.1. Compliance with Discharge Prohibitions and Receiving Waters Limitations**

The Permittees shall comply with Discharge Prohibitions A.1 and A.2 and Receiving Water Limitations B.1 and B.2 through the timely implementation of control measures and other actions as specified in Provisions C.2 through C.24. Compliance with Provisions C.9 through C.12, C.14, C.18 (pertaining to the Pescadero-Butano Sediment TMDL), and C.19.c-f of this Order, which prescribe requirements and schedules for Permittees identified therein to manage their discharges that may cause or contribute to violations of water quality standards (WQS) for pesticides, trash, mercury, polychlorinated biphenyls (PCBs), bacteria, sediment, diazinon and chlorpyrifos, and methylmercury, shall constitute compliance during the term of this Order with Receiving Water Limitations B.1 and B.2 for the pollutants and the receiving waters identified in the provisions. Compliance with Provision C.10 which prescribes requirements and schedules for Permittees to manage their discharges of trash, shall also constitute compliance with Discharge Prohibitions A.1 and A.2 during the term of this Order for discharges of trash. If exceedance(s) of WQS, except for exceedances of WQS for pesticides, trash, mercury, PCBs, bacteria, sediment, diazinon and chlorpyrifos, and methylmercury that are managed pursuant to Provisions C.9 through C.12, C.14, C.18 (pertaining to the Pescadero-Butano Sediment TMDL), and C.19.c-f, persist in receiving waters notwithstanding the implementation of the required controls and actions, the Permittees shall comply with the following procedure:

- C.1.a.** Upon a determination by either the Permittee(s) or the Water Board that discharges are causing or contributing to an exceedance of an applicable (WQS), the Permittee(s) shall notify, within no more than 30 days, and thereafter submit a report to the Water Board that describes controls or best management practices (BMPs) that are currently being implemented, and the current level of implementation, and additional controls or BMPs that will be implemented, and/or an increased level of implementation, to prevent or reduce the discharge of pollutants that are causing or contributing to the exceedance of water quality standards. The report may be submitted in conjunction with the Annual Report, unless the Water Board directs an earlier submittal, and shall constitute a request to the Water Board for amendment of this NPDES Permit. The report and application for amendment shall include an implementation schedule. The Water Board may require modifications to the report and application for amendment; and
- C.1.b.** Submit any modifications to the report required by the Water Board within 30 days of notification.

As long as Permittees have complied with the procedures set forth above, they do not have to repeat the same procedure for continuing or recurring

exceedances of the same receiving water limitations unless directed by the Water Board to develop additional control measures and BMPs and reinitiate the Permit amendment process.

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## C.2. Municipal Operations

The purpose of this provision is to ensure implementation of appropriate BMPs by all Permittees to control and reduce non-stormwater and polluted stormwater discharges to storm drains and watercourses during operation, inspection, and routine repair and maintenance activities of municipal facilities and infrastructure.

### C.2.a. Street and Road Repair and Maintenance

#### i. Task Description – Asphalt/Concrete Removal, Cutting, Installation, and Repair

The Permittees shall implement appropriate BMPs, such as those described in the California Stormwater Quality Association (CASQA) Municipal Stormwater BMP Handbook and Construction Stormwater BMP Handbook, at street and road repair and/or maintenance sites to control debris and waste materials during road and parking lot installation, repaving, repair, or maintenance activities.

#### ii. Implementation Levels

- (1) The Permittees shall require proper management of concrete slurry and wastewater, asphalt, pavement cutting, and other street and road maintenance materials and wastewater to avoid discharge to storm drains from such work sites. The Permittees shall coordinate with sanitary sewer agencies to determine if wastewater generated from road construction, repair, and maintenance activities may be discharged to the sanitary sewer system, provided appropriate approvals are obtained and pretreatment standards are met.
- (2) The Permittees shall require sweeping and/or vacuuming to remove debris, concrete, or sediment residues from work sites upon completion of work. The Permittees shall require cleanup of all construction debris, spills, and leaks using dry methods (e.g., absorbent materials, rags, pads, and vacuuming), as described in the Bay Area Stormwater Management Agencies Association (BASMAA) Blueprint for a Clean Bay or the CASQA Municipal Stormwater BMP Handbook.

#### iii. Reporting

- (1) The Permittees shall report on implementation of and compliance with these BMPs in the Annual Report, ~~along with a narrative description that identifies supporting BMP documents, as appropriate.~~
- (2) ~~In the 2024 Annual Report,~~ Permittees shall make applicable supporting BMP documents available to ~~the Water Board~~ by providing links to online documents ~~staff~~ or submitting the documents as part of the Annual Report ~~representatives during audits or inspections, and upon request.~~

**C.2.b. Sidewalk/Plaza Maintenance and Pavement Washing**

i. **Task Description** – The Permittees shall implement and require to be implemented BMPs that prevent the discharge of polluted wash water and non- stormwater to storm drains from pavement, sidewalk and plaza cleaning, mobile cleaning, outdoor pressure washing operations, and washing down of trash areas and gas station or mobile fueling service areas. BMPs for washing down outside areas of human habitation shall include sanitizing procedures. The Permittees shall implement BMPs such as those included in the BASMAA Mobile Surface Cleaner Program. The Permittees shall coordinate with sanitary sewer agencies to determine if disposal to the sanitary sewer is available for the wastewater generated from these activities provided that appropriate approvals and pretreatment standards are met.

ii. **Reporting**

- (1) The Permittees shall report on implementation of and compliance with these BMPs in the Annual Report, ~~along with a narrative description that identifies supporting BMP documents, as appropriate.~~
- (2) ~~In the 2024 Annual Report,~~ Permittees shall make applicable supporting BMP documents available to ~~the~~ Water Board ~~by providing links to online documents~~ staff or ~~submitting the documents as part of the Annual Report~~ representatives during audits or inspections, and upon request.

**C.2.c. Bridge and Structure Maintenance and Graffiti Removal**

i. **Task Description**

- (1) The Permittees shall implement appropriate BMPs to prevent the discharge of polluted stormwater and non-stormwater from bridges and structural maintenance activities directly into surface waters or storm drains.
- (2) The Permittees shall implement BMPs for graffiti removal that prevent non-stormwater and wash water discharges into storm drains.

ii. **Implementation Levels**

- (1) The Permittees shall prevent all debris and pollutants, including structural materials and coating debris, such as paint chips, generated in bridge and structure maintenance or graffiti removal, from entering storm drains or water courses.
- (2) The Permittees shall protect nearby storm drain inlets before removing graffiti from walls, signs, sidewalks, or other structures. The Permittees shall prevent any discharge of debris, cleaning compound waste, paint

waste, or wash water due to graffiti removal from entering storm drains or watercourses.

- (3) The Permittees shall use proper disposal methods for wastes generated from these activities. The Permittees shall train their employees and/or specify in contracts the proper capture and disposal methods for the wastes generated.

### iii. Reporting

- (1) The Permittees shall report on implementation of and compliance with these BMPs in the Annual Report, ~~along with a narrative description that identifies supporting BMP documents, as appropriate.~~
- (2) ~~In the 2024 Annual Report,~~ Permittees shall make applicable supporting BMP documents available to ~~the~~ Water Board ~~by providing links to online documents staff~~ or ~~submitting the documents as part of the Annual Report representatives during audits or inspections, and upon request.~~

### C.2.d. Stormwater Pump Stations

- i. **Task Description** – The Permittees shall implement measures to operate, inspect, and maintain stormwater pump stations to eliminate non-stormwater discharges containing pollutants, and to reduce pollutant loads in stormwater discharges to comply with WQS.
- ii. **Implementation Levels** – The Permittees shall comply with the following at Permittee-owned or -operated pump stations:
  - (1) Upon becoming aware that the discharge from a pump station has a dissolved oxygen (DO) concentration below 3.0 mg/L, implement corrective actions, such as continuous pumping at a low flow rate, aeration, or other appropriate methods to maintain DO concentrations of the discharge above 3 milligrams per liter (mg/L) and verify the effectiveness of the corrective actions with monitoring. Corrective actions are not necessary for discharges from pump stations that remain in the stormwater collection system or infiltrate into a dry creek immediately downstream.
  - (2) Ensure that pump stations are free of debris and trash, replace any oil-absorbent booms, as needed, and investigate and abate illicit discharges. Pump stations excluded from C.2.d.ii.(1) above are not excluded from this requirement.
  - (3) The Permittees shall maintain records of inspection, maintenance, implementation of corrective actions, and any monitoring records at Permittee-owned or -operated pump stations. These records shall be



made available to Water Board staff or its representatives during inspections and audits, or otherwise upon request.

**C.2.e. Rural Public Works Construction and Maintenance**

**i. Task Description – Rural Road and Public Works Construction and Maintenance**

For the purpose of this provision, rural means any watershed or portion thereof that is developed with large lot home-sites, such as one acre or larger, or with primarily agricultural, grazing, or open space uses. Rural roads include paved, unpaved, utility, and access roads in rural areas. The Permittees shall implement and require contractors to implement BMPs for erosion and sediment control during and after construction for maintenance activities on rural roads, such as those in the CASQA Construction Stormwater BMP Handbook, particularly in or adjacent to stream channels or wetlands. The Permittees shall notify the Water Board, the California Department of Fish and Wildlife (CDFW), and the U.S. Army Corps of Engineers, where applicable, and obtain appropriate agency permits for rural public works activities before work in or near creeks and wetlands.

San Mateo County has additional rural road requirements for the Pescadero-Butano Sediment TMDL described in Provision C.1618 and shall also implement that provision.

**ii. Implementation Level**

- (1) The Permittees shall continue to implement erosion and sediment control BMPs, in addition to those described in Provision C.2.a, during construction and maintenance activities on rural roads, including developing and implementing appropriate training and technical assistance resources for rural public works activities.
- (2) The Permittees shall implement appropriate BMPs to minimize impacts on streams and wetlands in the course of rural road and public works maintenance and construction activities by:
  - (a) Selecting road design, construction, maintenance, and repairs in rural areas that prevent and control road-related erosion and sediment transport;
  - (b) Identifying and prioritizing rural road maintenance on the basis of soil erosion potential, slope steepness, and stream habitat resources;
  - (c) Constructing roads and culverts that do not impact creek functions. New or replaced culverts shall not create a migratory fish passage barrier, where migratory fish are present, or lead to stream instability;

- (d) Implementing an inspection program to maintain rural roads' structural integrity and prevent impacts to water quality;
  - (e) Maintaining rural roads adjacent to streams and riparian habitat to reduce erosion, replace damaging shotgun culverts, and address excessive erosion;
  - (f) Re-grading unpaved rural roads to slope outward where consistent with road engineering safety standards, and installation of water bars as appropriate; and
  - (g) Replacing existing culverts or design of new culverts or bridge crossings shall use measures to reduce erosion, provide fish passage, and maintain natural stream geomorphology in a stable manner.
- (3) The Permittees shall incorporate information about the importance of planning and construction in avoiding water quality impacts into existing training and guidance on permitting requirements for rural public works activities.
- (4) The Permittees shall provide training incorporating these BMPs to rural public works maintenance staff at least twice within this Permit term.
- iii. Reporting** – The Permittees shall report on the implementation of and compliance with BMPs for rural public works construction and maintenance activities, including reporting on increased maintenance in priority areas, in the Annual Report.

**C.2.f. Corporation Yard BMP Implementation**

**i. Task Description** – Corporation Yard Maintenance

- (1) The Permittees shall implement and maintain a site-specific Stormwater Pollution Prevention Plan (SWPPP) for corporation yards, including municipal vehicle and heavy equipment maintenance yards and parking areas, and material storage facilities, to comply with water quality standards. Each SWPPP shall incorporate all appropriate BMPs, such as those described in the current versions of the CASQA Municipal Stormwater BMP Handbook or the Caltrans Storm Water Quality Handbook Maintenance Staff Guide, and addenda, as applicable.
- (2) The requirements in this provision shall apply only to facilities that are not covered under the State Water Board's Industrial Stormwater NPDES General Permit.

**ii. Implementation Level**

- (1) Implement BMPs to minimize pollutant discharges in stormwater and prohibit non-stormwater discharges, such as wash waters from street

sweepers, vactor trucks, or other related equipment. Pollution control actions shall include, but not be limited to, good housekeeping practices, material and waste storage control, and vehicle leak and spill control.

- (2) Routinely inspect corporation yards to ensure that non-stormwater discharges are not entering the storm drain system and that pollutant discharges are prevented to the maximum extent practicable. At a minimum, each corporation yard shall be fully inspected each year between August 1 and September 30. Permittees shall cease or cause to be ceased any active non-stormwater discharges immediately after they are discovered. Corrective actions shall be implemented before the next rain event, but no longer than 10 business days after the potential and/or actual discharges are discovered. Corrective actions can be temporary, and in which case more time can be allowed for permanent corrective actions. If more than 10 business days are required for compliance, a rationale shall be recorded.
- (3) Plumb all vehicle and equipment wash areas to the sanitary sewer after coordination with the local sanitary sewer agency and equip with a pretreatment device (if necessary) in accordance with the requirements of the local sanitary sewer agency. In areas where a sanitary sewer connection is not available, the Permittees shall collect and haul the wash water to an alternative sanitary sewer connection or municipal wastewater treatment plant, or implement appropriate BMPs to collect, properly treat, and reuse wash water onsite without any discharge.
- (4) Use dry cleanup methods when cleaning debris and spills from corporation yards. If wet cleaning methods must be used (e.g., pressure washing), the Permittee shall ensure that wash water is collected and disposed in the sanitary sewer after coordination with the local sanitary sewer agency and in accordance with the requirements of the local sanitary sewer agency. Any private companies hired by the Permittee to perform cleaning activities on Permittee-owned property shall follow the same requirements. In areas where a sanitary sewer connection is not available, the Permittees shall collect and haul the wash water to a municipal wastewater treatment plant, or implement appropriate BMPs and dispose of the wastewater to land in a manner that does not adversely impact surface water or groundwater.
- (5) Outdoor storage areas containing pollutants shall be covered and/or bermed to prevent discharges of polluted stormwater runoff or run-on to storm drain inlets.

**iii. Reporting**

- (1) In each Annual Report, Permittees shall list activities conducted in the corporation yards that have BMPs in the site-specific SWPPP, the date(s) of inspections, the results of inspections, and any follow-up actions, including the date of any necessary corrective actions implemented. The information may be reported in a narrative or tabular format.
- (2) In the 2023 Annual Report, Permittees shall make their corporation yard SWPPPs available to the Water Board by providing links to online documents or submitting the documents as part of the Annual Report.

**C.2.g. Storm Drain Inlet Marking**

**i. Task Description** – Permittees shall mark and maintain municipally-maintained storm drain inlets with an appropriate stormwater pollution prevention message, such as “No dumping, drains to Bay” or equivalent. For newly approved, privately maintained streets, Permittees shall require storm drain inlet markings with an appropriate stormwater pollution prevention message by the project developer upon construction and maintenance of markings through the development maintenance entity. Markings on the storm drain inlets shall be verified prior to acceptance of the project.

**ii. Implementation Level**

- (1) Inspect and maintain storm drain inlet markings of at least 80 percent of municipality-maintained inlets to ensure they are legibly labeled with a no dumping message or equivalent once per permit term.
- (2) Storm drain inlet markings of newly developed, privately maintained streets shall be verified prior to acceptance of the project. Permittees shall require maintenance of the storm drain inlet markings through the development maintenance entity.
- (3) Certify that all privately maintained streets had storm drain inlet markings verified prior to acceptance of the project and were required to maintain the storm drain inlet markings through the development maintenance entity.

**iii. Reporting** – In the 2026 Annual Report, each Permittee shall (1) state how many municipally-maintained storm drain inlets it has, (2) certify that at least 80 percent of municipality-maintained storm drain inlet markings are legibly labeled with an appropriate stormwater pollution prevention message during the permit term; and (3) include a picture of a labeled municipality-maintained inlet.

**C.2.h. Staff Training**

- i. Task Description** – Permittees shall ensure municipal maintenance staff conducting routine repair and maintenance activities of municipal facilities and infrastructure, or activities related to the implementation of corporation yard SWPPPs, are appropriately trained on the requirements of Provision C.2 and methods of implementation. Trainings may be program-wide, region-wide, or Permittee-specific.
- ii. Implementation Level** – At a minimum, provide training at least once within the 5-year term of this Permit to municipal staff on the following topics as relevant to municipal staff responsible for maintenance activities:
- (1) Stormwater pollution prevention;
  - (2) Appropriate BMPs for maintenance and cleanup activities;
  - (3) Street and Road Repair and Maintenance BMPs;
  - (4) Sidewalk/Plaza Maintenance and Pavement Washing;
  - (5) Bridge and Structure Maintenance and Graffiti Removal;
  - (6) Corporation Yard SWPPPs and BMPs; and
  - (7) Spill and discharge response and notification procedures and contacts.
- iii. Reporting** – The Permittees shall include the following information in each Annual Report:
- (1) Dates of training;
  - (2) Training topics covered;
  - (3) Total number of Permittee maintenance staff;
  - (4) Number and percentage of Permittee ~~staff implementing municipal~~ maintenance ~~activity~~staff who attended training;
  - ~~(5) Total number of corporation yard staff performing corporation yard inspections for the Permittee; and~~
  - ~~(6)~~(5) \_\_\_\_\_ If there was no training in a given year, so state.

### C.3. New Development and Redevelopment

The goal of Provision C.3 is for the Permittees to use their planning authorities to include appropriate source control, site design, and stormwater treatment measures in new development and significant redevelopment projects to address stormwater runoff pollutant discharges and prevent increases in runoff flows from new development and redevelopment projects. This goal is to be accomplished primarily through the implementation of low impact development (LID) techniques.

#### C.3.a. New Development and Redevelopment Performance Standard Implementation

- i. **Task Description** – At a minimum, each Permittee shall:
- (1) Have adequate legal authority to implement all requirements of Provision C.3;
  - (2) Have adequate development review and permitting procedures to impose conditions of approval or other enforceable mechanisms to implement the requirements of Provision C.3. For projects discharging directly to CWA section 303(d)-listed waterbodies, conditions of approval must require that post-development runoff not exceed pre-development levels for such pollutants that are listed;
  - (3) Evaluate potential water quality effects and identify appropriate mitigation measures when conducting environmental reviews, such as under CEQA;
  - (4) Provide training adequate to implement the requirements of Provision C.3 for staff, including interdepartmental training;
  - (5) Provide outreach adequate to implement the requirements of Provision C.3, including providing education materials to municipal staff, developers, contractors, construction site operators, and owner/builders, early in the planning process and as appropriate;
  - (6) For all new development and redevelopment projects that are subject to the Permittee's planning, building, development, or other comparable review, but not regulated by Provision C.3, encourage the inclusion of adequate site design measures that may include minimizing land disturbance and impervious surfaces (especially parking lots); clustering of structures and pavement; directing roof runoff to vegetated areas; use of micro-detention, including distributed landscape-based detention; preservation of open space; and protection and/or restoration of riparian areas and wetlands as project amenities;
  - (7) For all new development and redevelopment projects that are subject to the Permittee's planning, building, development, or other comparable

review, but not regulated by Provision C.3, encourage the inclusion of adequate source control measures to limit pollutant generation, discharge, and runoff. These source control measures should include:

- Storm drain inlet stenciling.
- Landscaping that minimizes irrigation and runoff, promotes surface infiltration where possible, minimizes the use of pesticides and fertilizers, and incorporates appropriate sustainable landscaping practices and programs, such as Bay-Friendly Landscaping.
- Appropriate covers, drains, and storage precautions for outdoor material storage areas, loading docks, repair/maintenance bays, and fueling areas.
- Covered trash, food waste, and compactor enclosures.
- Plumbing of the following discharges to the sanitary sewer, subject to the local sanitary sewer agency's regulations and standards:
  - Discharges from indoor floor mat/equipment/hood filter wash racks or covered outdoor wash racks for restaurants.
  - Dumpster drips from covered trash and food compactor enclosures.
  - Discharges from outdoor covered wash areas for vehicles, equipment, and accessories.
  - Swimming pool water, if discharge to onsite vegetated areas is not a feasible option.
  - Fire sprinkler test water, if discharge to onsite vegetated areas is not a feasible option.

(8) Revise, as necessary, General Plans to integrate water quality and watershed protection with water supply, flood control, habitat protection, groundwater recharge, and other sustainable development principles and policies (e.g., referencing the Bay-Friendly Landscape Guidelines).

ii. **Reporting** – Provide a brief summary of the method(s) of implementation of Provisions C.3.a.i.(1) - (8) in the 2023 Annual Report.

### **C.3.b. Regulated Projects**

i. **Task Description** – The Permittees shall require all projects fitting the category descriptions listed in Provision C.3.b.ii. below (hereinafter called Regulated Projects) to implement LID source control, site design, and

stormwater treatment onsite or at a joint stormwater treatment facility<sup>1</sup> in accordance with Provisions C.3.c. and C.3.d., unless the Provision C.3.e. alternate compliance options are invoked. For Regulated Projects that will discharge runoff to a joint stormwater treatment facility, the treatment facility must be completed by the end of construction of the first Regulated Project that will be discharging runoff to the joint stormwater treatment facility.

- (1) Any Regulated Project that has been approved with stormwater treatment measures in compliance with Provision C.3.d. under a previous MS4 permit is exempt from the requirements of Provision C.3.c. (low impact development requirements).
- (2) Any Regulated Project that was approved with no Provision C.3. stormwater treatment requirements under a previous MS4 permit and that has not begun construction by the effective date of this ~~permit~~ Permit, shall be required to fully comply with the requirements of Provisions C.3.c. and C.3.d. Permittees may grant exemptions from this requirement as follows:
  - (a) An exemption may be granted to:
    - (i) Any Regulated Project that was previously approved with a vesting tentative map that confers a vested right to proceed with development in substantial compliance with the ordinances, policies, and standards in effect at the time the vesting tentative map was approved or conditionally approved, as allowed by State law.
    - (ii) Any Regulated Project for which the Permittee has no legal authority to require changes to previously granted approvals, such as projects that have been granted building permits.
  - (b) An exemption from the LID requirements of Provision C.3.c. may be granted to any such Regulated Project as long as stormwater treatment with media filters is provided that comply with the hydraulic sizing requirements of Provision C.3.d.

**ii. Regulated Projects are defined in the following categories:**

- (1) Special Land Use Categories
  - (a) **New Development or redevelopment projects** that fall into one of the categories listed below and that create and/or replace 5,000 square feet or more of impervious surface (collectively over the entire project site). This category includes development projects of the following four types on public or private land that fall under the

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<sup>1</sup> **Joint stormwater treatment facility** – Stormwater treatment facility built to treat the combined runoff from two or more Regulated Projects.



planning and building authority of a Permittee, including sidewalks and any other portions of the public right of way that are developed or redeveloped as part of the project:<sup>2</sup>

- (i) Auto service facilities, described by the following Standard Industrial Classification (SIC) Codes: 5013, 5014, 5541, 7532-7534, and 7536-7539;
  - (ii) Retail gasoline outlets;
  - (iii) Restaurants (SIC Code 5812); or
  - (iv) Stand-alone uncovered parking lots and uncovered parking lots that are part of a development project if the parking lot creates and/or replaces 5,000 square feet or more of impervious surface. This category includes the top uncovered portion of parking structures, unless drainage from the uncovered portion is connected to the sanitary sewer along with the covered portions of the parking structure.
- (b) For redevelopment projects in the categories specified in Provision C.3.b.ii.(1)(a)(i)-(iv):
- (i) The following interior and exterior practices are excluded:
    - a. Interior remodels; and
    - b. Routine maintenance or repair such as roof or exterior wall surface replacement.
  - (ii) The following pavement maintenance practices are excluded;
    - a. Pothole and square cut patching;
    - b. Overlaying existing asphalt or concrete pavement with asphalt or concrete without expanding the area of coverage;
    - c. Shoulder grading;
    - d. Reshaping/regrading drainage systems;
    - e. Crack sealing;
    - f. Pavement preservation activities that do not expand the road prism;

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<sup>2</sup> This does not include separate additional portions of the public right of way that Permittees require treatment of, which the Regulated Project is not disturbing. This is typically enforced through local ordinance, such as what is described in Provision C.3.j.ii.(2)(j).

- g. Upgrading from a bituminous surface treatment (e.g., chip seal),<sup>3</sup> ~~regardless of what is beneath the bituminous surface treatment,~~<sup>4</sup> with an overlay of asphalt or concrete; without expanding the area of coverage;<sup>5</sup>
- h. Applying a bituminous surface treatment to existing asphalt or concrete pavement, without expanding the area of coverage; and
- i. Vegetation maintenance.

~~(iii) For projects consisting of excluded pavement maintenance practices specified in Provision C.3.b.ii.(1)(b)(ii), if those projects include activities that are not excluded (e.g., sidewalk construction or reconstruction involving the creation or replacement of 5,000 or more square feet of impervious surface), those activities shall not also be excluded from the Provision C.3 requirements for Regulated Projects if they meet any of the Regulated Project definitions in Provision C.3.b.~~

- ~~j. The following pavement maintenance practices are not excluded: Layering gravel over an existing gravel road, without expanding the area of coverage.~~

~~(iv)(iii) The following pavement maintenance practices are not excluded. For Road Reconstruction Projects, these practices are included only if they trigger all criteria specified in Provision C.3.b.ii.(5), including the criteria regarding contiguousness.~~

- a. Removing and replacing an asphalt or concrete pavement to the top of the base course<sup>6</sup> or lower, or repairing the pavement base (including repair of the pavement base in preparation for bituminous surface treatment, such as chip seal), as these are considered replaced impervious surfaces;
- b. Extending the pavement edge without increasing the size of the road prism, or paving graveled shoulders, as these are considered new impervious surfaces; and
- c. Resurfacing by upgrading from dirt to gravel, to a bituminous surface treatment (e.g., chip seal),<sup>4</sup> to asphalt, or to concrete; or upgrading from gravel to a bituminous surface treatment, to

<sup>3</sup> This is defined further in the Glossary

<sup>4</sup> This is defined further in the Glossary

<sup>5</sup> This includes wedge grinding that is implemented as part of the upgrade project, so long as the area of coverage is not expanded. See definition of wedge grinding in Glossary.

<sup>6</sup> See definition in Glossary.

asphalt, or to concrete, as these are considered new impervious surfaces.

(iv) For a project consisting of a combination of exempted pavement maintenance practices (pursuant to Provision C.3.b.ii.(1)(b)(ii)), non-exempted pavement maintenance practices (pursuant to Provision C.3.b.ii.(1)(b)(iii)), and/or practices that fall under any other Regulated Project category (pursuant to Provision C.3.b.ii.(1)-(6)), the parts of the project that are not exempt shall be evaluated as a Regulated Project.

(c) Where a redevelopment project in the categories specified in Provision C.3.b.ii.(1)(a)(i)-(iv) results in an alteration of **50 percent or more** of the impervious surface of a previously existing development that was not subject to Provision C.3, the entire project, consisting of all existing, new, and/or replaced impervious surfaces, must be included in the treatment system design (i.e., stormwater treatment systems must be designed and sized to treat stormwater runoff from the entire redevelopment project).

(d) Where a redevelopment project in the categories specified in Provision C.3.b.ii.(1)(a)(i)-(iv) results in an alteration of **less than 50 percent** of the impervious surface of a previously existing development that was not subject to Provision C.3, only the new and/or replaced impervious surface of the project must be included in the treatment system design (i.e., stormwater treatment systems must be designed and sized to treat stormwater runoff from the new and/or replaced impervious surface of the project).

(e) The calculations in Provision C.3.b.ii.(1)(c)-(d) shall include portions of the public right of way that are developed or redeveloped as part of the Regulated Project.

## (2) Other Development Projects

New development projects that create 510,000 square feet or more of impervious surface (collectively over the entire project site) including commercial, industrial, residential housing subdivisions (i.e., detached single-family home subdivisions, multi-family attached subdivisions (town homes), condominiums, and apartments), mixed-use, and public projects (other than public road projects), including sidewalks and any other portions of the public right of way that are developed or redeveloped as part of the projects.<sup>2</sup> This category includes development projects on public or private land that fall under the planning and building authority of a Permittee.

(3) **Other Redevelopment Projects**

Redevelopment projects that create and/or replace 510,000 square feet or more of impervious surface (collectively over the entire project site) including commercial, industrial, residential housing subdivisions (i.e., detached single-family home subdivisions, multi-family attached subdivisions (town homes), condominiums, and apartments), mixed-use, new and reconstructed private roads and private trails, and public projects (other than public road and trail projects), including sidewalks and any other portions of the public right of way that are developed or redeveloped as part of the projects.<sup>2</sup> Redevelopment is any land-disturbing activity that results in the creation, addition, or replacement of exterior impervious surface area on a site on which some past development has occurred. This category includes redevelopment projects on public or private land that fall under the planning and building authority of a Permittee.

Specific exclusions that apply to this category are listed in Provision C.3.b.ii.(1)(b). Public works projects that are additionally excluded from this category – unless they create and/or replace 5,000 contiguous<sup>8</sup> square feet or more of impervious surface – include the following examples: sidewalk gap closures,<sup>7</sup> sidewalk section replacement, and ADA curb ramps. However, as noted above, portions of the public right of way that are developed or redeveloped as part of Regulated Projects (e.g., curb extensions, pavement replacement, and curb and gutter replacement) shall be included in the total created and/or replaced impervious surface that must be treated by those Regulated Projects.

- (a) Where a redevelopment project results in an alteration of **50 percent or more** of the impervious surface of a previously existing development that was not subject to Provision C.3, the entire project, consisting of all existing, new, and/or replaced impervious surfaces, must be included in the treatment system design (i.e., stormwater treatment systems must be designed and sized to treat stormwater runoff from the entire redevelopment project).
- (b) Where a redevelopment results in an alteration of **less than 50 percent** of the impervious surface of a previously existing development that was not subject to Provision C.3, only the new and/or replaced impervious surface of the project must be included in the treatment system design (i.e., stormwater treatment systems must be designed and sized to treat stormwater runoff from the new and/or replaced impervious surface of the project).

<sup>7</sup> The filling of gaps between sections of sidewalks, with pavement (e.g., where a block has a sidewalk, but it is not continuous because it is missing across a parcel, completing the sidewalk across that parcel).

(c) The calculations in Provision C.3.b.ii.(3)(a)-(b) shall include portions of the public right of way that are developed or redeveloped as part of the Regulated Project.

**(4) New or Widening Road Projects**

Any of the following types of road projects that create ~~5~~10,000 square feet or more of newly constructed contiguous<sup>8</sup> impervious surface, that are both public and private road projects, and that fall under the building and planning authority of a Permittee:

- (a) Construction of new streets or roads, including sidewalks and bicycle lanes built as part of the new streets or roads.
- (b) Widening of existing streets or roads with additional traffic lanes.
  - (i) Where the addition of traffic lanes results in an alteration of more than 50 percent of the impervious surface of an existing street or road within the project that was not subject to Provision C.3, the entire project, consisting of all existing, new, and/or replaced impervious surfaces, shall be included in the treatment system design (i.e., stormwater treatment systems must be designed and sized to treat stormwater runoff from the entire street or road that had additional traffic lanes added).
  - (ii) Where the addition of traffic lanes results in an alteration of less than 50 percent of the impervious surface of an existing street or road within the project that was not subject to Provision C.3, only the new and/or replaced impervious surface of the project must be included in the treatment system design (i.e., stormwater treatment systems must be designed and sized to treat stormwater runoff from only the new traffic lanes). However, if the stormwater runoff from the existing traffic lanes and the added traffic lanes cannot be separated, any onsite treatment system shall be designed and sized to treat stormwater runoff from the entire street or road. If an offsite treatment system is installed or in-lieu fees paid in accordance with Provision C.3.e, the offsite treatment system or in-lieu fees must address only the stormwater runoff from the added traffic lanes.
- (c) Construction of impervious<sup>9</sup> trails that are greater than or equal to 10 feet wide or are creek-side (within 50 feet of the top of bank).

<sup>8</sup> Project areas interrupted by cross streets or intersections are considered contiguous.

<sup>9</sup> Gravel ~~is~~layers are considered impervious-, excluding gravel layers that are included in pervious pavement systems (as defined in the Glossary).

- (d) Specific exclusions to Provisions C.3.b.ii.(4)(a)-(c) include the following:
- (i) Sidewalks built as part of new streets or roads and built to direct stormwater runoff to adjacent vegetated areas.
  - (ii) Bicycle lanes built as part of new streets or roads, but that are not hydraulically connected to the new streets or roads and that direct stormwater runoff to adjacent vegetated areas.
  - (iii) Impervious trails that direct stormwater runoff to adjacent vegetated areas, or other non-erodible permeable areas, preferably away from creeks or towards the outboard side of levees, where those areas are at least half as large as the contributing impervious surface area.
  - (iv) Sidewalks, bicycle lanes, or trails constructed ~~with permeable surfaces.~~<sup>40</sup> as pervious pavement systems.<sup>11</sup>
  - (v) Caltrans highway projects and associated facilities.

**(5) Road Reconstruction Projects**

Road projects that involve the reconstruction of existing streets or roads,<sup>12</sup> which create and/or replace greater than or equal to one contiguous<sup>8</sup> acre of impervious surface and that are public road projects and/or fall under the building and planning authority of a Permittee, including sidewalks and bicycle lanes that are built or rebuilt as part of the existing streets or roads. This Regulated Project category includes utility trenching projects.

The specific exclusions that apply to this category are listed in Provision C.3.b.ii.(1)(b)(ii)-(iv). Pavement maintenance practices that are not excluded (as detailed in Provision C.3.b.ii.(1)(b)(iv)) are considered Road Reconstruction Projects if they meet the other definitions therein.

- (a) Where the reconstruction project results in an alteration of greater than or equal to 50 percent of the impervious surface of an existing street or road within the project that was not subject to Provision C.3, the entire project, consisting of all existing, new, and/or replaced impervious surfaces, shall be included in the treatment system design (i.e., stormwater treatment systems must be designed and sized to

<sup>40</sup> ~~Permeable surfaces include pervious concrete, porous asphalt, and unit pavers, designed consistent with stormwater best management practice standards to limit discharges of runoff from the project.~~

<sup>11</sup> Permeable surfaces include pervious concrete, porous asphalt, and unit pavers, designed consistent with stormwater best management practice standards to limit discharges of runoff from the project.

<sup>12</sup> The definition of roads includes roads on levees.

treat stormwater runoff from the entire street or road that was reconstructed).

- (b) Where the reconstruction project results in an alteration of less than 50 percent of the impervious surface of an existing street or road within the project that was not subject to Provision C.3, only the new and/or replaced impervious surface of the project must be included in the treatment system design (i.e., stormwater treatment systems must be designed and sized to treat stormwater runoff from only the new and/or replaced impervious surface within the project footprint). However, if the stormwater runoff from the existing impervious surface and the added impervious surface cannot be separated, any onsite treatment system shall be designed and sized to treat stormwater runoff from the entire street or road. If an offsite treatment system is installed or in-lieu fees paid in accordance with Provision C.3.e, the offsite treatment system or in-lieu fees must address only the stormwater runoff from the added impervious surface.
- (c) Road Reconstruction Projects shall comply with Provision C.3.d. However, with cause (e.g., significantly constrained area for a BMP, substantially increased costs for that sizing relative to the Provision C.3.j.i.(2)(g) approach outlined in the Previous Permit, significant amounts of run-on from adjacent areas, or other substantial constraints identified by Permittees) and with reporting in their Annual Reports, Permittees may use the Guidance for Sizing Green Infrastructure Facilities in Streets Projects with companion analysis Green Infrastructure Facility Sizing for Non-Regulated Street Projects submitted in June 2019, to size Road Reconstruction Projects. If so, Permittees must comply with the Water Board's June 21, 2019, conditional approval of that submittal, which provides qualifiers to, and the conditions under which, the alternative sizing criteria may be used.
- (d) Permittees may credit the acreage of impervious surface created or replaced for Road Reconstruction Projects towards the Numeric Implementation retrofit requirements specified in Provision C.3.j.ii.(2).

**(6) Large Detached Single-Family Home Projects**

Detached single-family home projects that create and/or replace 10,000 ft<sup>2</sup> or more of impervious surface (collectively over the entire project site) and are not part of a larger development or redevelopment plan regulated under Provision C.3.b.ii(2)-(3).

- (a) Where a single family home project results in an alteration of **50 percent or more** of the impervious surface of a previously existing project that was not subject to Provision C.3, the entire project,

consisting of all existing, new, and/or replaced impervious surfaces, must be included in the treatment system design (i.e., stormwater treatment systems must be designed and sized to treat stormwater runoff from the entire project).

(b) Where a single family home project results in an alteration of **less than 50 percent** of the impervious surface of a previously existing project that was not subject to Provision C.3, only the new and/or replaced impervious surface of the project must be included in the treatment system design (i.e., stormwater treatment systems must be designed and sized to treat stormwater runoff from the new and/or replaced impervious surface of the project).

(c) The calculations in Provision C.3.b.ii.(6)(a)-(b) shall include portions of the public right of way that are developed or redeveloped as part of the Regulated Project.

(d) Included in this Regulated Project category is the addition of an accessory dwelling unit (ADU) on an existing parcel with one single-family home, without a subdivision.

### iii. Implementation Level

(1) —All elements of Provision C.3.b.i-ii, and Provisions C.3.b.ii.(1)-(4), shall be fully implemented effective immediately, including.

(2) Beginning July 1, 2023, Provisions C.3.b.ii.(5)-(6) shall be effective. Prior to July 1, 2023, projects under Provision C.3.b.ii.(5) shall comply with Provision C.3.j.iii (No Missed Opportunities). Prior to July 1, 2023, projects under Provision C.3.b.ii.(6) shall comply with Provision C.3.i.

(3) Beginning July 1, 2023, all references to 10,000 square feet in Provisions C.3.b.ii.(2)-(4) change to 5,000 square feet. The lower 5,000 square foot impervious surface threshold does not apply to private Regulated Projects which have received final discretionary approval (by June 30, 2023) and to public Regulated Projects which have been fully funded and have had construction scheduled (both by June 30, 2023).

(4) For Provisions C.3.b.iii.(1)-(3), this shall include a database or equivalent tabular format that contains all the information listed under Reporting (Provision C.3.b.iv.).

### iv. Reporting

#### (1) C.3.b.i.(2) Reporting

In the 2023 Annual Report, each Permittee shall provide a complete list of the development projects that are subject to the requirements of Provision



C.3.b.i.(2). For each such project, the Permittee shall indicate the type of stormwater treatment system required or the specific exemption granted, pursuant to Provision C.3.b.i.(2)(a) and (b). If a Permittee has no projects subject to Provision C.3.b.i.(2), it shall so state in the 2023 Annual Report.

**(2) Annual Reporting – C.3.b.ii. Regulated Projects**

For each Regulated Project approved during the fiscal year reporting period, the following information shall be reported electronically in the fiscal year Annual Report, in tabular form (as set forth in the attached Provision C.3.b. Sample Reporting Table):

- (a) Project Name, Number, Location (cross streets), and Street Address;
- (b) Name of Developer, Phase No. (if project is being constructed in phases, each phase should have a separate entry), Project Type (e.g., commercial, industrial, multi-unit residential, mixed-use, public), and description;
- (c) Project watershed;
- (d) Total project site area and total area of land disturbed;
- (e) Total new impervious surface area and/or total replaced impervious surface area;
- (f) If redevelopment or road widening project, total pre-project impervious surface area and total post-project impervious surface area;
- (g) Status of project (e.g., application date, application deemed complete date, project approval date); and whether the project has been completed. If not, the estimated project completion date;
- (h) Source control measures;
- (i) Site design measures;
- (j) All post-construction stormwater treatment systems installed onsite, at a joint stormwater treatment facility, and/or at an offsite location;
- (k) Operation and maintenance responsibility mechanism for the life of the project;
- (l) Hydraulic Sizing Criteria used;
- (m) Alternative compliance measures for Regulated Project (if applicable)
  - (i) If alternative compliance will be provided at an offsite location in accordance with Provision C.3.e.i.(1), include information required in Provision C.3.b.iv.(2)(a) – (l) for the offsite project; and

(ii) If alternative compliance will be provided by paying in-lieu fees in accordance with Provision C.3.e.i.(2), provide information required in Provision C.3.b.iv.(2)(a) – (l) for the Regional Project. Additionally, provide a summary of the Regional Project’s goals, duration, estimated completion date, total estimated cost of the Regional Project, and estimated monetary contribution from the Regulated Project to the Regional Project; and

(n) Hydromodification (HM) Controls (see Provision C.3.g) – If not required, state why not. If required, state control method used.

### C.3.c. Low Impact Development (LID)

The goal of LID is to reduce runoff and mimic a site’s predevelopment hydrology by minimizing disturbed areas and impervious cover and then infiltrating, storing, detaining, evapotranspiring, and/or biotreating stormwater runoff close to its source. LID employs principles such as preserving and recreating natural landscape features and minimizing imperviousness to create functional and appealing site drainage that treats stormwater as a resource, rather than a waste product. Practices used to adhere to these LID principles include measures such as rain barrels and cisterns, green roofs, permeable pavement, preserving undeveloped open space, and biotreatment through rain gardens, bioretention units, bioswales, and planter/tree boxes.

i. **Task Description** – The Permittees shall, at a minimum, implement the following LID requirements:

#### (1) Source Control Requirements

Require all Regulated Projects to implement source control measures onsite that, at a minimum, shall include the following:

(a) Minimization of stormwater pollutants of concern in urban runoff through measures that may include plumbing of the following discharges to the sanitary sewer, subject to the local sanitary sewer agency’s regulations and standards:

- Discharges from indoor floor mat/equipment/hood filter wash racks or covered outdoor wash racks for restaurants;
- Dumpster drips from covered trash, food waste, and compactor enclosures;
- Discharges from covered outdoor wash areas for vehicles, equipment, and accessories;
- Swimming pool water, if discharge to onsite vegetated areas is not a feasible option; and

- Fire sprinkler test water, if discharge to onsite vegetated areas is not a feasible option;
  - (b) Properly designed covers, drains, and storage precautions for outdoor material storage areas, loading docks, repair/maintenance bays, and fueling areas;
  - (c) Properly designed trash storage areas;
  - (d) Landscaping that minimizes irrigation and runoff, promotes surface infiltration, minimizes the use of pesticides and fertilizers, and incorporates other appropriate sustainable landscaping practices and programs such as Bay-Friendly Landscaping;
  - (e) Efficient irrigation systems; and
  - (f) Storm drain system stenciling or signage.
- (2) Site Design and Stormwater Treatment Requirements
- (a) Require each Regulated Project to implement at least the following design strategies onsite:
    - (i) Limit disturbance of natural water bodies and drainage systems; minimize compaction of highly permeable soils; protect slopes and channels; and minimize impacts from stormwater and urban runoff on the biological integrity of natural drainage systems and water bodies;
    - (ii) Conserve natural areas, including existing trees, other vegetation, and soils;
    - (iii) Minimize impervious surfaces;
    - (iv) Minimize disturbances to natural drainages; and
    - (v) Minimize stormwater runoff by implementing one or more of the following site design measures:
      - Direct roof runoff into cisterns or rain barrels for reuse.
      - Direct roof runoff onto vegetated areas.
      - Direct runoff from sidewalks, walkways, and/or patios onto vegetated areas.
      - Direct runoff from driveways and/or uncovered parking lots onto vegetated areas.

- Construct sidewalks, walkways, and/or patios with pervious pavement systems.<sup>13</sup>
  - Construct driveways, bike lanes, and/or uncovered parking lots with pervious pavement systems.
- (b) Permittees shall implement the design specifications for pervious pavement systems contained within their countywide stormwater handbooks.
- (c) Require each Regulated Project and all projects implemented pursuant to Provision C.3.j to treat 100 percent of the amount of runoff identified in Provision C.3.d for the Regulated Project's or Provision C.3.j project's drainage area with LID treatment measures onsite or with LID treatment measures at a joint stormwater treatment facility.
- (i) LID treatment measures are harvesting and use, infiltration, evapotranspiration, and biotreatment.
- (ii) Biotreatment (or bioretention) systems shall be designed to have a surface area no smaller than what is required to accommodate a 5 inches/hour stormwater runoff surface loading rate, infiltrate runoff through biotreatment soil media at a minimum of 5 inches per hour, and maximize infiltration to the native soil during the life of the Regulated Project. The soil media for biotreatment (or bioretention) systems shall be designed to sustain healthy, vigorous plant growth and maximize stormwater runoff retention and pollutant removal. Permittees shall ensure that Regulated Projects use biotreatment soil media that meet the minimum specifications set forth in the Revised Model Biotreatment Soil Media Specifications submitted by BASMAA on behalf of the Permittees on February 5, 2016, and approved on April 18, 2016, pursuant to the requirements of Provision C.3.c.i.(2)(c)(ii) of MRP 2. Permittees may collectively (on an all-Permittee scale or countywide scale) develop and adopt revisions to the soil media minimum specifications, subject to the Executive Officer's approval.
- a. The Permittees may convene a workgroup with Water Board staff to discuss and investigate the pollutant removal effectiveness and hydrologic equivalency of – and suggested criteria for – high flow-rate media treatment systems in combination with retention/detention measures, such as silva cells and structural soils, as compared to conventional

<sup>13</sup> Pervious pavement systems include pervious asphalt, pervious concrete, pervious pavers, and grid pavers, and are defined in the Glossary.

bioretention. The workgroup should consider issues including: the MEP standard in relation to the use of such systems; the pollutant removal benefits and hydrologic criteria associated with the MRP3's LID design approach and which are included in other MS4 permits, such as the Western Washington Phase II Municipal Stormwater Permit (NPDES Permit No. WAR045717) and the Los Angeles Regional MS4 Permit (NPDES Permit No. CAS004004); and additional issues, such as the feasibility of obtaining high flow rate media at construction and, as needed, for the life of a project.

- (iii) Green roofs may be considered biotreatment systems that treat roof runoff only if they meet certain minimum specifications. Permittees shall ensure that green roofs installed at Regulated Projects meet the following minimum specifications:
  - a. The green roof system planting media shall be sufficiently deep to provide capacity within the pore space of the media for the required runoff volume specified by Provision C.3.d.i.(1).
  - b. The green roof system planting media shall be sufficiently deep to support the long-term health of the vegetation selected for the green roof, as specified by a landscape architect or other knowledgeable professional.
- (d) Require any Regulated Project that does not comply with Provision C.3.c.i.(2)(c) above to meet the requirements established in Provision C.3.e for alternative compliance.

## ii. Reporting

- (1) For specific tasks listed above that are reported using the reporting tables required for Provision C.3.b.iv, a reference to those tables will suffice.

## C.3.d. Numeric Sizing Criteria for Stormwater Treatment Systems

i. **Task Description** – The Permittees shall require that stormwater treatment systems constructed for Regulated Projects and for projects implemented pursuant to Provision C.3.j meet at least one of the following hydraulic sizing design criteria:

- (1) **Volume Hydraulic Design Basis** – Treatment systems whose primary mode of action depends on volume capacity shall be designed to treat stormwater runoff equal to:
  - (a) The maximized stormwater capture volume for the area, on the basis of historical rainfall records, determined using the formula and volume capture coefficients set forth in Urban Runoff Quality Management,

WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87, (1998), pages 175–178 (e.g., approximately the 85th percentile 24-hour storm runoff event); or

- (b) The volume of annual runoff required to achieve 80 percent or more capture, determined in accordance with the methodology set forth in Section 5 of CASQA's Stormwater Best Management Practice Handbook, New Development and Redevelopment (2003), using local rainfall data.
- (2) **Flow Hydraulic Design Basis** – Treatment systems whose primary mode of action depends on flow capacity shall be sized to treat:
    - (a) 10 percent of the 50-year peak flow rate;
    - (b) The flow of runoff produced by a rain event equal to at least two times the 85th percentile hourly rainfall intensity for the applicable area, based on historical records of hourly rainfall depths; or
    - (c) The flow of runoff resulting from a rain event equal to at least 0.2 inches per hour intensity.
  - (3) **Combination Flow and Volume Design Basis** – Treatment systems that use a combination of flow and volume capacity shall be sized to treat at least 80 percent of the total runoff over the life of the project, using local rainfall data.
- ii. **Reporting** – Permittees shall use the reporting tables required in Provision C.3.b.iv.(2).
  - iii. **Limitations on Use of Infiltration Devices in Stormwater Treatment Systems**
    - (1) For Regulated Projects and for all projects implemented pursuant to Provision C.3.j, each Permittee shall review planned land use and proposed treatment design to verify that installed stormwater treatment systems with no under-drain, and that function primarily as infiltration devices, should not cause or contribute to the degradation of groundwater quality at project sites. An infiltration device is any structure that is designed to infiltrate stormwater into the subsurface and, as designed, bypass the natural groundwater protection afforded by surface soil. Infiltration devices include dry wells, injection wells, and infiltration trenches (includes french drains).
    - (2) For any Regulated Project and for any project implemented pursuant to Provision C.3.j that includes plans to install stormwater treatment systems which function primarily as infiltration devices, the Permittee shall require that:

- (a) Appropriate pollution prevention and source control measures are implemented to protect groundwater at the project site, including the inclusion of a minimum of two feet of suitable soil to achieve a maximum 5 inches/hour infiltration rate for the infiltration system;
- (b) Adequate maintenance is provided to maximize pollutant removal capabilities;
- (c) The vertical distance from the base of any infiltration device to the seasonal high groundwater mark is at least 10 feet. (Note that some locations within the Permittees' jurisdictions are characterized by highly porous soils and/or high groundwater tables. In these areas, a greater vertical distance from the base of the infiltration device to the seasonal high groundwater mark may be appropriate, and treatment system approvals should be subject to a higher level of analysis that considers the potential for pollutants (such as from onsite chemical use), the level of pretreatment to be achieved, and other similar factors in the overall analysis of groundwater safety);
- (d) Unless stormwater is first treated by a method other than infiltration, infiltration devices are not approved as treatment measures for runoff from areas of industrial or light industrial activity; areas subject to high vehicular traffic (i.e., 25,000 or greater average daily traffic on a main roadway or 15,000 or more average daily traffic on any intersecting roadway); automotive repair shops; car washes; fleet storage areas (e.g., bus, truck); nurseries; and other land uses that pose a high threat to water quality;
- (e) Infiltration devices are not placed in the vicinity of known contamination sites unless it has been demonstrated that increased infiltration will not increase leaching of contaminants from soil, alter groundwater flow conditions affecting contaminant migration in groundwater, or adversely affect remedial activities; and
- (f) Infiltration devices are located a minimum of 100 feet horizontally away from any known water supply wells, septic systems, and underground storage tanks with hazardous materials. (Note that some locations within the Permittees' jurisdictions are characterized by highly porous soils and/or high groundwater tables. In these areas, a greater horizontal distance from the infiltration device to known water supply wells, septic systems, or underground storage tanks with hazardous materials may be appropriate, and treatment system approvals should be subject to a higher level of analysis that considers the potential for pollutants (such as from onsite chemical

use), the level of pretreatment to be achieved, and other similar factors in the overall analysis of groundwater safety).

#### iv. Tree Runoff Reduction and Tree-Based Stormwater Treatment Systems

- (1) The Permittees collectively may submit a proposal, subject to the Executive Officer's approval, which evaluates the benefit and associated criteria of runoff reduction associated with trees with respect to treatment control sizing, which evaluates and includes as appropriate the findings of the Healthy Watersheds, Resilient Baylands project,<sup>14</sup> and which will be considered for incorporation into a subsequent Permit. Such a proposal shall characterize the multiple benefits of green infrastructure beyond standard designs (e.g., urban forestry), develop recommendations for ~~municipalities~~ Permittees to achieve the benefits (e.g., beneficial modifications to GI designs, guidelines for coordinating with work such as stream restoration, parks and urban forestry), and suggest opportunities to modify ~~green infrastructure permit~~ Provision C.3 language in a future ~~permit~~ Permit to better recognize broader benefits.

The proposal may include treatment control sizing and design criteria for tree-based stormwater treatment systems in combination with systems that provide additional hydrologic benefit (such as structural soils, suspended pavement systems, or other methods to provide tree rooting volume), which provide water quality and hydrologic benefit equivalent to bioretention.

- (2) Tree Interceptor Credits, as described in the 2011 BASMAA Feasibility/Infeasibility Criteria Report submitted pursuant to Provision C.3.c.i.(2)(b)(iv) of MRP 1, shall not be used to reduce the stormwater treatment required pursuant to Provision C.3.

#### v. Reporting

- (1) If the Permittees collectively submit a proposal pursuant to Provision C.3.d.iv, the proposal shall be submitted by no later than with the 2025 Annual Report.

#### C.3.e. Alternative or In-Lieu Compliance with Provision C.3.b.

- i. The Permittees may allow a Regulated Project to provide alternative compliance with Provision C.3.b in accordance with one of the two options listed below:

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<sup>14</sup> The San Francisco Estuary Partnership (SFEP) and Association of Bay Area Governments (ABAG) along with several other partners (including Water Board staff) secured a U.S. EPA Water Quality Improvement Fund (WQIF) grant to pursue the Healthy Watersheds, Resilient Baylands project, which in part investigates the stormwater treatment benefit provided by trees within the urban landscape.



(1) **Option 1: LID Treatment at an Offsite Location**

Treat a portion (this portion may be zero, ~~but to the MEP;~~ Permittees should treat as much onsite as possible) of the amount of runoff identified in Provision C.3.d for the Regulated Project's drainage area with LID treatment measures onsite or with LID treatment measures at a joint stormwater treatment facility **and** treat the remaining portion of the Provision C.3.d runoff with LID treatment measures at an Offsite Project<sup>15</sup> in the same watershed. The offsite LID treatment measures must provide hydraulically-sized treatment (in accordance with Provisions C.3.d and C.3.g, as appropriate) of an equivalent quantity of both stormwater runoff and pollutant loading and achieve a net environmental benefit.

(2) **Option 2: Payment of In-Lieu Fees**

Treat a portion (this portion may be zero, ~~but to the MEP;~~ Permittees should treat as much onsite as possible) of the amount of runoff identified in Provision C.3.d for the Regulated Project's drainage area with LID treatment measures onsite or with LID treatment measures at a joint stormwater treatment facility **and** pay equivalent in-lieu fees<sup>16</sup> to treat the remaining portion of the Provision C.3.d runoff (and comply with Provision C.3.g, as appropriate) with LID treatment measures at a Regional Project<sup>17</sup> or Offsite Project. The Regional Project must achieve a net environmental benefit, through a net increase in ~~imperious~~impervious surface treated, and/or a net reduction in flow and/or pollutant load.

- (3) For the alternative compliance options described in Provision C.3.e.i.(1) and (2) above (Options 1 and 2), all Offsite Projects and Regional Projects must be completed within three years after the end of construction of the Regulated Project. However, the timeline for completion of an Offsite Project or Regional Project may be extended, up to five years after the completion of the Regulated Project, with prior Executive Officer approval. Executive Officer approval will be granted contingent upon a demonstration of good faith efforts to implement the Offsite Project or Regional Project, such as having funds encumbered and applying for the appropriate regulatory permits.

<sup>15</sup> **Offsite Project** – A stormwater treatment facility that discharges into the same watershed as the Regulated Project and is located at a different public or private parcel or property (e.g., right-of-way) from the Regulated Project.

<sup>16</sup> **In-lieu fees** – Monetary amount necessary to provide both hydraulically-sized treatment (in accordance with Provision C.3.d) with LID treatment measures of an equivalent quantity of stormwater runoff and pollutant loading, and a proportional share of the operation and maintenance costs of the Offsite Project or Regional Project.

<sup>17</sup> **Regional Project** – A regional or municipal stormwater treatment facility that captures runoff from a drainage area larger than the parcel on which it is located and discharges into the same watershed as the Regulated Project.

(4) Reporting

- (a) Annual reporting on Alternative Compliance projects shall be done in conjunction with reporting requirements under Provision C.3.b.iv.(2).

**ii. Special Projects**

- (1) When considered at the watershed scale, certain land development projects characterized as smart growth or high density can either reduce existing impervious surfaces or create less “accessory” impervious areas and automobile-related pollutant impacts. Incentive LID Treatment Reduction Credits approved by the Water Board may be applied to these Special Projects, which are Regulated Projects that meet the specific criteria listed below in Provision C.3.e.ii.(2). For any Special Project, the allowable incentive LID Treatment Reduction Credit is the maximum percentage of the amount of runoff identified in Provision C.3.d for the Special Project’s drainage area that may be treated with one or a combination of the following two types of non-LID treatment systems:

- Tree-box-type high flowrate biofilters
- Vault-based high flowrate media filters

The allowed LID Treatment Reduction Credit recognizes that density and space limitations for the Special Projects identified herein may make 100% LID treatment infeasible.

- (2) Prior to granting any LID Treatment Reduction Credits, Permittees must first establish all the following:
- (a) The infeasibility of treating 100% of the amount of runoff identified in Provision C.3.d for the Regulated Project’s drainage area with LID treatment measures onsite;
- (b) The infeasibility of treating 100% of the amount of runoff identified in Provision C.3.d for the Regulated Project’s drainage area with LID treatment measures offsite or paying in-lieu fees to treat 100% of the Provision C.3.d runoff with LID treatment measures at an offsite or Regional Project; and
- (c) The infeasibility of treating 100% of the amount of runoff identified in Provision C.3.d for the Regulated Project’s drainage area with some combination of LID treatment measures onsite, offsite, and/or paying in-lieu fees towards at an offsite or Regional Project.

For each Special Project, a Permittee shall document the basis of infeasibility used to establish technical and/or economic infeasibility.

Under Provision C.3.e.v, each Permittee is required to report on the infeasibility of 100% LID treatment in each scenario described in Provision C.3.e.ii.(2)(a)-(c) above, for each of the Special Projects for which LID Treatment Reduction Credit was applied.

(3) Category A Special Project Criteria

- (a) To be considered a Category A Special Project, a Regulated Project must meet all of the following criteria:
- (i) Be built as part of a Permittee's stated objective to preserve or enhance a pedestrian-oriented type of urban design.
  - (ii) Be located in a Permittee's designated central business district, downtown core area or downtown core zoning district, neighborhood business district or comparable pedestrian-oriented commercial district, or historic preservation site and/or district.
  - (iii) Create and/or replace one half acre or less of impervious surface area.
  - (iv) Include no surface parking, except for incidental surface parking. Incidental surface parking is allowed only for emergency vehicle access, Americans with Disabilities Act (ADA) accessibility, and passenger and freight loading zones.
  - (v) Have at least 85 percent coverage for the entire project site by permanent structures. The remaining 15 percent portion of the site is to be used for safety access, parking structure entrances, trash and recycling service, utility access, pedestrian connections, public uses, landscaping, and stormwater treatment.
- (b) Any Category A Special Project may qualify for 100 percent LID Treatment Reduction Credit, which would allow the Category A Special Project to treat up to 100 percent of the amount of runoff identified in Provision C.3.d. for the Project's drainage area with either one or a combination of the two types of non-LID treatment systems listed in Provision C.3.e.ii.(1).

(4) Category B Special Project Criteria

- (a) To be considered a Category B Special Project, a Regulated Project must meet all of the following criteria:
- (i) Be built as part of a Permittee's stated objective to preserve or enhance a pedestrian-oriented type of urban design.
  - (ii) Be located in a Permittee's designated central business district, downtown core area or downtown core zoning district,

neighborhood business district or comparable pedestrian-oriented commercial district, or historic preservation site and/or district.

(iii) Create and/or replace greater than one-half acre but no more than 2 acres of impervious surface area.

(iv) Include no surface parking, except for incidental surface parking. Incidental surface parking is allowed only for emergency vehicle access, ADA accessibility, and passenger and freight loading zones.

(v) Have at least 85 percent coverage for the entire project site by permanent structures. The remaining 15 percent portion of the site is to be used for safety access, parking structure entrances, trash and recycling service, utility access, pedestrian connections, public uses, landscaping, and stormwater treatment.

(b) For any Category B Special Project, the maximum LID Treatment Reduction Credit allowed is determined based on the density achieved by the Project in accordance with the criteria listed below. Density is expressed in Floor Area Ratios (FARs<sup>18</sup>) for commercial development projects, in Dwelling Units<sup>19</sup> per Acre (DU/Ac) for residential development projects, and in FARs and DU/Ac for mixed-use development projects.

(i) 50 percent Maximum LID Treatment Reduction Credit

a. For any commercial Category B Special Project with an FAR of at least 2:1, up to 50 percent of the amount of runoff identified in Provision C.3.d. for the Project's drainage area may be treated with either one or a combination of the two types of non-LID treatment systems listed in Provision C.3.e.ii.(1).

b. For any residential Category B Special Project with a gross density<sup>20</sup> of at least 50 DU/Ac, up to 50 percent of the amount of runoff identified in Provision C.3.d. for the Project's drainage area may be treated with either one or a combination of the two types of non-LID treatment systems listed in Provision C.3.e.ii.(1) above.

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<sup>18</sup> **Floor Area Ratio** – The ratio of the total floor area on all floors of all buildings at a project site (except structures, floors, or floor areas dedicated to parking) to the total project site area.

<sup>19</sup> **Dwelling Unit** – A single unit providing complete, independent living facilities for one or more persons, including permanent provisions for living, sleeping, eating, cooking, and sanitation.

<sup>20</sup> **Gross Density** – The total number of residential units divided by the acreage of the entire site area, including land occupied by public rights-of-way, recreational, civic, commercial, and other non-residential uses.

- c. For any mixed use Category B Special Project with an FAR of at least 2:1 or a gross density of at least 50 DU/Ac, up to 50 percent of the amount of runoff identified in Provision C.3.d. for the Project's drainage area may be treated with either one or a combination of the two types of non-LID treatment systems listed in Provision C.3.e.ii.(1) above.
- (ii) 75 percent Maximum LID Treatment Reduction Credit
- a. For any commercial Category B Special Project with an FAR of at least 3:1, up to 75 percent of the amount of runoff identified in Provision C.3.d. for the Project's drainage area may be treated with either one or a combination of the two types of non-LID treatment systems listed in Provision C.3.e.ii.(1) above.
  - b. For any residential Category B Special Project with a gross density of at least 75 DU/Ac, up to 75 percent of the amount of runoff identified in Provision C.3.d. for the Project's drainage area may be treated with either one or a combination of the two types of non-LID treatment systems listed in Provision C.3.e.ii.(1) above.
  - c. For any mixed-use Category B Special Project with an FAR of at least 3:1 or a gross density of at least 75 DU/Ac, up to 75 percent of the amount of runoff identified in Provision C.3.d. for the Project's drainage area may be treated with either one or a combination of the two types of non-LID treatment systems listed in Provision C.3.e.ii.(1) above.
- (iii) 100 percent Maximum LID Treatment Reduction Credit
- a. For any commercial Category B Special Project with an FAR of at least 4:1, up to 100 percent of the amount of runoff identified in Provision C.3.d. for the Project's drainage area may be treated with either one or a combination of the two types of non-LID treatment systems listed in Provision C.3.e.ii.(1) above.
  - b. For any residential Category B Special Project with a gross density of at least 100 DU/Ac, up to 100 percent of the amount of runoff identified in Provision C.3.d. for the Project's drainage area may be treated with either one or a combination of the two types of non-LID treatment systems listed in Provision C.3.e.ii.(1) above.

- c. For any mixed-use Category B Special Project with an FAR of at least 4:1 or a gross density of at least 100 DU/Ac, up to 100 percent of the amount of runoff identified in Provision C.3.d. for the Project's drainage area may be treated with either one or a combination of the two types of non-LID treatment systems listed in Provision C.3.e.ii.(1) above.

(5) Category C Special Project Criteria (Affordable Housing)

- (a) For the purposes of attributing Affordable Housing Credits, affordable housing is defined as preserved housing with deed restrictions running at least 55 years, at rent/mortgage rates (including utilities) no greater than 30 percent of the total household income, and which meets the following income levels specified in the Federal Department of Housing and Urban Development's (HUD's) definition of affordable housing in metropolitan areas: For metropolitan areas, HUD defines Extremely Low household incomes as 0 - 30 percent of area median household income (AMI), Very Low household incomes as 31 - 50 percent of AMI, Low household incomes as 51-80 percent of AMI, and Moderate household incomes as 81-120 percent of AMI.

To be considered a Category C Special Project, a Regulated Project must additionally meet both of the following criteria:

- (i) Be primarily a residential development project.
  - (ii) Achieve at least a gross density of 40 DU/Ac.
- (b) For any Category C Special Project, the total maximum LID Treatment Reduction Credit allowed is the sum of four different types of credits that the Category C Special Project may qualify for, namely: Affordable Housing, Location, Density, and Minimized Surface Parking Credits.
  - (c) Affordable Housing Credits: A Category C Special Project may qualify for Affordable Housing Credits, according to the following criteria: The income limits that shall be used for these criteria are the most current Official State Income Limits (adjusted for household size), which are defined on the California Department of Housing and Community Development's website.<sup>21,22</sup> All qualifying affordable housing DUs must be preserved housing with deed restrictions running at least 55

<sup>21</sup> <https://www.hcd.ca.gov/grants-funding/income-limits/state-and-federal-income-limits.shtml>

<sup>22</sup> As of December 31, 2021, they are: <https://www.hcd.ca.gov/grants-funding/income-limits/state-and-federal-income-limits/docs/income-limits-2021.pdf>

years, at rent/mortgage rates (including utilities) no greater than 30 percent of the total household income.

(i) To qualify for 70 percent Affordable Housing Credit:

At least 100 percent of the project's DUs must have monthly rent/mortgage rates<sup>23</sup> no greater than 30 percent of the Moderate household income level ( $\leq$  120 percent of AMI), at least 75 percent of the project's DUs must have monthly rent/mortgage rates<sup>4423</sup> no greater than 30 percent of the Low household income level ( $\leq$  80 percent of AMI), at least 50 percent of the project's DUs must have monthly rent/mortgage rates<sup>4423</sup> no greater than 30 percent of the Very Low household income level ( $\leq$  50 percent of AMI), and at least 25 percent of the project's DU's must have monthly rent/mortgage rates<sup>4423</sup> no greater than 30 percent of the Extremely Low household income level ( $\leq$  30 percent of AMI), as defined for each County in Table H-2 of Attachment H.

(ii) To qualify for ~~35~~50 percent Affordable Housing Credit:

At least 75 percent of the project's DUs must have monthly rent/mortgage rates<sup>4423</sup> no greater than 30 percent of the Moderate household income level ( $\leq$  120 percent of AMI), at least 50 percent of the project's DUs must have monthly rent/mortgage rates<sup>4423</sup> no greater than 30 percent of the Low household income level ( $\leq$  80 percent of AMI), and at least 25 percent of the project's DUs must have monthly rent/mortgage rates<sup>4423</sup> no greater than 30 percent of the Very Low household income level ( $\leq$  50 percent of AMI), as defined and at least 15 percent of the project's DUs must have monthly rent/mortgage rates<sup>23</sup> no greater than 30 percent of the Extremely Low household income level ( $\leq$  30 percent of AMI).

(iii) To qualify for each County in Table H-2 of Attachment H.25 percent Affordable Housing Credit:

At least 50 percent of the project's DUs must have monthly rent/mortgage rates<sup>23</sup> no greater than 30 percent of the Moderate household income level ( $\leq$  120 percent of AMI), at least 25 percent of the project's DUs must have monthly rent/mortgage rates<sup>23</sup> no greater than 30 percent of the Low household income level ( $\leq$  80 percent of AMI), at least 15 percent of the project's DUs must have monthly rent/mortgage rates<sup>23</sup> no greater than 30 percent of the Very Low household income level ( $\leq$  50 percent of AMI), and at

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<sup>23</sup> Including utilities.

least 5 percent of the project's DUs must have monthly rent/mortgage rates<sup>23</sup> no greater than 30 percent of the Extremely Low household income level (≤ 30 percent of AMI).

| <u>AMI</u>                         | <u>Minimum Percentage of DUs</u> |                   |                   |
|------------------------------------|----------------------------------|-------------------|-------------------|
|                                    | <u>70% credit</u>                | <u>50% credit</u> | <u>25% credit</u> |
| <u>Moderate (≤120% of AMI)</u>     | <u>100</u>                       | <u>75</u>         | <u>50</u>         |
| <u>Low (≤80% of AMI)</u>           | <u>75</u>                        | <u>50</u>         | <u>25</u>         |
| <u>Very Low (≤50% of AMI)</u>      | <u>50</u>                        | <u>25</u>         | <u>15</u>         |
| <u>Extremely Low (≤30% of AMI)</u> | <u>25</u>                        | <u>15</u>         | <u>5</u>          |

- (d) Location Credits: To qualify for any Location Credits, a Category C Special Project must first qualify for one of the Affordable Housing Credits in Provision C.3.e.ii.(5)(c).
- (i) A Category C Special Project may qualify for the following Location Credits:
  - a. 5 percent Location Credit: Located within a ¼-mile radius of an existing or planned transit hub.
  - b. 10 percent Location Credit: Located within a planned Priority Development Area (PDA), which is an infill development area formally designated by the Association of Bay Area Government's/Metropolitan Transportation Commission's FOCUS regional planning program. FOCUS is a regional incentive-based development and conservation strategy for the San Francisco Bay Area.
- (ii) Only one Location Credit may be used by an individual Category C Special Project, even if the project qualifies for multiple Location Credits.
- (iii) One hundred percent of a Category C Special Project's site must be located within the ¼-mile radius of an existing or planned transit hub to qualify for the corresponding Location Credit listed above. One hundred percent of a Category C Special Project's site must



be located within a PDA to qualify for the corresponding Location Credit listed above.

- (iv) Transit hub is defined as a rail, light rail, or commuter rail station, ferry terminal, or bus transfer station served by three or more bus routes (i.e., a bus stop with no supporting services does not qualify). A planned transit hub is a station on the MTC's Regional Transit Expansion Program list, per MTC's Resolution 3434 (revised September 2008), which is a regional priority funding plan for future transit stations in the San Francisco Bay Area.
- (e) Density Credits: To qualify for any Density Credits, a Category C Special Project must first qualify for one of the Affordable Housing Credits listed in Provision C.3.e.ii.(5)(c).
  - (i) A Category C Special Project may qualify for the following Density Credits:
    - a. 5 percent Density Credit: Achieve a gross density of at least 40 DU/Ac.
    - b. 10 percent Density Credit: Achieve a gross density of at least 60 DU/Ac.
    - c. 15 percent Density Credit: Achieve a gross density of at least 100 DU/Ac.
  - (ii) Only one Density Credit may be used by an individual Category C Special Project, even if the project qualifies for multiple Density Credits.
- (f) Minimized Surface Parking Credits: To qualify for any Minimized Surface Parking Credits, a Category C Special Project must first qualify for one of the Affordable Housing Credits listed in Provision C.3.e.ii.(5)(c).
  - (i) A Category C Special Project may qualify for the following Minimized Surface Parking Credits:
    - a. 5 percent Minimized Surface Parking Credit: Have no surface parking except for incidental surface parking. Incidental surface parking is allowed only for emergency vehicle access, ADA accessibility, and passenger and freight loading zones.
- (g) Category C Special Projects receiving final discretionary approval prior to July 1, 2022, may use the Category C Special Project criteria included in the Previous Permit.

- (6) Any Regulated Project that meets the criteria for multiple Special Projects Categories (i.e., a Regulated Project that may be characterized as a Category B or C Special Project) may only use the LID Treatment Reduction Credit allowed under one of the Special Projects Categories (i.e., a Regulated Project that may be characterized as a Category B or C Special Project may use the LID Treatment Reduction Credit allowed under Category B or Category C, but not the sum of both.).

**iii. Implementation Level**

- (1) Provisions C.3.e.i-ii supersede any Alternative Compliance Policies previously approved by the Executive Officer.
- (2) The definitions of FAR and gross density applicable to Provision C.3.e.ii.(4) shall apply to all Special Projects granted final discretionary approval on or after July 1, 2022.
- (3) For all offsite projects and Regional Projects installed in accordance with Provision C.3.e.i-ii, the Permittees shall meet the Operation & Maintenance (O&M) requirements of Provision C.3.h.

**iv. Reporting** – Annual reporting shall be done in conjunction with reporting requirements under Provision C.3.b.iv.(2).

Any Permittee choosing to require 100 percent LID treatment onsite for all Regulated Projects and not allow alternative compliance under Provision C.3.e, shall include a statement to that effect in each Annual Report.

**v. Reporting on Special Projects**

- (1) Permittees shall track any identified potential Special Projects, including those projects that have submitted planning applications, but that have not received final discretionary approval.
- (2) In each Annual Report, Permittees shall report to the Water Board on these tracked potential Special Projects using Table 3.1 found at the end of Provision C.3. All the required column entry information listed in Table 3.1 shall be reported for each potential Special Project. Any Permittee with no Special Projects shall so state.

For each Special Project listed in Table 3.1, Permittees shall include a narrative discussion of the feasibility or infeasibility of 100 percent LID treatment onsite, offsite, and at a Regional Project. The narrative discussion shall address each of the following:

- (a) The infeasibility of treating 100 percent of the amount of runoff identified in Provision C.3.d for the Regulated Project's drainage area with LID treatment measures onsite.

- (b) The infeasibility of treating 100 percent of the amount of runoff identified in Provision C.3.d for the Regulated Project's drainage area with LID treatment measures offsite or paying in-lieu fees to treat 100% of the Provision C.3.d runoff with LID treatment measures at a Regional Project.
- (c) The infeasibility of treating 100 percent of the amount of runoff identified in Provision C.3.d for the Regulated Project's drainage area with some combination of LID treatment measures onsite, offsite, and/or paying in-lieu fees towards a Regional Project.

Both technical and economic feasibility or infeasibility shall be discussed, as applicable. The discussion shall also contain enough technical and/or economic detail to document the basis of infeasibility used.

- (3) Once a Special Project has final discretionary approval, it shall be reported in the Provision C.3.b. Reporting Table in the same reporting year that the project was approved. In addition to the column entries contained in the Provision C.3.b. Reporting Table, the Permittees shall provide the following supplemental information for each approved Special Project:
  - (a) Submittal Date: Date that a planning application for the Special Project was submitted.
  - (b) Description: Type of project, number of floors, number of units (commercial, mixed-use, residential), type of parking, and other relevant information.
  - (c) Site Acreage: Total site area in acres.
  - (d) Total Impervious Surface Created/Replaced: The total impervious surface in acres created or replaced by the project, which is subject to the treatment requirements listed in Provision C.3.e.ii.(1).
  - (e) Gross Density in DU/Ac: Number of dwelling units per acre.
  - (f) Category C Projects: Number of DUs in each AMI Category: For Category C Special Projects only, the number of preserved DUs (DUs with deed restrictions running at least 55 years) that have rent/mortgage rates (including utilities) no less than 30 percent of the Moderate, Low, Very Low, and Extremely Low area median household income levels specified in Table H-2 of Attachment H.
  - (g) Density in FAR: Floor Area Ratio.

- (h) Special Project Category: For each applicable Special Project Category, list the specific criteria applied to determine applicability. For each non-applicable Special Project Category, indicate n/a.
- (i) LID Treatment Reduction Credit: For each applicable Special Project Category, state the maximum total LID Treatment Reduction Credit applied. For Category C Special Projects also list the individual Affordable Housing, Location, Density, and Minimized Surface Parking Credits applied.
- (j) Stormwater Treatment Systems: List all proposed stormwater treatment systems and the corresponding percentage of the total amount of runoff identified in Provision C.3.d. for the Project's drainage area that will be treated by each treatment system.
- (k) List of Non-LID Stormwater Treatment Systems: List all non-LID stormwater treatment systems approved. For each type of non-LID treatment system, indicate: (1) the percentage of the total amount of runoff identified in Provision C.3.d. for the Special Project's drainage area, and (2) whether the treatment system either meets minimum design criteria published by a government agency or received certification issued by a government agency, and reference the applicable criteria or certification.

**C.3.f. Alternative Certification of Stormwater Treatment Systems**

- i. **Task Description** – In lieu of reviewing a Regulated Project's adherence to Provision C.3.d, a Permittee may elect to have a third party conduct detailed review and certify the Regulated Project's adherence to Provision C.3.d. The third-party reviewer must be a Civil Engineer, or a Licensed Architect or Landscape Architect registered in the State of California or staff of another Permittee subject to the requirements of this Permit.
- ii. **Implementation Level** – Any Permittee accepting third-party reviews must make a reasonable effort to ensure that the third party has no conflict of interest with regard to the Regulated Project in question. That is, any consultant or contractor (or his/her employees) hired to design and/or construct a stormwater treatment system for a Regulated Project shall not also be the certifying third party. The Permittee must verify that the third party certifying any Regulated Project has current training on stormwater treatment system design (within three years of the certification signature date) for water quality and understands the groundwater protection principles applicable to Regulated Project sites.

Training conducted by an organization with stormwater treatment system design expertise (such as a college or university, the American Society of Civil

Engineers, American Society of Landscape Architects, American Public Works Association, California Water Environment Association (CWEA), BASMAA, National Association of Flood & Stormwater Management Agencies, CASQA, or the equivalent, may be considered qualifying training.

- iii. **Reporting** – Projects reviewed by third parties shall be noted in reporting tables for Provision C.3.b.

**C.3.g. Hydromodification Management**

- i. **Hydromodification Management (HM) Projects** are Regulated Projects that create and/or replace one acre or more of impervious surface except where one of the following applies.

- (1) The post-project impervious surface area is less than, or the same as, the pre-project impervious surface area.
- (2) The project is located in a catchment that drains to a hardened (e.g., continuously lined with concrete) engineered channel or channels or enclosed pipes, which extend continuously to the Bay, Delta, or flow-controlled reservoir, or, in a catchment that drains to channels that are tidally influenced.
- (3) The project is located in a catchment or subwatershed that is highly developed (i.e., that is 70 percent or more impervious).<sup>24</sup>

All HM Projects shall meet the HM Standard of either Provision C.3.g.ii or Provision C.3.g.iii.

The Hydromodification Applicability Maps developed by the Permittees in the Alameda, Santa Clara, San Mateo, and Fairfield-Suisun Programs, and the City of Vallejo, under Order No. R2-2009-0074 remain in effect and are provided in Attachment C to this Permit.

Permittees that do not have the location-based applicability criteria (Provision C.3.g.i.(2) – (3)) shown on existing maps shall develop, or cause to be developed, new maps, overlays to existing maps, or other equivalent information that demonstrates whether a project falls under one of those two criteria (whether or not areas are subject to HM requirements). Such maps, overlays, or other equivalent information shall be acceptable to the Executive Officer and shall not be effective until accepted by the Executive Officer.

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<sup>24</sup> The Permittees' maps accepted for Order No. R2-2009-0074 were prepared using this standard, adjusted to 65 percent imperviousness to account for the presence of vegetation on the photographic references used to determine imperviousness. Thus, the maps for Order No. R2-2009-0074 are accepted as meeting the 70 percent requirement.

ii. **HM Standard**

Stormwater discharges from HM Projects shall not cause an increase in the erosion potential of the receiving stream over the pre-project (existing) condition. Increases in runoff flow and volume shall be managed so that post-project runoff shall not exceed estimated pre-project rates and durations, where such increased flow and/or volume is likely to cause increased potential for erosion of creek beds and banks, silt pollutant generation, or other adverse impacts on beneficial uses due to increased erosive force. The demonstration that post-project stormwater runoff does not exceed estimated pre-project runoff rates and durations shall include the following:

- (1) **Range of Flows to Control:** For Alameda, Contra Costa, San Mateo, and Santa Clara Permittees, and the City of Vallejo, HM controls shall be designed such that post-project stormwater discharge rates and durations match pre-project discharge rates and durations from 10 percent of the pre-project 2-year peak flow<sup>25</sup> up to the pre-project 10-year peak flow. For Fairfield-Suisun Permittees, HM controls shall be designed such that post-project stormwater discharge rates and durations shall match from 20 percent of the 2-year peak flow up to the pre-project 10-year peak flow.
- (2) **Goodness of Fit Criteria:** The post-project flow duration curve shall not deviate above the pre-project flow duration curve by more than 10 percent over more than 10 percent of the length of the curve corresponding to the range of flows to control.
- (3) **Standard HM Modeling:** Permittees shall use, or shall cause to be used, a continuous simulation hydrologic computer model to simulate pre-project and post-project runoff, or sizing factors or charts developed using such a model, to design onsite or regional HM controls. The Permittees shall compare, or shall cause to be compared, the pre-project and post-project model output for a long-term rainfall record and shall show that applicable performance criteria in Provision C.3.g.ii.(1)-(3) are met. HM controls designed using the Bay Area Hydrology Model (BAHM) and site-specific input data shall be considered to meet the HM Standard. Such use must be consistent with directions and options set forth in the most current BAHM User Manual. Modifications to the BAHM shall be acceptable to the

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<sup>25</sup> Where referred to in this Order, the 2-year peak flow is determined using a flood frequency analysis based on USGS Bulletin 17B to obtain the peak flow statistically expected to occur at a 2-year recurrence interval. In this analysis, the appropriate record of hourly rainfall data (e.g., 35-50 years of data) is run through a continuous simulation hydrologic model, the annual peak flows are identified, rank ordered, and the 2-year peak flow is estimated. Such models include U.S. EPA's Hydrologic Simulation Program—Fortran (HSPF), the U.S. Army Corps of Engineers' Hydrologic Engineering Center-Hydrologic Modeling System (HEC-HMS), and U.S. EPA's Storm Water Management Model (SWMM).

Executive Officer, shall be consistent with the requirements of this Provision, and shall be reported as required below:

- **Precipitation Data:** Precipitation data used in the modeling of HM controls shall, at a minimum, be 30 years of hourly rainfall data representative of the area being modeled. Where a longer rainfall record is available, the longer record shall be used.
- **Calculating Post-Project Runoff:** Retention and detention basins shall be considered impervious surfaces for purposes of calculating post-project runoff. Pre- and post-project runoff shall be calculated and compared for the entire site, without separating or excluding areas that may be considered self-retaining.

### iii. HM Standard – Direct Simulation of Erosion Potential

HM control shall be achieved by maintaining the erosion potential in receiving streams at a value of equal to or less than 1.0. In order to use the Provision C.3.g.iii HM Standard – Direct Simulation of Erosion Potential, for their HM Projects, the CCCWP Permittees shall distinguish the range of situations present within their jurisdictions and incorporate an associated range of sizing factors for HM controls (described below in Provision C.3.g.vi.(2)) to address that range of situations, sufficient to demonstrate that appropriately-sized HM controls in those respective situations would achieve the HM Standard. The CCCWP Permittees shall submit a Technical Report describing and justifying these criteria, subject to the Executive Officer's approval.

### iv. Types of HM Controls

Projects shall meet the HM Standard using any of the following HM controls or a combination thereof:

- (1) **Onsite HM controls** are flow duration control structures, LID features and facilities, and hydrologic source controls that collectively result in the HM Standard being met at the point(s) where stormwater runoff discharges from the project site.
- (2) **Regional HM controls** are flow duration control structures that collect stormwater runoff discharge from multiple projects (each of which shall incorporate hydrologic source control measures as well) and are designed such that the HM Standard is met for all the projects at the point where the regional HM control discharges.
- (3) **In-stream measures** shall be an option only where the stream, which receives runoff from the project, is already impacted by erosive flows and shows evidence of excessive sediment, erosion, deposition, or is a hardened channel.

In-stream measures involve modifying the receiving stream channel slope and geometry so that the stream can convey the new flow regime without increasing the potential for erosion and aggradation. In-stream measures are intended to improve long-term channel stability and prevent erosion by reducing the erosive forces imposed on the channel boundary.

In-stream measures, or a combination of in-stream and onsite controls, shall be designed to achieve the HM Standard from the point where the project(s) discharge(s) to the stream to the mouth of the stream or to achieve an equivalent degree of flow control mitigation (based on amount of impervious surface mitigated) as part of an in-stream project located in the same watershed. Designing in-stream controls requires a hydrologic and geomorphic evaluation (including a longitudinal profile) of the stream system downstream and upstream of the project. As with all in-stream activities, other regulatory permits must be obtained by the project proponent.<sup>26</sup>

#### v. Implementation Level

- (1) For ACCWP, SCVURPPP, Alameda, Santa Clara, San Mateo SMCWPPP, and FSURMPSolano Permittees, HM Projects shall meet the HM Standard in Provision C.3.g.ii immediately.
- (2) For CCCWP Permittees, HM Projects receiving final planning entitlements prior to Executive Officer approval of CCCWP's submittal pursuant to Provisions C.3.g.iii and C.3.g.vi.(2) shall use the methods and criteria specified in CCCWP's Stormwater C.3 Guidebook, 7<sup>th</sup> Edition (2017), or most current version. Subsequent to Executive Officer approval of CCCWP's submittal pursuant to Provisions C.3.g.iii and C.3.g.vi.(2), HM Projects shall use the methods and criteria specified (and/or acknowledged and approved) in the Executive Officer's approval or conditional approval of that submittal; CCCWP Permittees may alternatively implement the HM Standard in Provision C.3.g.ii.

#### vi. Reporting

- (1) New HM Applicability Maps or equivalent information prepared pursuant to Provision C.3.g.i, for those Permittees who do not have an approved Map, shall be submitted, acceptable to the Executive Officer, not later than with the 2023 Annual Report.

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<sup>26</sup> In-stream control projects require a Stream Alteration Agreement from CDFW, a CWA section 404 permit from the U.S. Army Corps of Engineers, and a section 401 certification from the Water Board. Early discussions with these agencies on the acceptability of an in-stream modification are necessary to avoid project delays or redesign.



(2) With the 2023 Annual Report, the CCCWP Permittees shall submit a Technical Report subject to the Executive Officer's approval, consisting of a HM Management Plan describing how the CCCW Permittees will implement the HM Standard specified in Provision C.3.g.iii. The Technical Report shall include:

- (a) A complete suite of sizing factors – for each type of HM control that may be used in the County – that is protective of all likely site and watershed characteristics, for sites with soils in Hydrologic Soil Groups (HSG) A, B, C, and D, with equations for adjustments to the sizing factors based on geographic differences (including, but not limited to, annual rainfall intensity and frequency, land use, and other hydrologic characteristics), based on the methods and criteria in the CCCWP Hydromodification Technical Report (September 29, 2017), and pursuant to the recommendations provided in the Water Board's Response to CCCWP's Hydromodification Management Memo of November 4, 2020 (March 19, 2021). The complete suite of sizing factors shall ensure each type of HM control achieves the Provision C.3.g.iii HM Standard.

For the complete suite of sizing factors, the base case sizing factor for HM controls at sites with HSG D soils shall be 6.5 percent.<sup>27</sup>

- (b) The Technical Report may optionally identify geographic areas or criteria for site-by-site determination, where the use of the prescribed methods, criteria, and suite of sizing factors may result in HM Projects failing to comply with the Provision C.3.g.iii HM Standard. For those areas, the Technical Report shall propose additional onsite mitigation measures, which when implemented in addition to the complete suite of sizing factors specified in Provision C.3.g.vi.(2)(a), ensure that HM controls achieve the Provision C.3.g.iii HM Standard.

The additional onsite mitigation measures include, but are not limited to: site grading to produce self-retaining areas, specific guidance on augmentation of HM control design (e.g., increasing the size of the storage layer), and increases to the HM control sizing factors.

~~This~~The additional mitigation measures shall not include: reliance on land development restrictions, or on open space preservation, or on the presence of existing or future HM and LID controls located elsewhere within the catchment.

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<sup>27</sup> This is a conservative value, based on sites with project-scale built-out imperviousness in the upper watershed for the Lower Control Threshold of 0.1Q2, for soil percolation rates of 0.024 inches per hour, as presented in Table 5-7 on page 58 of the CCCWP Hydromodification Technical Report (September 29, 2017).

The Technical Report may additionally propose alternative or supplemental methods of compliance with the Provision C.3.g.iii HM Standard, including any combination of: undersized onsite HM controls, additional new HM controls located offsite within the same catchment as the receiving stream, and in-stream controls (e.g., as described in SCVURPPP's 2005 Hydromodification Management Plan Final Report), which when implemented together achieve the Provision C.3.g.iii HM Standard.

- (3) Reporting of HM projects shall be as described in Provision C.3.b.
- (4) Permittees allowing the use of BAHM shall report collectively, with each Annual Report, a listing, summary, and date of modifications made to the BAHM, including the technical rationale. This shall be prepared at the countywide program level and submitted on behalf of participating Permittees.
- (5) In addition, for each HM Project approved during the reporting period, Permittees shall collect and make available the following information. Information shall be reported electronically, and, where appropriate, in tabular form.
  - Device(s) or method(s) used to meet the HM Standard, such as detention basin(s), bioretention unit(s), regional detention basin, or in-stream control(s);
  - Method used by the project proponent to design and size the device or method used to meet the HM Standard;
  - Site plans identifying impervious areas, surface flow directions for the entire site, and location(s) of HM measures;
  - For projects using standard sizing charts, a summary of sizing calculations used;
  - For projects using the BAHM, a listing of model inputs; and
  - For projects using custom modeling, a summary of the modeling calculations with a corresponding graph showing curve matching (existing, post-project, and post-project-with HM controls curves).

#### **C.3.h. Operation and Maintenance of Stormwater Treatment Systems**

- i. **Task Description** – Each Permittee shall implement an Operation and Maintenance (O&M) Verification Program.
- ii. **Implementation Level** – At a minimum, the O&M Verification Program shall include the following elements:

- (1) Conditions of approval or other legally enforceable agreements or mechanisms for all Regulated Projects and for all projects implemented pursuant to Provision C.3.j that, at a minimum, require at least one of the following from all project proponents and their successors in control of the Project or successors in fee title:
  - (a) The project proponent's signed statement accepting responsibility for the operation and maintenance of the installed pervious pavement system(s) (if any), onsite, joint, and/or offsite stormwater treatment system(s), and HM control(s) (if any) until such responsibility is legally transferred to another entity;
  - (b) Written conditions in the sales or lease agreements or deed for the project that requires the buyer or lessee to assume responsibility for the operation and maintenance of the pervious pavement system(s) (if any), onsite, joint, and/or offsite installed stormwater treatment system(s), and HM control(s) (if any) until such responsibility is legally transferred to another entity;
  - (c) Written text in project deeds, or conditions, covenants and restrictions (CCRs) for multi-unit residential projects that require the homeowners association or, if there is no association, each individual owner to assume responsibility for the O&M of the installed pervious pavement system(s) (if any), onsite, joint, and/or offsite stormwater treatment system(s), and HM control(s) (if any) until such responsibility is legally transferred to another entity; or
  - (d) Any other legally enforceable agreement or mechanism, such as recordation in the property deed, that assigns the operation and maintenance responsibility for the installed pervious pavement system(s) (if any), onsite, joint, and/or offsite treatment system(s) and HM control(s) (if any) to the project owner(s) or the Permittee.
- (2) Coordination with the appropriate mosquito and vector control agency with jurisdiction to establish a protocol for notification of installed stormwater treatment systems and HM controls.
- (3) Conditions of approval or other legally enforceable agreements or mechanisms for all Regulated Projects that require the granting of site access to all representatives of the Permittee, local mosquito and vector control agency staff, and Water Board staff, for the sole purpose of performing operation and maintenance inspections of the installed pervious pavement system(s) (if any), stormwater treatment system(s) and HM control(s) (if any).

- (4) A database or equivalent tabular format of the following:
- (a) All pervious pavement system(s) that total 3,000 square feet or more installed at Regulated Projects, offsite, or at a Regional Project. The total square footage should not include pervious pavement systems installed as private-use patios for single family homes, townhomes, or condominiums.
  - (b) All stormwater treatment systems installed onsite at Regulated Projects, offsite, or at a joint or Regional Project.
  - (c) All HM controls installed onsite at Regulated Projects, offsite, or at a joint or Regional Project.
- (5) The database or equivalent tabular format required in Provision C.3.h.ii.(4) shall include the following information for each Regulated Project, offsite project, and Regional Project, and shall be made available to Water Board staff upon request:
- (a) Name and address of the project;
  - (b) Names of the owner(s) and responsible operator(s) of the installed pervious pavement system(s) (if any), stormwater treatment system(s), and/or HM control(s);
  - (c) Specific description of the location (or a map showing the location) of the installed pervious pavement system(s) (if any), stormwater treatment system(s), and HM control(s) (if any);
  - (d) Date(s) that the pervious pavement system(s) (if any), stormwater treatment system(s), and HM controls (if any) was/were installed;
  - (e) Description of the type and size of the pervious pavement systems (if any), stormwater treatment system(s), and HM control(s) (if any) installed;
  - (f) Detailed information on operation and maintenance inspections. For each inspection, include the following:
    - (i) Date of inspection.
    - (ii) Type of inspection (e.g., installation, annual, followup, spot).
    - (iii) Type(s) of pervious pavement systems inspected (e.g., pervious concrete, pervious asphalt, pervious pavers).
    - (iv) Type(s) of stormwater treatment systems inspected (e.g., swale, bioretention unit, tree well) and an indication of whether the treatment system is an onsite, joint, or offsite system.

- (v) Type of HM controls inspected.
  - (vi) Inspection findings or results (e.g., proper installation, proper operation and maintenance, system not operating properly because of plugging, bypass of stormwater because of improper installation or maintenance, maintenance required immediately).
  - (vii) Enforcement action(s) taken, if any (e.g., verbal warning, notice of violation, compliance schedule, administrative citation, administrative order).
- (6) A prioritized O&M Inspection Plan for inspecting all pervious pavement systems that total 3,000 square feet or more (excluding private-use patios for single family homes, townhomes, or condominiums), stormwater treatment systems and HM controls installed at Regulated Projects, offsite locations, and/or at joint or Regional Projects. For residential subdivisions with pervious pavement systems that include individual driveways, inspection of a representative number of driveways is sufficient.

At a minimum, the O&M Inspection Plan must specify the following for each fiscal year:

- (a) Inspection by the Permittee of all newly installed pervious pavement systems that total 3,000 square feet or more (excluding private-use patios for single family homes, townhomes, or condominiums), stormwater treatment systems, and HM controls (at Regulated Projects, offsite locations, and/or at joint or Regional Projects) at the completion of installation to ensure approved plans have been followed. For residential subdivisions with pervious pavement systems that include individual driveways, inspection of a representative number of driveways is sufficient;
- (b) Inspection by the Permittee of an average of 20 percent, but no less than 15 percent, of the total number (at the end of the preceding fiscal year) of Regulated Projects, offsite projects, or Regional Projects. Each inspection shall include inspection of all pervious pavement systems that total 3,000 square feet or more (excluding private-use patios for single family homes, townhomes, or condominiums), stormwater treatment systems, and HM controls installed at the Regulated Project, offsite project, or Regional Project. For residential subdivisions with pervious pavement systems that include individual driveways, inspection of a representative number of driveways is sufficient;
- (c) Inspection by the Permittee of all Regulated Projects, offsite projects, or Regional Projects at least once every five years. Each inspection

shall include inspection of all pervious pavement systems that total 3,000 square feet or more (excluding private-use patios for single family homes, townhomes, or condominiums), stormwater treatment systems, and HM controls installed at the Regulated Project, offsite project, or Regional Project. For residential subdivisions with pervious pavement systems that include individual driveways, inspection of a representative number of driveways is sufficient; and

- (d) For vault-based stormwater treatment systems, Permittees may accept 3<sup>rd</sup> party inspection reports in lieu of conducting Permittee operation and maintenance inspections only if the 3<sup>rd</sup> party inspections are conducted at least annually. Information from each 3<sup>rd</sup> party inspection shall be included in the database or tabular format required in Provision C.3.h.ii.(5) and each inspection shall be clearly identified as a 3<sup>rd</sup> party inspection.

Each 3<sup>rd</sup> party inspection report must clearly document the following:

- (i) Name of 3<sup>rd</sup> party inspection company.
  - (ii) Date of inspection.
  - (iii) Condition of the treatment unit(s) at the time of inspection.
  - (iv) Description of maintenance activities performed during the inspection.
  - (v) Date- and time-stamped photographs of the inside of the vault unit(s) before and after maintenance activities.
- (7) An Enforcement Response Plan (ERP) for all operation and maintenance inspections that serves as a reference document for inspection staff so that consistent enforcement actions can be taken to bring development projects into compliance. At a minimum, the ERP must contain the following:
    - (a) Enforcement Procedures – A description of the Permittee’s procedures from the discovery of problems through the confirmation of implementation of corrective actions. This shall include guidance for recognizing common problems with the different types of pervious pavement systems, stormwater treatment systems, and/or HM controls, remedies for the problems, and appropriate enforcement actions, follow-up inspections, and appropriate time periods for implementation of corrective actions, and the roles and responsibilities of staff responsible for implementing the ERP.
    - (b) Enforcement Tools and Field Scenarios – A discussion of the various, escalating enforcement tools appropriate for different field scenarios of

problems identified with the pervious pavement systems, stormwater treatment systems, and/or HM controls as well as for different types of inadequate response to enforcement actions taken.

- (c) **Timely Correction of Identified Problems** – A description of the Permittee’s procedures for assigning due dates for corrective actions. Permittees shall require timely correction of all identified problems with the pervious pavement systems, stormwater treatment systems, and/or HM controls.

Corrective actions shall be implemented no longer than 30 days after a problem is identified by an inspector. Corrective actions can be temporary ~~and, in which case~~ more time may be allowed for permanent corrective actions. If more than 30 days are required for compliance, a rationale shall be recorded in the electronic database or equivalent tabular system.

**iii. Due Date for Implementation:** Immediate.

- iv. Maintenance Approvals:** The Permittees shall ensure that all pervious pavement systems that total 3,000 square feet or more (excluding private-use patios for single family homes, townhomes, or condominiums), stormwater treatment systems, and HM controls installed onsite, offsite, or at a joint or Regional Project by development proponents are properly operated and maintained for the life of the projects. In cases where the responsible party for a pervious pavement system, stormwater treatment system, or HM control has worked diligently and in good faith with the appropriate State and federal agencies to obtain approvals necessary to complete maintenance activities, but these approvals are not granted, the Permittees shall be deemed to be in compliance with Provision C.3.h. Permittees shall ensure that constructed wetlands installed by Regulated Projects and used for urban runoff treatment shall abide by the Water Board’s Resolution No. 94-102: Policy on the Use of Constructed Wetlands for Urban Runoff Pollution Control and the operation and maintenance requirements contained therein.

**v. Reporting**

- (1) The database or equivalent tabular format required in Provisions C.3.b.ii.(4) and (5) shall be maintained by the Permittees. Upon request from the Executive Officer, information from this database or equivalent tabular format shall be submitted to Water Board staff for review. The requested information may include specific details on each inspection conducted within particular timeframes, such as several fiscal years.
- (2) On an annual basis, before the wet season, provide a list of newly installed (installed within the reporting period) stormwater treatment

systems and HM controls to the local mosquito and vector control agency, and ~~send~~include a copy of that communication ~~to~~with the ~~Water Board~~Annual Report. This list shall include the facility locations and a description of the stormwater treatment measures and HM controls installed.

- (3) Each Permittee shall report the following information in the Annual Report each year:
- (a) Total number of Regulated Projects in the Permittee's database or tabular format as of the end of the reporting period (fiscal year).
  - (b) Total number of Regulated Projects, offsite projects, and Regional Projects inspected during the reporting period (fiscal year).
  - (c) Percentage of the total number of Regulated Projects that were inspected during the reporting period (fiscal year).
  - (d) A discussion of the inspection findings for the year and any common problems encountered with various types of pervious pavement systems, treatment systems and/or HM controls. This discussion should include a general comparison to the inspection findings from the previous year.
  - (e) A discussion of the effectiveness of the Permittee's O&M Program and any proposed changes to improve the O&M Program (e.g., changes in prioritization plan or frequency of O&M inspections, other changes to improve effectiveness of program).

**C.3.i. Required Site Design Measures for Small Development and Redevelopment Projects and Smaller Detached Single-Family Home Projects**

- i. **Task Description** – The Permittees shall require all development and redevelopment projects, which create and/or replace  $\geq 2,500$  ft<sup>2</sup> to  $< 5,000$  ft<sup>2</sup> of impervious surface, and detached single-family home projects,<sup>28</sup> which create and/or replace  $\geq 2,500$  ft<sup>2</sup> to  $< 10,000$  ft<sup>2</sup> of impervious surface, to install one or more of the following site design measures:
- Direct roof runoff into cisterns or rain barrels for reuse.
  - Direct roof runoff onto vegetated areas.

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<sup>28</sup> **Detached single-family home project** – The building of one single new house or the addition and/or replacement of impervious surface to one single existing house, which is not part of a larger plan of development.



- Direct runoff from sidewalks, walkways, and/or patios onto vegetated areas.
- Direct runoff from driveways and/or uncovered parking lots onto vegetated areas.
- Construct sidewalks, walkways, and/or patios with permeable surfaces.<sup>611</sup>
- Construct bike lanes, driveways, and/or uncovered parking lots with permeable surfaces.<sup>511</sup>

This provision applies to all development projects that require approvals and/or permits issued under the Permittees' planning, building, or other comparable authority.

- ii. **Reporting** – On an annual basis, discuss the implementation of the requirements of Provision C.3.i, including ordinance revisions, permit conditions, development of standard specifications and/or guidance materials, and staff training.

### **C.3.j. Green Infrastructure Planning and Implementation**

- i. **Task Description** – The Permittees shall continue to implement their Green Infrastructure Plans (completed during the term of the Previous Permit), as may be updated and/or supplemented to comply with this Order, for the inclusion of low impact development drainage design into storm drain infrastructure on public and private lands, including streets, roads, storm drains, parking lots, building roofs, and other storm drain infrastructure elements.

- (1) The Plans are intended to serve as an implementation guide and reporting tool during this and subsequent Permit terms to provide reasonable assurance that urban runoff TMDL wasteload allocations (e.g., for the San Francisco Bay mercury and PCBs TMDLs and the Urban Creeks Pesticides TMDL) will be met, and to set goals for reducing, over the long term, the adverse water quality impacts of urbanization and urban runoff on receiving waters.

- (2) Over the long term, the Plans are intended to describe how the Permittees will shift their impervious surfaces and storm drain infrastructure from gray, or traditional storm drain infrastructure where runoff flows directly into the storm drain and then the receiving water, to green—that is, to a more-resilient, sustainable system that slows runoff by dispersing it to vegetated areas, harvests and uses runoff, promotes infiltration and evapotranspiration, and uses bioretention and other green infrastructure practices to clean stormwater runoff.

- (3) Green infrastructure project prioritization is described in the Green Infrastructure Plans based on local characteristics and priorities, and therefore green infrastructure projects will typically be designed to achieve multiple benefits in addition to mercury and PCBs load reduction. Furthermore, this Provision establishes a separate impervious surface retrofit requirement for other-than Regulated Projects.

## ii. Implementation Level

### (1) Programmatic Implementation

The Permittees shall, individually or in a coordinated manner, update and/or supplement their Green Infrastructure Plans as needed to ensure that municipal processes and ordinances allow and appropriately encourage implementation of green infrastructure, and incorporate lessons learned, by:

- (a) Revising implementation mechanisms to include consideration, or reconsideration, of cooperation with non-municipal entities such as schools on green infrastructure implementation, and otherwise updating implementation mechanisms as appropriate.
- (b) Following through with the development or updates of general plans, specific plans, urban forestry plans, climate change adaptation plans, complete streets plans and other planning documents with a green infrastructure nexus to include language which is more supportive of green infrastructure implementation, as identified by Permittees in their Green Infrastructure Plans. Upon request by Water Board staff, Permittees shall provide justifications for planning documents that they assert do not need to be updated to further support green infrastructure implementation.
- (c) Developing funding and funding mechanisms identified in the Green Infrastructure Plans, such as by working with the relevant agencies to expand the scope of transportation grants to include allocation for green infrastructure; establishing green infrastructure-based or green infrastructure-incorporating stormwater fees, including work that sets the foundation for additional future stormwater fees; establishing or increasing application review fees, and evaluating other opportunities to leverage municipal approval of private development to fund green infrastructure implementation.
- (d) Reviewing countywide green infrastructure implementation guidance documents and adapting them as necessary to account for local considerations if this has not already been completed during the

Previous Permit term, and otherwise reviewing and updating general guidelines and standard specifications as appropriate.

- (e) Continuing to implement the tools developed during the Previous Permit term to track and map completed public and private green infrastructure projects, and making the information publicly available.
- (f) Continuing to adopt or amend policies, ordinances, and/or other appropriate legal mechanisms to ensure implementation of the Green Infrastructure Plan in accordance with the requirements of this Provision, as necessary.
- (g) Continuing to conduct outreach and education as follows:
  - (i) Conduct public outreach on the requirements of this Provision, including outreach coordinated with adoption or revision of standard specifications and planning documents, and with the initiation and planning of infrastructure projects. Such outreach shall include general outreach and targeted outreach to and training for professionals involved in infrastructure planning and design.
  - (ii) Train appropriate staff, including planning, engineering, public works maintenance, finance, fire/life safety, and management staff on the requirements of this Provision and methods of implementation.
  - (iii) Educate appropriate Permittee elected officials (e.g., mayors, city council members, county supervisors, district board members) on the requirements of this Provision and methods of implementation.

**(2) Numeric Implementation**

- (a) By June 30, 2027, the Permittees shall implement, or cause to be implemented, green infrastructure projects within their jurisdictions which are not already defined as Regulated Projects pursuant to Provision C.3.b, such that the impervious surface retrofits listed in Table H-1 of Attachment H are achieved.
- (b) The Permittees may meet the numeric retrofit requirements listed in Table H-1 of Attachment H on a countywide basis. If Permittees within a given county do not collectively achieve their numeric retrofit requirements, each Permittee within that county shall be separately responsible for achieving its individual retrofit requirement.
- (c) Though Permittees may meet their total individual numeric retrofit requirements on a countywide basis, each Permittee shall implement, or cause to be implemented, a green infrastructure project or projects

treating no less than 0.2 acres of impervious surface within its jurisdiction, where that project is not already defined as a Regulated Project pursuant to Provision C.3.b. Alternatively, a Permittee may contribute substantially to such a green infrastructure project(s) outside of its jurisdiction and within its County.

~~(d)~~ NonImpervious surfaces treated by non-Regulated Projects and green infrastructure beyond the minimum required by Provision C.3.d for a Regulated Project may be counted towards the numeric requirements in this table. If Table H-1 of Attachment H.

Impervious surfaces treated by Regulated Projects, beyond the minimum required by Provisions C.3.c-d for such Regulated Projects, may be counted towards the numeric requirements in Table H-1 of Attachment H.

If a portion of the impervious surface treated by such a Non-Regulated Project or green infrastructure/LID by Regulated Projects (beyond the minimum required by Provision Provisions C.3.c-d for a such Regulated Project Projects) is later used as part of an Alternative Compliance exchange to offset the treatment required by a Regulated Project pursuant to Provision C.3.e.i, then that portion may no longer be counted towards the Provision C.3.j.ii.(2) retrofit requirements listed in Table H-1 of Attachment H.

~~(d)~~(e) Projects completed after January 1, 2021, shall be counted towards the Provision C.3.j.ii.(2) Numeric Implementation retrofit requirements.

~~(e)~~(f) Projects completed by June 30, 2027, shall be counted towards the Provision C.3.j.ii.(2) Numeric Implementation retrofit requirements.

If a project is not completed by June 30, 2027, it may still count towards the Provision C.3.j.ii.(2) Numeric Implementation retrofit requirements, if it is approved and as long as it is either a private project which has received final discretionary approval or a public project which has had construction scheduled and has been fully funded. Permittees that count such projects towards the Provision C.3.j.ii.(2) Numeric Implementation retrofit requirements shall certify in their Annual Reports that the any counted private projects are approved have received final discretionary approval by June 30, 2027, and any counted public projects have had construction scheduled and have been fully funded by June 30, 2027.

~~(f)~~(g) Controls implemented to satisfy Provision C.3 requirements, including the numeric retrofit requirements specified in Provision C.3.j.ii.(2), may also be used to satisfy Provision C.11 Mercury

Controls requirements, and Provision C.12 PCBs Controls requirements, as long as they satisfy the other aspects of those requirements, such as location (i.e., for PCBs, controls that are implemented in areas of old industrial land use or otherwise in areas with identified relatively high concentrations of PCBs).

~~(g)~~(h) Permittees may credit the acreage of impervious surface created or replaced for Regulated Road Reconstruction Projects, specified in Provision C.3.b.ii.(5), towards the Numeric Implementation retrofit requirements specified in Provision C.3.j.ii.(2).

~~(h)~~(i) Permittees with small rural jurisdictions (e.g., whose stormwater conveyance systems are dominated by roadside ditches) may collectively submit a proposal, subject to the Executive Officer's approval, for pilot projects investigating the use of alternative green infrastructure techniques to comply with the Provision C.3.j.ii.(2) Numeric Implementation retrofit requirements, with construction by June 30, 2027. If a project is not completed by June 30, 2027, it may still count towards the Provision C.3.j.ii.(2) Numeric Implementation retrofit requirements, if it is approved and fully funded. Permittees that count such projects towards the Provision C.3.j.ii.(2) Numeric Implementation retrofit requirements shall certify in their Annual Reports that the projects are approved and funded by June 30, 2027.

The proposal shall include a discussion describing the small rural jurisdiction, including density, developed versus undeveloped areas, and piped stormwater conveyances versus roadside ditches.

~~(i)~~(i) Permittees with existing ordinances (or that adopt new ordinances by June 30, 2023) that require Regulated Projects to treat significantly more impervious surface than the minimum required by Provision C.3.c-d, may offset their Numeric Implementation retrofit requirements specified in Provision C.3.j.ii.(2) by a one-time credit of up to 25 percent, and by no greater than one acre. The claimed offset shall not reduce Permittees' Numeric Implementation retrofit requirements below 0.2 acres as specified in Provision C.3.j.ii.(2)(c).

In order to claim this offset, Permittees shall submit a report subject to Executive Officer approval estimating the benefit that will be realized by the adopted ordinance(s) in the current Permit term and the subsequent Permit terms (i.e., until June 30, 2032), as specified in Provision C.3.j.v.(5). The offset claimed shall be no greater than the benefit of the offset estimated in the report. Permittees shall not use the offset prior to Executive Officer approval of the report.

- (3) **Design and Other Criteria** - Green infrastructure projects built pursuant to Provision C.3.j shall:
- (a) Comply with Provision C.3.c and Provisions C.3.e-h.
  - (b) Comply with Provision C.3.d. With cause (e.g., significantly constrained area for a BMP, substantially increased costs for that sizing relative to the C.3.j.i.(2)(g) approach outlined in the Previous Permit, significant amounts of run-on from adjacent areas, or other substantial constraints identified by Permittees) and with reporting in their Annual Reports, Permittees may use the Guidance for Sizing Green Infrastructure Facilities in Streets Projects with companion analysis Green Infrastructure Facility Sizing for Non-Regulated Street Projects submitted in June 2019, to size Non-Regulated green streets projects. If so, Permittees must comply with the Water Board's June 21, 2019, conditional approval of that submittal, which provides qualifiers to, and the conditions under which, the alternative sizing criteria may be used for Non-Regulated green streets projects.
- (4) **Long-Term Green Infrastructure Implementation**
- (a) The Permittees and their representatives may, together with Water Board staff and impartial science experts (e.g., SFEI, SFEP, U.S. EPA Region 9), collectively form a Technical Working Group (TWG) to discuss long-term green infrastructure goals and recommend long-term percentage reductions in Permittees' impervious surfaces, at individual, countywide and regional scales. The TWG should prioritize discussion of long-term green infrastructure goals for development and redevelopment projects not already captured by Provision C.3.b, and in particular, public road and right of way reconstruction projects that are not already defined as Regulated Projects by Provision C.3.b.ii.(5). The TWG should additionally review BMPs and performance metrics, and should consider linkages to climate change impacts and resiliency.
  - (b) Prior to the submittal of a report containing the TWG's recommendations for long-term percentage reductions in Permittees' impervious surfaces – as prescribed by Provision C.3.j.v.(6) – the TWG should meet at a minimum biannually, and subsequent to that submittal should meet at a minimum annually.

**iii. No Missed Opportunities**

Each Permittee shall:

- (1) Continue to maintain a list of green infrastructure projects, public and private, that are planned for implementation during the permit term and

infrastructure projects planned for implementation during the permit term that have potential for green infrastructure measures.

- (2) Submit the list with each Annual Report and a summary of planning or implementation status for each public green infrastructure project and each private green infrastructure project that is not also a Regulated Project as defined in Provision C.3.b.ii. Include a summary of how each public infrastructure project with green infrastructure potential will include green infrastructure measures to the maximum extent practicable during the permit term. For any public infrastructure project where implementation of green infrastructure measures is not practicable, submit a brief description of the project and the reasons green infrastructure measures were impracticable to implement.

**iv. Participate in Processes to Promote Green Infrastructure**

- (1) The Permittees shall, individually or collectively, track processes, assemble and submit information, and provide informational materials and presentations as needed to assist relevant regional, State, and federal agencies to plan, design, and fund incorporation of green infrastructure measures into local infrastructure projects, including transportation projects. Issues to be addressed include coordinating the timing of funding from different sources, changes to standard designs and design criteria, ranking and prioritizing projects for funding, and implementation of cooperative in-lieu programs.
- (2) In each Annual Report, Permittees shall report on the goals and outcomes during the reporting year of work undertaken to participate in processes to promote green infrastructure.

**v. Tracking and Reporting Progress**

- (1) The Permittees shall continue to implement the existing regionally-consistent tracking and mapping tools developed pursuant to Provision C.3.j.i.(2).(d) of the Previous Permit to track and report implementation of green infrastructure measures including treated area and connected and disconnected impervious area on both public and private parcels within their jurisdictions. The methods shall also address tracking needed to provide reasonable assurance that wasteload allocations for TMDLs, including the San Francisco Bay PCBs and mercury TMDLs, and reductions for trash, are being met. The tracking and mapping tools shall be used by Permittees to inform issues relevant to program management, such as life cycle costs, asset management, operation and maintenance frequency, and beneficial design changes.

- (a) Non-regulated green infrastructure projects built pursuant to Provision C.3.j shall be tracked and mapped in the same manner as Regulated Projects. These projects shall be reported in a separate table from Regulated Projects.
- (b) The tracking and mapping tools shall include a component that is available to the public, which is advertised on individual Permittee websites and on County stormwater program websites, and as appropriate is advertised in other locations. This component must include the following basic information: a brief description of design (e.g., whether bioretention or bioswale), location, land use type, and area treated. If the tools contain additional information which has not been made available to the public such as detailed design information, incurred or planned O&M costs and O&M frequency, condition assessments, and pollutant loads treated, that information shall be made available to Water Board staff upon request.
- (c) The Permittees shall certify in the 2023 Annual Reports that the tracking and mapping tools have been completed and are being implemented.
- (d) In each Annual Report, Permittees shall provide summary reports on the implementation of the tracking and mapping tools, and shall provide a link to the component which is available to the public.

~~(2)~~ In each the 2024 and 2026 Annual Report, Permittees shall:

~~(3)~~ (2) Report Reports, report on updates, addenda, and changes to their programmatic implementation, including, but not limited to, the items listed in Provision C.3.j.ii.(1).

~~(4)~~ (3) In each Annual Report, Permittees shall report on progress made towards the retrofit requirements described in Provision C.3.j.ii.(2).

~~(5)~~ (4) With the 2026 Annual Reports, Permittees shall provide a summary of lessons learned to-date with regard to Provision C.3.j.ii.(1), including topics such as operation and maintenance, sizing, infiltration and other design criteria for stormwater treatment controls, implementation of tracking and mapping tools, cooperation with non-municipal entities, regional project efforts, funding initiatives and opportunities to leverage municipal approval of private development, education and outreach, and development or updates of plan documents with a green infrastructure nexus. In the summary, Permittees shall also discuss attainment of the numeric retrofit requirements prescribed in Provision C.3.j.ii.(2).

In that summary, as applicable, Permittees shall report on how they have addressed deficiencies identified in Provision C.3.j.ii.(1).



~~(6)~~(5) Pursuant to Provision C.3.j.ii.(2)(i), Permittees whose jurisdictions are dominated by rural areas may collectively submit a proposal, subject to the Executive Officer's approval, for the use of alternative green infrastructure techniques. This proposal shall be submitted by no later than with the 2023 Annual Reports.

~~(7)~~(6) Each Permittee that wishes to use the one-time offset specified in Provision C.3.j.ii.(2)(j) shall submit a report estimating the benefit realized by the adopted ordinance(s) in the current Permit term, and until June 30, 2032, by no later than with the 2023 Annual Report, subject to Executive Officer approval. Permittees shall not use the offset prior to Executive Officer approval of the Report. The benefit of the estimated offset shall be no less than the offset claimed during the current Permit term.

In each Annual Report, each Permittee claiming the offset shall report on the acreage of retrofit produced by the implementation of the offset in that Fiscal Year, as well as the cumulative acreage of retrofit produced by the implementation of the offset up to that point in time during the current Permit term.

~~(8)~~(7) By no later than with the ~~2024~~2025 Annual Reports, the Permittees shall collectively submit a report summarizing any TWG efforts and recommendations, as specified in Provision C.3.j.ii.(4).

~~(9)~~(8) Pursuant to Provision C.3.j.ii.(2)(f) and Provision C.3.j.ii.(2)(i), Permittees shall certify in each Annual Report that any projects counting towards the Provision C.3.j.ii.(2) Numeric Implementation retrofit requirements, which have not been completed by June 30, 2027, have been approved and fully funded by June 30, 2027.

**Table 3.1 Standard Tracking and Reporting Form for Potential Special Projects**

| Project No. | Permittee | Address | Application Submittal Date | Description | Site Total Acreage | Total Impervious Surface Created/ Replaced | Gross Density DU/Ac | Category C Projects: Number of DUs in each AMI Category | FAR | Special Project Category | LID Treatment Reduction Credit | Stormwater Treatment Systems |
|-------------|-----------|---------|----------------------------|-------------|--------------------|--|---------------------|---|-----|--------------------------|--------------------------------|------------------------------|
|             |           |         |                            |             |                    |  |                     |   |     |                          |                                |                              |
|             |           |         |                            |             |                    |  |                     |   |     |                          |                                |                              |
|             |           |         |                            |             |                    |  |                     |   |     |                          |                                |                              |
|             |           |         |                            |             |                    |  |                     |   |     |                          |                                |                              |

**Project No.:** Number of the Special Project as it appears in Table 3.1.

**Permittee:** Name of the Permittee in whose jurisdiction the Special Project will be built.

**Address:** Address of the Special Project; if no street address, state the cross streets.

**Submittal Date:** Date that a planning application for the Special Project was submitted; if a planning application has not been submitted, include a projected application submittal date.

**Description:** Type of project (commercial, mixed-use, residential), number of floors, number of units, type of parking, and other relevant information.

**Site Total Acreage:** Total site area in acres.

**Total Impervious Surface Created/Replaced:** The total impervious surfaced in acres created or replaced by the project, which is subject to the treatment requirements listed in Provision C.3.e.ii.(1).

**Gross Density in DU/Ac:** Number of dwelling units per acre.

**Category C Projects: Number of DUs in each AMI Category:** For Category C Special Projects only, the number of preserved DUs (DUs with deed restrictions running at least 55 years) that have rent/mortgage rates (including utilities)

no less than 30 percent of the Moderate, Low, Very Low, and Extremely Low area median household income levels specified in Table H-2 of Attachment H.

**FAR:** Floor Area Ratio.

**Special Project Category:** For each Special Project Category, indicate applicability. If a Category is applicable, list the specific criteria applied to determine applicability.

**LID Treatment Reduction Credit:** For each applicable Special Project Category, state the maximum total LID Treatment Reduction Credit available. For Category C Special Projects also list the individual Affordable Housing, Location, Density, and Minimized Surface Parking Credits available.

**Stormwater Treatment Systems:** List all proposed stormwater treatment systems and the corresponding percentage of the total amount of runoff identified in Provision C.3.d. for the Project's drainage area that will be treated by each treatment system.

Revised Tentative Order

## C.4. Industrial and Commercial Site Controls

Each Permittee shall implement an industrial and commercial site control program at all sites that could reasonably be considered to cause or contribute to pollution of stormwater runoff. Permittees shall conduct inspections, effective follow-up, and enforcement to abate potential and actual non-stormwater discharges, consistent with each respective Enforcement Response Plan. These combined efforts will prevent the discharge of pollutants and impacts to beneficial uses of receiving waters. Inspections shall confirm implementation of appropriate and effective BMPs and other pollutant controls by industrial and commercial site operators.

### C.4.a. Legal Authority for Effective Site Management

- i. **Task Description** – Permittees shall have sufficient legal authority to inspect, require effective stormwater pollutant control, and implement progressively stricter enforcement to achieve expedient compliance and pollutant abatement at commercial and industrial sites within their jurisdiction.
- ii. **Implementation Level** – Permittees shall have the legal authority to oversee, inspect, and require expedient compliance and pollution abatement at all industrial and commercial sites that may be reasonably considered to cause or contribute to pollution of stormwater runoff. Permittees shall have the legal authority to require implementation of appropriate BMPs at industrial and commercial facilities to address pollutant sources associated with outdoor process and manufacturing areas; outdoor material storage areas; outdoor waste storage and disposal areas; outdoor vehicle and equipment storage and maintenance areas; outdoor parking areas and access roads; outdoor wash areas, for example, areas used to wash restaurant equipment and mats; outdoor drainage from indoor areas; rooftop equipment; vehicle fueling activities; contaminated and erodible surface areas; and other sources determined by the Permittees or the Water Board Executive Officer to have a reasonable potential to contribute to pollution of stormwater runoff.

### C.4.b. Industrial and Commercial Business Inspection Plan (Inspection Plan)

- i. **Task Description** – Permittees shall continue to update and implement an Inspection Plan that will serve as a prioritized inspection workplan. This Inspection Plan will allow inspection staff to categorize the commercial and industrial sites within the Permittee's jurisdiction by pollutant threat and inspection frequency, change inspection frequency based on site performance, and add and remove sites as businesses open and close.

**ii. Implementation Level**

(1) Facilities to Prioritize for Inspection

Commercial and industrial facilities with the functional aspects and types described below, and other facilities identified by the Permittees as reasonably likely to contribute to pollution of stormwater runoff, shall be prioritized for inspection on the basis of the potential for water quality impact using criteria such as pollutant sources on site, use of pollutants of concern, proximity to a waterbody, and the enforcement history of potential discharges and actual discharges at the facility. Permittees may use a variety of sources to develop and update the business inspection prioritization, including, but not limited to, business license applications, tax records, and inspectors' observations. The following are some of the functional aspects of businesses and types of businesses that shall be included in the Inspection Plan:

- (a) Sites with the following functions or facilities that may be sources of pollutants when exposed to stormwater:
  - (i) Outdoor process and manufacturing areas
  - (ii) Outdoor material storage areas
  - (iii) Outdoor waste storage, handling, and disposal areas
  - (iv) Outdoor vehicle and equipment storage and maintenance areas
  - (v) Outdoor wash areas
  - (vi) Outdoor drainage from indoor areas
  - (vii) Fueling Areas
  - (viii) Rooftop equipment
  - (ix) Other sources determined by the Permittee or Water Board as reasonably likely to contribute to pollution of stormwater runoff.
- (b) Sites that support industrial and commercial activities that have a reasonable likelihood to be sources of pollutants to stormwater and non-stormwater discharges, including:
  - (i) Industrial facilities, as defined at 40 CFR 122.26(b)(14), including facilities subject to the Statewide NPDES General Permit for Stormwater Discharges Associated with Industrial Activity (hereinafter the Industrial General Permit);
  - (ii) Vehicle Salvage yards;

- (iii) Metal and other recycled materials collection facilities, and waste transfer facilities;
  - (iv) Vehicle mechanical repair, maintenance, fueling, or cleaning facilities;
  - (v) Nurseries and greenhouses;
  - (vi) Restaurants and other food service businesses at which food is prepared or that have onsite eating and drinking areas for customers;
  - (vii) Supermarkets or large grocery stores with outdoor waste storage or cardboard compacting areas;
  - (viii) Building trades facilities or yards, corporation yards;
  - (ix) Building material retailers and storage;
  - (x) Plastics manufacturers; and
  - (xi) Other facilities designated by the Permittee or Water Board to be reasonably likely to contribute to pollution of stormwater runoff.
- (2) Inspection Plan – The Inspection Plan shall be updated annually and shall contain the following information:
- (a) A description of the process for prioritizing inspections and frequency of inspections. The prioritization criteria shall assign a more frequent inspection schedule to the highest priority facilities per Provision C.4.b.ii.(1). If any geographical areas are to be targeted for inspections due to high potential for stormwater pollution, these areas should be indicated in the Inspection Plan.
  - (b) Assign appropriate inspection frequency for each industrial and commercial facility based on the priority established in Provision C.4.b.ii.(2)(a), potential for contributing pollution to stormwater runoff, and commensurate with the threat to water quality.
  - (c) A mechanism to include new businesses that warrant inspections.
  - (d) Total number and a list of all industrial and commercial facilities requiring inspections, within each Permittee's jurisdiction, based on the prioritization criteria established in Provision C.4.(b)ii.(2)(a). This list shall be updated annually.
  - (e) List of facilities scheduled for inspection each fiscal year of the MRP permit term. Each fiscal year's inspection list shall be added to the Inspection Plan at the beginning of the fiscal year as part of the annual

update. Previous fiscal years' inspection lists shall remain in the Inspection Plan.

- (f) If a Permittee relies on multiple entities to perform business and commercial inspections, a list of the entities and their responsibilities with regard to this Permit. Describe how the Permittee oversees and coordinates the entities performing inspections and assures that all sites with the potential to pollute stormwater are inspected.
- (3) Record Keeping – For each facility identified in Provision C.4.b.ii.(2)(d), the Permittee shall maintain a database or equivalent tabular system of at least the following information:
- (a) Name and address of the business and local business operator;
  - (b) A brief description of business activity or pollutant source, including SIC or NAICS code. Examples: outdoor process/manufacturing areas, outdoor material storage areas, outdoor waste storage and disposal areas, outdoor vehicle and equipment storage and maintenance areas, outdoor parking areas and access roads, outdoor wash areas, rooftop equipment, outdoor drainage from indoor areas, and use of mobile businesses for outdoor fueling, washing, etc.;
  - (c) Inspection priority and inspection frequency; and
  - (d) Whether facility requires coverage under the Industrial General Permit.

### iii. Reporting

- (1) Permittees shall include the following information in the 2023 Annual Report:
  - (a) A brief description of which Permittee entity or entities are responsible for reviewing and approving business license applications or a link to the Permittee's website for business license applications.
- (2) Permittees shall make the list required by Provision C.4.b.ii.(2)(d) available upon Water Board request.

### C.4.c. Enforcement Response Plan

- i. **Task Description** – Each Permittee shall implement and update, as needed, its Enforcement Response Plan (ERP), a reference document to guide inspection staff in achieving timely and effective compliance from all commercial and industrial site operators.
- ii. **Implementation Level** – The ERP shall contain the following:

- (1) Enforcement Procedures – A description of the Permittee’s enforcement and compliance procedures, from the discovery of problems through the confirmation of implementation of corrective actions. This shall include guidance for appropriate enforcement actions, follow-up inspections, referrals to another agency, appropriate time periods for implementation of corrective actions, and the roles and responsibilities of all persons responsible for implementing the ERP.
- (2) Enforcement Tools and Field Scenarios – A discussion of the various, escalating enforcement tools for different field scenarios, including, but not limited to, potential discharges (e.g., housekeeping issues, inadequate waste or materials management, evidence of actual discharges, lack of emergency response plans, lack of BMPs, inadequate BMPs, and inappropriate BMPs); actual discharges (observed or documented flow of unauthorized, illicit, or pollutant-containing stormwater discharges to the MS4); non-compliance with previous enforcement actions; and sites with a history of potential and/or actual discharges.
- (3) Timely Correction of Potential and Actual Discharges – A description of the Permittee’s procedures for assigning due dates for corrective actions. Each Permittee shall require timely correction of all potential and actual discharges. Permittees shall require actual discharges to cease immediately. Corrective actions shall be implemented before the next rain event, and no longer than 10 business days after the potential or actual non-stormwater discharges are discovered. Corrective actions can be temporary. ~~More, in which case more~~ time can be allowed for permanent corrective actions. If more than 10 business days are required for compliance, the rationale, including the expected time frame for compliance, shall be recorded in the electronic database or equivalent tabular system.
- (4) Referral and Coordination with Other Agencies – Each Permittee shall enforce its stormwater ordinances to achieve compliance at sites with observed potential and actual discharges, including compliance required by Discharge Prohibition A.1. For cases in which the Permittee’s enforcement tools are inadequate to remedy the noncompliance, the Permittee shall refer the case to the Water Board, district attorney, or other relevant agencies for additional enforcement. Permittees may also contact and coordinate with Water Board staff for joint inspections and parallel enforcement of large, complex, or noncompliant sites.



**C.4.d. Inspections**

i. **Task Description** – Each Permittee shall conduct inspections according to the Inspection Plan in Provision C.4.b.ii.(2) and the ERP in Provision C.4.c.ii. to enforce its ordinance to prevent stormwater pollution.

ii. **Implementation Level**

- (1) Inspections – Inspections shall be conducted to include at least the following activities:
- (a) Observations for appropriate BMPs to prevent stormwater runoff pollution, or unauthorized or illicit discharge;
  - (b) Observations for evidence of unauthorized or illicit discharges, illicit connections, and potential discharge of pollutants to stormwater by the Discharger or contractors, such as and including mobile businesses, that operate on the facility;
  - (c) Observations for noncompliance with Permittee ordinances and other local requirements; and
  - (d) Verification of coverage under the Industrial General Permit, if applicable.
- (2) Record Keeping – Permittees shall maintain adequate records to demonstrate compliance and appropriate follow-up enforcement responses for facilities inspected. Permittees shall maintain an electronic database or equivalent tabular system that contains the following information regarding industrial and commercial site inspections:
- (a) Name of facility/site inspected
  - (b) Inspection date
  - (c) Industrial General Permit coverage required (Yes or No)
  - (d) Compliance status
  - (e) Specific problems, including inadequate and ineffective BMPs
  - (f) Type of enforcement (if applicable)
  - (g) Problem resolution date
  - (h) Additional comments

The electronic database or equivalent tabular system and any supporting documentation shall be made readily available to Water Board staff or its representative during inspections, audits, or upon request.

- (3) Data Evaluation – Permittees shall evaluate the frequency of potential and actual non-stormwater discharges by business category. Note trends and, as needed, implement focused inspections or education in subsequent years to address trends.

### iii. Reporting

- (1) Permittees shall include the following information in each Annual Report:
  - (a) Number of inspections conducted;
  - ~~(b) Number of sites with enforcement actions at each enforcement level;~~
  - ~~(c) Number of sites with enforcement actions unresolved after 10 days or a reasonable time (and no compliance schedule);~~
  - ~~(d) The highest level of enforcement implemented, including a list with the name and address of sites in the highest level of enforcement;~~
  - ~~(e)~~(b) Number of each type of enforcement action, as listed in each Permittee's ERP, issued;
  - ~~(f)~~(c) Number of enforcement actions, ~~including or~~ discrete number of potential and actual discharges fully resolved within 10 working days or otherwise deemed resolved in a longer, but still timely manner; and
  - ~~(g)~~(d) Frequency of potential and actual non-stormwater discharges by business category.
- (2) Permittees shall make the list of facilities required to have coverage under the Industrial General Permit, but that have not filed for coverage, available upon Water Board request. ~~The~~For facilities added to the list or re-inspected during this Permit term, the list shall include the date when the facility was first identified and the date when it was most recently inspected or evaluated.

#### C.4.e. Staff Training

- i. **Task Description** – Permittees shall provide focused training for industrial and commercial site inspectors and illicit discharge detection and elimination inspectors annually. Trainings may be program-wide, region-wide, or Permittee- specific.
- ii. **Implementation Level** – At a minimum, provide inspection training, within the 5-year term of this Permit, in the following topics:
  - (1) Urban runoff pollution prevention;
  - (2) Inspection procedures;

- (3) Business Inspection Plan;
- (4) Enforcement Response Plan;
- (5) Illicit Discharge Detection and Elimination; and
- (6) Appropriate BMPs to be used at different industrial and commercial facilities.

**iii. Reporting** – The Permittees shall include the following information in each Annual Report:

- (1) Dates of training;
- (2) Training topics covered;
- ~~(3) Total number of industrial and commercial site inspectors performing inspections for the Permittee;~~
- ~~(4) Total number of illicit discharge detection and elimination inspectors performing inspections for the Permittee;~~
- ~~(5)~~(3) Total number and percentage of industrial and commercial site inspectors attending training; and
- ~~(6)~~(4) Total number and percentage of illicit discharge detection and elimination inspectors attending training.

## C.5. Illicit Discharge Detection and Elimination

The purpose of this provision is to implement the illicit discharge prohibition and to detect and control illicit discharges not otherwise controlled under provisions Provisions C.4. – Industrial and Commercial Site Controls, C.6. – Construction Site Controls, and C.17 – Discharges Associated with Unsheltered Homeless Populations. Permittees shall implement an illicit discharge program that includes active surveillance and centralized complaint collection and follow-up to detect and eliminate illicit discharges into the MS4. Permittees shall maintain a complaint tracking and follow-up data system as their primary accountability reporting for this provision.

### C.5.a. Legal Authority

- i. **Task Description** – Permittees shall have the legal authority to prohibit and control illicit discharges and implement progressively stricter enforcement to achieve expedient compliance.
- ii. **Implementation Level**
  - (1) Permittees shall have adequate legal authority to address illicit discharges to the MS4, including, but not limited to, the following:
    - (a) Discharges of sewage, trash, or other potentially polluting or hazardous materials;
    - (b) Discharges of wash water resulting from the cleaning of exterior surfaces, pavement, equipment, and other facilities of any commercial business, or any other public or private facility, including discharges from mobile businesses;
    - (c) Discharges of runoff from material storage areas, including those containing chemicals, fuels, or other potentially polluting or hazardous materials;
    - (d) Discharges of pool or fountain water containing chlorine, biocides, or other chemicals; discharges of pool or fountain filter backwash water;
    - (e) Discharges of sediment, pet waste, vegetation clippings, or other landscape or construction-related wastes;
    - (f) Discharges of food-related wastes (e.g., grease, fish processing wastes, restaurant kitchen mat and trash bin wash water); and
  - (2) Permittees shall have adequate legal authority to prohibit, discover through inspection and surveillance, and eliminate illicit connections and discharges to the MS4.

- (3) Permittees shall have adequate legal authority to control the discharge of spills, dumping, or disposal of materials other than ~~storm water~~stormwater to the MS4.
- (4) Permittees shall have adequate legal authority to hold mobile businesses, and the businesses, property managers, property owners, and other associated entities that hire a mobile business, responsible for stormwater pollution discharged by the mobile business operating at their location.

**C.5.b. Enforcement Response Plan (ERP)**

- i. **Task Description** – Each Permittee shall implement and update, as needed, its ERP – a reference document for inspection staff to take consistent actions to achieve timely and effective abatement of illicit discharges and compliance from responsible parties.
- ii. **Implementation Level** – The ERP shall contain the following:
  - (1) **Enforcement Procedures** – A description of the Permittee’s procedures from the discovery of problems through the confirmation of implementation of corrective actions. This shall include guidance for appropriate enforcement actions, follow-up inspections, referrals to another agency, appropriate time periods for implementation of corrective actions, and the roles and responsibilities of all persons responsible for implementing the ERP.
  - (2) **Enforcement Tools and Field Scenarios** – A discussion of the various, escalating enforcement tools for different field scenarios, including, but not limited to, potential discharges (e.g., housekeeping issues, inadequate waste or materials management, evidence of actual discharges, lack of emergency response plans, lack of BMPs, inadequate BMPs, and inappropriate BMPs); actual discharges (observed or documented flow of unauthorized, illicit, or pollutant-containing stormwater discharges to the MS4); non-compliance with previous enforcement actions; and sites with a history of potential and/or actual discharges.
  - (3) **Timely Correction of Potential and Actual Discharges** – A description of the Permittee’s procedures for assigning due dates for corrective actions. Each Permittee shall require timely correction of all potential and/or actual discharges. Permittees shall require actual discharges to cease immediately. Corrective actions shall be implemented before the next rain event, and no longer than 10 business days after the potential or actual discharges are discovered. Corrective actions can be temporary. ~~More, in~~ which case more time can be allowed for permanent corrective actions. If more than 10 business days are required for compliance, the rationale,

including the expected time frame for compliance, shall be recorded in the electronic database or equivalent tabular system.

- (4) Referral and Coordination with Other Agencies – Each Permittee shall enforce its stormwater ordinances to achieve compliance at sites with observed potential and actual discharges, including compliance required by Discharge Prohibition A.1. For cases in which the Permittee’s enforcement tools are inadequate to remedy the noncompliance, the Permittee shall refer the case to the Water Board, district attorney, or other relevant agencies for additional enforcement. Permittees may also contact and coordinate with Water Board staff for joint inspections and parallel enforcement of large, complex, or noncompliant sites.

**C.5.c. Spill, Dumping, and Complaint Response Program**

- i. **Task Description** – Each Permittee shall implement a program to respond to spills, dumping, and complaints.

**ii. Implementation Level**

- (1) Each Permittee shall have a central contact point for the public and Permittee’s staff to report spills, dumping, and complaints. At a minimum, this central contact point shall include a phone number. Permittees shall also include, as feasible, a user-friendly web address for reporting for spills and dumping or a link to a web-based reporting application.
- (2) Each Permittee shall publicize the phone number on its website, and, if used, a web reporting address or link to a web-based reporting application, to the Permittee’s staff and the public. The contact information on the Permittee’s website shall be kept up-to-date, and updated at least annually when changed. This central contact point shall be readily searchable and accessible on the Permittee’s website.
- (3) Each Permittee shall require the municipal staff conducting routine maintenance and inspection activities to report illicit discharges found during their activities to the central contact point so that illicit discharge staff can investigate and track.
- (4) Each Permittee shall maintain and update, as needed, a spill, dumping, and complaint response flow chart and/or phone tree for the staff responsible for the spill and dumping response program. At a minimum, this flow chart and/or phone tree shall identify staff or positions responsible for receiving the complaints and investigating and abating the complaints.
- (5) Each Permittee shall also maintain and update, as needed, a spill, dumping, and complaint response flow chart and phone tree or contact list

for internal use that shows the various responsible agencies and their contacts, who would be involved in illicit discharge incident response that goes beyond the Permittee's immediate capabilities.

- (6) Each Permittee shall conduct reactive inspections in response to spill, dumping, and complaint reports and shall also conduct follow-up inspections, as needed, to ensure that corrective measures have been effectively implemented to achieve and maintain compliance. The start of the investigation of a spill or discharge shall not exceed 3 business days from the date the complaint was received by the Permittee. If additional time is required, the Permittee shall document the rationale for the delay.

**iii. Reporting** – Permittees shall provide the following information in the 2024 and 2026 Annual Reports.

- (1) The spill, dumping, and complaint reporting phone number and, if used, a web reporting address or a link to a web-based reporting application;
- (2) A screen shot of the Permittee's website showing the central contact point; and
- (3) A discussion of how the central contact point – spill and dumping reporting phone number and, if used, the web address or web-based reporting application – is being publicized to Permittees' staff and the public.
- (4) Copies of the phone trees and contact lists required in Provision C.5.c.ii (4) and (5) shall be provided as attachments to, or links in, the 2026 Annual Report. The lists may be redacted to remove references to private cell phone numbers. The unredacted phone trees and contact lists shall be made available to Water Board staff or representatives during audits or inspections, and upon request

**C.5.d. Tracking and Case Follow-up**

- i. Task Description** – All incidents or discharges reported to the spill, dumping, and complaints central contact point, that might discharge into the MS4, shall be logged to track follow-up and response through problem resolution. The data collected shall be sufficient to demonstrate escalating responses for repeated problems and inter/intra-agency coordination, where appropriate. It is not necessary to track and report data according to this provision if they are tracked and reported according to State Water Resources Control Board Order No. 2006-0003-DWQ, Statewide General Waste Discharge Requirements for Sanitary Sewer Systems.
- ii. Implementation Level** – Maintain records for tracking and follow-up to water quality spills, dumping, and complaints that might discharge into the MS4 in an electronic database or equivalent tabular system.

The water quality spills, dumping, and complaint tracking system shall contain the following information:

- (1) Complaint information:
  - (a) Date that complaint is received by the Permittee;
  - (b) Type of pollutant; and
  - (c) Problem Status (potential or actual discharge).
- (2) Investigation information:
  - (a) Date and time investigation of spill or discharge started;
  - (b) Date and time response to illegal dumping report or complaint started;
  - (c) Agency, department, or other entities responding to the complaint or discharge;
  - (d) Type of pollutant;
  - (e) Identify the entered storm drain or approximate location, and/or receiving water;
  - (f) Date and time abated; and
  - (g) Type of enforcement based on the Permittee's ERP.
- (3) Responses to discharges or dumping associated with unsheltered populations, including those living in homeless encampments or vehicles, shall be coordinated with the Permittee's Provision C.10 Trash Control efforts, Provision C.17 Homeless Encampment Discharge Control efforts, and other agencies and entities addressing homelessness issues, as appropriate.

**iii. Reporting** – Permittees shall provide the following information in the Annual Report:

- (1) Number of discharges reported;
- (2) Number of discharges reaching storm drains and/or receiving waters; **and**
- (3) Number of discharges resolved in a timely manner; **and**
- ~~(4) Copies of the phone trees and contact lists required in Provision C.5.c.ii (4) and (5) shall be provided as attachments to, or links in, the 2026 Annual Report. The lists may be redacted to remove references to private cell phone numbers. The unredacted phone trees and contact lists shall be made available to Water Board staff or representatives during audits or inspections, and upon request.~~



~~(5)~~(4) The electronic database or equivalent tabular system and supporting documentation shall be made available to Water Board staff or representatives during audits or inspections, and upon request.

**C.5.e. Control of Mobile Sources**

- i. Task Description** – Permittees shall have oversight and control of pollutants associated with mobile businesses.
- ii. Implementation Level** – Each Permittee shall implement a program to reduce the discharge of pollutants from mobile businesses.

(1) The program shall include the following:

- (a) Implementation of minimum standards and BMPs for each of the various types of mobile businesses, including, but not limited to, automobile washing, vehicle fueling, power washing, steam cleaning, graffiti removal, and carpet cleaning~~;~~
- (b) Implementation of an enforcement strategy that specifically addresses mobile businesses~~;~~
- (c) Updating and maintaining a mobile business inventory at least annually~~;~~
- (d) Implementation of an outreach and education strategy to mobile businesses operating within the Permittee's jurisdiction~~;~~ and
- (e) Inspection of mobile businesses.

(2) Permittees may cooperate countywide and/or region-wide with the implementation of their programs for mobile businesses, including sharing of mobile business information, BMP requirements, enforcement action information, and educational materials.

**iii. Reporting**

(1) In the 2026 Annual Report, each Permittee shall provide the following:

- (a) Minimum standards and BMPs for each of the various types of mobile businesses;
- (b) Enforcement strategy;
- ~~(c) Number of inspections conducted of mobile businesses and/or job sites through the 2025-2026 reporting year;~~
- ~~(d) Number and type of enforcement actions taken against mobile businesses through the 2025-2026 reporting year;~~

~~(e)~~(c) A list and summary of the countywide or regional activities conducted, including BMP requirements, enforcement action information, and educational materials (Permittees' annual reports may refer to the countywide or regional reports for this information);

~~(f)~~(d) A list and summary of specific outreach events and education conducted for each type of mobile business operating within the Permittee's jurisdiction; and

~~(g)~~(e) A copy of the most recent version of the mobile business inventory.

(2) In each Annual Report, each Permittee shall include at least the following:

- (a) The total number of inspections conducted of mobile businesses;
- (b) The number of each type of mobile business inspected; and
- (c) A summary of the enforcement actions taken against mobile businesses during the reporting year.

#### C.5.f. Municipal Separate Storm Sewer System (MS4) Map

i. **Task Description** – Each Permittee shall make the current map(s) of its MS4 available to the public ~~upon request~~.

Permittees shall identify information missing from the current MS4 maps and develop a plan and schedule to compile additional storm sewer system information, considering the potential to identify component locations, size or specifications, materials of construction, and condition. This information will be used to update Permittee maps and databases.

#### ii. Implementation Level

(1) Current MS4 Maps – Permittees shall make current maps of the MS4 publicly available, either electronically or in hard copy. Public availability shall be made through a single point of contact that is convenient for the public, such as a staffed counter or web-accessible maps. The MS4 map availability shall be publicized through Permittee directories and web pages.

(2) Updates to MS4 Maps – During the current Permit term, each Permittee shall complete the following:

(a) Determine information missing from the Permittee's current MS4 map(s), which may include Oakland Museum watershed maps, existing MS4 maps or drawings in the Permittee files, or other storm sewer system information databases.

(b) Identify and make available upon Water Board request maps of the storm sewer system and other stormwater controls installed after

publication of the Oakland Museum watershed maps within the Permittee's jurisdictional area.

- (c) Develop a plan and schedule for updating the Permittee's storm sewer system information. Permittees or countywide ~~storm water~~stormwater programs may work together or with the Oakland Museum of California to develop a plan and schedule for updating existing information, maps, drawings, and databases. ~~These updates~~The plan will ~~include~~consider the ~~identification of all~~potential to identify storm sewer system component locations, size or specifications, materials of construction, and condition.

**iii. Reporting**

- (1) In the 2024 Annual Report, Permittees shall discuss how they make MS4 maps available to the public and how they publicize the availability of the MS4 maps.
- (2) Submit a plan and schedule with the 2026 Annual Report to update existing storm sewer system information as described above.

## C.6. Construction Site Control

Each Permittee shall implement a construction site inspection and control program at all construction sites, with follow-up and enforcement consistent with each Permittee's respective Enforcement Response Plan, to prevent construction site discharges of pollutants into the storm drains. Inspections shall confirm implementation of appropriate and effective erosion and other construction pollutant controls by construction site operators/developers. Each Permittee shall in its reporting demonstrate the effectiveness of its inspections and enforcement activities to prevent polluted construction site discharges into storm drains.

### C.6.a. Legal Authority for Effective Site Management

i. **Task Description** – Permittees shall have the authority to require effective stormwater pollutant controls to prevent discharge of pollutants into the storm drains, and to implement progressive enforcement to achieve expedient compliance and cleanup at all public and private construction sites.

#### ii. Implementation Level

- (1) Permittees shall have the legal authority to require, at all construction sites year-round, effective erosion control, run-on and runoff control, sediment control, active treatment systems (as appropriate), good site management, and non-~~storm water~~stormwater management through all phases of construction (including, but not limited to, grubbing, clearing, site grading, filling, excavation, leveling, building, landscaping, and finishing of lots) until the site is fully stabilized by landscaping or the installation of permanent erosion control measures.
- (2) Permittees shall have the legal authority to oversee, inspect, and require expedient compliance and cleanup at all construction sites year-round.

### C.6.b. Enforcement Response Plan (ERP)

i. **Task Description** – Each Permittee shall implement and update, as needed, its ERP – a reference document for inspection staff to take consistent actions to achieve timely and effective compliance at all public and private construction sites.

#### ii. Implementation Level – The ERP shall contain the following:

- (1) **Enforcement Procedures** – A description of the Permittee's procedures from discovery of problems through confirmation of implementation of corrective actions. This shall include guidance for appropriate enforcement actions, follow-up inspections, referrals to another agency, appropriate time periods for implementation of corrective actions, and the roles and responsibilities of all persons responsible for implementing the ERP.

- (2) Enforcement Tools and Field Scenarios – A discussion of the various, escalating enforcement tools for different field scenarios, including, but not limited to, potential discharges (e.g., housekeeping issues, inadequate waste or materials management, evidence of actual discharges, lack of emergency response plans, lack of BMPs, inadequate BMPs, and inappropriate BMPs); actual discharges (observed or documented flow of unauthorized, illicit, or pollutant-containing stormwater discharges to the MS4); non-compliance with previous enforcement actions; and sites with a history of potential and/or actual discharges.
- (3) Timely Correction of Potential and Actual Discharges – A description of the Permittee's procedures for assigning due dates for corrective actions. Each Permittee shall require timely correction of all potential and actual discharges. Permittees shall require actual discharges to cease immediately. Corrective actions shall be implemented before the next rain event, and no longer than 10 business days after the potential or actual discharges are discovered. Corrective actions can be temporary. More, in which case more time can be allowed for permanent corrective actions. If more than 10 business days are required for compliance, the rationale, including the expected time frame for compliance, shall be recorded in the electronic database or equivalent tabular system.
- (4) Referral and Coordination with Other Agencies – Each Permittee shall enforce its stormwater ordinances to achieve compliance at sites with observed potential and actual discharges, including compliance required by Discharge Prohibition A.1. For cases in which the Permittee's enforcement tools are inadequate to remedy the noncompliance, the Permittee shall refer the case to the Water Board, district attorney, or other relevant agencies for additional enforcement. Permittees may also contact and coordinate with Water Board staff for joint inspections and parallel enforcement of large, complex, or noncompliant sites.

#### **C.6.c. Best Management Practices Categories**

- i. **Task Description** – Permittees shall require all construction sites to have site-specific, and seasonally- and phase-appropriate, effective BMPS in the following six categories:

- (1) Erosion Control
- (2) Run-on and Runoff Control
- (3) Sediment Control, including entrance/exit and perimeter controls
- (4) Active Treatment Systems, as necessary
- (5) Good Site Management, including materials and waste management

(6) Non-Stormwater Management

**ii. Implementation Level**

The BMPs targeting specific construction site pollutants within the six categories listed in Provision C.6.c.i. shall be site-specific. Permittees may select site-specific BMPs, or BMP combinations, from resources such as:

- (1) CASQA BMP Handbook, Construction, December 2019
- (2) Caltrans Stormwater Quality Handbooks, Construction Site Best Management Practices Manual, May 2017, and addenda
- (3) Other BMPs shown to provide equivalent or better protection

**C.6.d. Plan Approval Process**

**i. Task Description** – Permittees shall review erosion control plans for consistency with local requirements and the appropriateness and adequacy of proposed BMPs for each site before issuing grading permits for projects. Permittees shall also verify that sites disturbing one acre or more of land have filed a Notice of Intent for permit coverage under the Construction Stormwater General Permit.

**ii. Implementation Level** – Before approval and issuance of local grading permits, each Permittee shall perform the following:

- (1) Review the site operator's/developer's erosion/pollution control plan or Stormwater Pollution Prevention Plan (SWPPP) to verify compliance with the Permittee's grading ordinance and other local requirements. Also review the site operator's/developer's erosion/pollution control plan or SWPPP to verify that seasonally appropriate and effective BMPs for the six categories listed in Provision C.6.c.i. are planned.<sup>29</sup>
- (2) For sites disturbing one acre or more of soil, verify that the site operators/developers have filed a Notice of Intent for permit coverage under the Construction Stormwater General Permit.
- (3) Provide construction stormwater management educational materials to site operators/developers, as appropriate.

**C.6.e. Inspections**

**i. Task Description** – Permittees shall conduct inspections to determine compliance with local ordinances (grading and stormwater) and determine the effectiveness of the BMPs in the six categories listed in Provision C.6.c.i. in preventing the discharge of construction pollutants into the storm drain.

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<sup>29</sup> If SWPPPs do not include erosion control plan drawings for use by construction workers and managers at the site, erosion, sediment, and site control plans and drawings must also be submitted and reviewed.

Permittees shall require timely corrections of all actual and potential discharges observed.

**ii. Implementation Level**

**(1) Wet Season Notification**

By September 1 of each year, each Permittee shall remind all site developers and/or owners disturbing one acre or more of soil, hillside projects, and high priority sites to prepare for the upcoming wet season.

**(2) Frequency of Inspections**

Inspections shall be conducted monthly during the wet season<sup>30</sup> at the following sites:

- (a) All construction sites disturbing one or more acre of land;
- (b) All hillside projects (based on the Permittee's map of hillside development areas or criteria, or if the Permittee does not have a map of hillside development areas or criteria, those projects on sites with  $\geq 15$  percent slope) disturbing greater than or equal to 5,000 square feet; and
- (c) High Priority Sites – Other sites determined by the Permittee or the Water Board as significant threats to water quality. In evaluating threat to water quality, the following factors shall be considered:
  - (i) Soil erosion potential or soil type;
  - (ii) Site slope;
  - (iii) Project size and type;
  - (iv) Sensitivity of receiving waterbodies;
  - (v) Proximity to receiving waterbodies;
  - (vi) Non-stormwater discharges; and
  - (vii) Any other relevant factors as determined by the local agency or the Water Board.

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<sup>30</sup> For the purpose of inspections, the wet season is defined as October through April, but sites need to implement seasonally appropriate BMPs in the six categories listed in C.6.c.i throughout the year.

(3) Contents of Inspections

Inspections shall focus on the adequacy and effectiveness of the site-specific BMPs implemented for the six categories listed in Provision C.6.c.i.

Permittees shall require timely corrections of all actual and potential problems observed. Inspections of construction sites shall include, but are not limited to, the following:

- (a) Assessment of compliance with Permittee's ordinances and permits related to urban runoff, including the implementation and maintenance of the verified erosion/pollution control plan or SWPPP (from Provision C.6.d.ii.(1));
- (b) Assessment of the adequacy and effectiveness of the site-specific BMPs implemented for the six categories listed in Provision C.6.c.i;
- (c) Visual observations for:
  - (i) Actual discharges of sediment and/or construction-related materials into storm drains and/or waterbodies.
  - (ii) Evidence of sediment and/or construction-related materials discharges into storm drains and/or waterbodies.
  - (iii) Illicit connections, and
  - (iv) Potential illicit connections.
- (d) Education on stormwater pollution prevention, as needed.

(4) Tracking

All inspections shall be recorded on a written or electronic inspection form. Inspectors shall follow the ERP for all actual and potential discharges discovered during the inspection.

Permittees shall track in an electronic database or tabular format all inspections. This electronic database or tabular format shall be made readily available during inspections and audits by the Water Board staff or its representatives. This electronic database or tabular format shall record the following information for each site inspection:

- (a) Site name;
- (b) Inspection date;
- (c) Weather during inspection;
- (d) The department, agency, or other entity performing the inspection.



- (e) Enforcement Response Level (Use ERP);
- (f) Problem(s) observed using Illicit Discharge and the six BMP categories listed in Provision C.6.c.i;
- (g) Resolution of Problems noted using the following three standardized categories: Problems Fixed, Need More Time, and Escalate Enforcement; and
- (h) Comments, which shall include all rationale for longer compliance times, all escalation in enforcement discussions, and any other information that may be relevant to that site inspection.

### iii. Reporting

- (1) Each Permittee shall summarize the following information in the Annual Report:
  - (a) Total number of construction sites requiring inspections during at least part of the Permit year~~;~~;
  - (b) Total number of active hillside sites disturbing less than one acre of soil requiring inspection;
  - (c) Total number of active sites disturbing one acre or more of soil;
  - (d) Total number of active sites disturbing less than one acre of soil identified as High Priority sites in Provision C.6.e.ii.(2)(c) requiring inspections;
  - (e) Total number of inspections conducted;
  - (f) Number of enforcement actions taken by type, organized by the categories in each Permittee's ERP;
  - (g) Number of illicit discharges, actual and suspected/potential, of sediment or other construction-related materials; and
  - (h) Number of enforcement actions or discrete number of potential and actual discharges fully corrected prior to the next rain event, but no longer than 10 business days after the potential and actual discharges<sup>31</sup> are discovered or otherwise considered corrected in a timely, though longer period.
- (2) In the 2027 Annual Report, each Permittee shall evaluate its respective electronic database or tabular format and the summaries produced in Provision C.6.e.ii.(4). This evaluation shall include findings on the

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<sup>31</sup> Permittees who track by discrete potential and actual discharges shall report by discrete discharges. Permittees who track by enforcement actions shall report by enforcement actions

program's strength, comparison to previous years' results, as well as areas that need more focused education for site owners, operators, and developers the following year.

- (3) An electronic copy of the construction site and inspection database(s) shall be made available to the Water Board during inspections, audits, or upon request.

**C.6.f. Staff Training**

- i. **Task Description** – Permittees shall provide training or access to training for all staff conducting construction stormwater inspections.
- ii. **Implementation Level** – Permittees shall provide training at least every other year to staff responsible for conducting construction site stormwater inspections. Training topics shall include information on correct uses of specific BMPs, proper installation and maintenance of BMPs, Permit requirements, local requirements, and the ERP.
- iii. **Reporting** – Permittees shall include in each Annual Report the following information:
  - (1) Dates of training;
  - (2) Training topics covered;
  - (3) Total number of inspectors, including both municipal and non-municipal inspectors~~staff~~; and
  - (4) The number of ~~municipal and non-municipal~~ inspectors attending each training, including both municipal and non-municipal staff.

If there was no training in that year, so state.

## C.7. Public Information and Outreach

Each Permittee shall increase the awareness of the community, including diverse socioeconomic groups, government elected officials and staff, and ethnic communities, regarding the impacts of stormwater pollution on receiving waters and potential solutions to mitigate these impacts; positively influence the public's waste disposal and runoff pollution generation behavior; and involve various citizens in mitigating the impacts of stormwater pollution. Outreach required in other provisions may be conducted under Provision C.7.

### C.7.a. Outreach Campaigns

- i. **Task Description** – Permittees shall continue to participate in or contribute to outreach campaigns, with the goal of significantly increasing overall awareness of stormwater runoff pollution prevention messages and behavior changes in target audiences.
- ii. **Implementation Level**
  - (1) Target a broad audience with a minimum of one outreach campaign with specific stormwater runoff pollution prevention messages. The outreach campaign(s) should utilize various electronic and print media, and paid and free media, including social media, as practicable, to best reach different demographics. The outreach campaign(s) may be coordinated regionally or countywide.
  - (2) Permittees shall conduct timely evaluations to measure the effectiveness of the outreach campaigns. Effectiveness assessment/evaluation may be done regionally or countywide.

### C.7.b. Stormwater Pollution Prevention Education

- i. **Task Description** – Permittees shall continue to maintain a point of contact to provide the public with stormwater pollution prevention information.
- ii. **Implementation Level**
  - (1) Each Permittee shall maintain and publicize one point of contact for information on stormwater issues, watershed characteristics, and stormwater pollution prevention alternatives. This point of contact can be maintained individually or collectively, and Permittees may combine this function with the spill and dumping complaint central contact point required in Provision C.5 – Illicit Discharge Detection and Elimination.
  - (2) Each Permittee shall place and maintain information on stormwater issues, watershed characteristics, and stormwater pollution prevention alternatives on its website. In lieu of posting the detailed informational pages directly on their individual websites, Permittees may choose to

provide links from their websites to the countywide program’s websites and/or websites for other collaborative efforts between Permittees. Each Permittee shall publicize its website.

**C.7.c. Public Outreach and Citizen Involvement Events**

- i. **Task Description** – Public outreach shall include a variety of pollution prevention messages such as for car washing; proper use, storage, and disposal of vehicle waste fluids; household waste materials disposal; pesticide use; and trash. Public outreach events may include venues such as fairs, shows, workshops, and household waste collection events. Citizen involvement events may include venues such as creek/shore clean-ups, adopt-an-inlet/creek/beach programs, volunteer monitoring, storm drain inlet marking, riparian restoration activities, and community grants.
- ii. **Implementation Level** – Each Permittee shall annually participate and/or host a mix of public outreach and citizen involvement events according to its population, as shown in the table below:

**Table 7.1 Public Outreach and Citizen Involvement Events<sup>32</sup>**

| Permittee Population            | Number of Events |
|---------------------------------|------------------|
| < 10,000                        | 2                |
| 10,001– 40,000                  | 4                |
| 40,001 – 100,000                | 5                |
| 100,001 – 175,000               | 7                |
| 175,001 – 250,000               | 8                |
| > 250,000                       | 10               |
| Non-population-based Permittees | 6                |

**C.7.d. Watershed Stewardship Collaboration**

- i. **Task Description** – Permittees shall individually or collectively collaborate with other organizations to encourage and support community watershed stewardship activities. This may include collaborating with community groups such as local watershed forums and “friends of creek” groups; encouraging and supporting the development of grassroots watershed groups; or engaging existing groups, such as neighborhood associations, in watershed stewardship

<sup>32</sup> Permittees may claim individual credits for events in which their Countywide Program participates, that the County Program supports or hosts, or other collaborative efforts, provided such events are publicized in the Permittee’s jurisdiction.

activities. This may also include collaboration with other organizations that benefit the health of the watershed, such as ReScape California, or collaboration to introduce community watershed stewardship activities into organizations focused on other environmental or sustainability efforts.

- ii. **Implementation Level** – Annually demonstrate effort.

**C.7.e. School-Age Children Outreach**

- i. **Task Description** – Permittees shall individually or collectively implement outreach activities designed to increase awareness of stormwater and/or watershed message(s) in school-aged children (K through 12).
- ii. **Implementation Level** – Implement annually and demonstrate effectiveness of efforts through assessment.

**C.7.f. Outreach to Municipal Officials**

- i. **Task Description** – Permittees shall conduct outreach to municipal officials. One alternative means of accomplishing this is through the use of the Nonpoint Education for Municipal Officials program (NEMO) to significantly increase overall awareness of stormwater and/or watershed message(s) among regional municipal officials.
- ii. **Implementation Level** – At least once per permit cycle, or more often.

**C.7.g. Tracking and Reporting**

- i. **Task Description** – Permittees shall electronically track outreach efforts in a table or spreadsheet. The tracking document should include, at a minimum:
  - (1) Outreach event or campaign type;
  - (2) Dates;
  - (3) Target Audience;
  - (4) Number of participants and number of participants compared to previous events, if applicable;
  - (5) Location(s) or website address, as applicable;
  - (6) Contact information for venues and coordinators, if applicable;
  - (7) Materials and activities, as applicable;
  - (8) Level of effort;
  - (9) Evaluation of effectiveness;
  - (10) Lessons learned; and

(11)Planned changes in approach or implementation, if any.

ii. **Implementation Level** – The tracking document shall be made available to the Water Board staff during inspections, audits, or upon request.

iii. **Reporting**

- (1) In each Annual Report, each Permittee (or the Countywide Program, if the tracking was done countywide or regionally) shall submit a table listing the types of outreach programs implemented during that Permit year along with a brief description. The table should be a cumulative table showing the number, if applicable, of each type of outreach campaigns or events occurring during each Permit year.
- (2) In the 2023 Annual Report, each Permittee shall list the Permittee's point of contact and the URL for its stormwater pollution website. The Permittee shall discuss how the point of contact and website are publicized and maintained, and certify that it has a website dedicated to providing and maintaining information on stormwater issues, watershed characteristics, and stormwater pollution prevention approaches. Changes in this information shall be reported in the Annual Report for the year in which the change occurs.
- (3) In the 2027 Annual Report, each Permittee (or the Countywide Program, if the effectiveness assessment/evaluation was done countywide or regionally) shall submit a summary of the effectiveness assessments/evaluations by type of outreach described in Provisions C.7.a through C.7.f. The summary shall include plans for continuing or modifying each outreach type during the next permit term.

## C.8. Water Quality Monitoring

### C.8.a. Compliance Options

All Permittees shall comply with all the monitoring requirements in this Provision. Permittees may choose any of the following mechanisms, or a combination of these mechanisms, to meet the monitoring requirements:

- i. **Regional Collaboration.** Permittees are encouraged to continue contributing to the Regional Monitoring Collaborative (RMC), which coordinates water quality monitoring conducted by all the Permittees. Permittees are encouraged to consider and assign additional duties to the RMC for purposes of increased efficiencies, particularly, but not limited to, reporting duties.
- ii. **Area-wide Stormwater Program.** Permittees may contribute to their countywide or area-wide Stormwater Program, so that the Stormwater Program conducts monitoring on behalf of its members.
- iii. **Third-party Monitoring.** Permittees may use data collected by a third-party organization, such as the Water Board or Department of Pesticide Regulation, to fulfill a monitoring requirement, provided the data are demonstrated to meet the data quality objectives described in Provision C.8.b.

### C.8.b. Monitoring Protocols and Data Quality

Where applicable, monitoring data must be Surface Water Ambient Monitoring Program (SWAMP) comparable. Minimum data quality shall be consistent with the latest version of the SWAMP Quality Assurance Project Plan (QAPrP) for applicable parameters, including data quality objectives, field and laboratory blanks, field duplicates, laboratory spikes, and clean techniques, using the most recent SWAMP Standard Operating Procedures.

### C.8.c. San Francisco Estuary Receiving Water Monitoring

With limited exceptions, urban runoff from the Permittees' jurisdictions ultimately discharges to the San Francisco Estuary. Monitoring of the Estuary is intended to answer questions<sup>33</sup> such as:

- Are chemical concentrations in the Estuary potentially at levels of potential concern and are associated impacts likely?
- What are the concentrations and masses of contaminants in the Estuary and its segments?

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<sup>33</sup> [https://www.sfei.org/sites/default/files/biblio\\_files/MYP%202021%20FINAL.pdf](https://www.sfei.org/sites/default/files/biblio_files/MYP%202021%20FINAL.pdf) (SF Bay Regional Monitoring Program (RMP) Multi-Year Plan, January 2021). While the stated objectives may change over time, the intent of this provision is for Permittees to continue contributing financially and as stakeholders in such a program as the RMP, which monitors the quality of San Francisco Bay.

- What are the sources, pathways, loadings, and processes leading to contaminant related impacts in the Estuary?
- Have the concentrations, masses, and associated impacts of contaminants in the Estuary increased or decreased?
- What are the projected concentrations, masses, and associated impacts of contaminants in the Estuary?

The Permittees shall participate in implementing an Estuary receiving water monitoring program, at a minimum equivalent to the San Francisco Estuary Regional Monitoring Program by contributing their fair share financially on an annual basis.

#### C.8.d. Low Impact Development (LID) Monitoring

LID Monitoring is intended to measure compliance and effectiveness of LID controls. It will improve the understanding of the benefit of LID implementation, in particular, green stormwater infrastructure, on pollutant loading and hydrology of receiving waters within Permittees' jurisdictions, at different space and time scales, and inform the design, construction, operation and maintenance (O&M) and future implementation of LID. LID Monitoring may also be used to calibrate and validate models that estimate pollutant removal effectiveness and inform sizing of LID facilities (e.g., countywide C.3 technical guidance documents, reasonable assurance analysis models, and other sizing and assessment models).

LID Monitoring is intended to answer both of the following two management questions:

- What are the pollutant removal and hydrologic benefits, such as addressing impacts associated with hydromodification, of different types of LID facilities, systems, components, and design variations, at different spatial scales (e.g., single control vs watershed or catchment scale), and how do they change over time?
- What are the minimum levels of O&M necessary to avoid deteriorated LID facilities, systems, and components that reduce pollutant removal and hydrologic performance?

##### i. LID Monitoring Plans

- (1) The Permittees shall, at the regional or countywide level, develop LID Monitoring Plans to implement the requirements in Provision C.8.d.iii-iv. The LID Monitoring Plans shall, at a minimum:



- (a) Explain how the study(s) will address ~~the two~~both management questions, and propose monitoring questions necessary ~~to~~that will address ~~the~~both management questions.
- (b) Describe the LID facility(s) or system(s) and study area(s), including the characteristics, land use and management actions within the tributary drainage area to the LID facility(s) or system(s) that will be monitored.
- (c) List the monitoring stations, monitoring parameters, and associated measurement, sample and analytical methods that will be utilized.
- ~~(d)~~ Establish a monitoring schedule, including number and type (wet weather and dry weather) of monitoring events for each site, that may result in a greater number of total and/or annual monitoring events than the minimum required in Table 8.d.2.
- ~~(e)(d)~~ This shall include a power analysis to ensure the number and frequency of sample events are sufficient to produce statistically valid monitoring results that will reliably answer the management questions, using a confidence level of 95 percent and a power level of 80 percent, and including a discussion of the allocation of samples between and within sites.
- ~~(f)(e)~~ Describe the data evaluation methods, such as statistical analyses to test whether differences in concentrations are statistically significant.
- ~~(g)(f)~~ Include study-specific QAPrPs for the studies, Quality Assurance Project Plans (QAPPs), which, at a minimum, are equivalent/comparable to the SWAMP QAPrP.
- ~~(g)~~ Provide annual cost estimates for the implementation of the LID Monitoring Plan, ~~which cost estimates shall be commensurate with those that the Permittees provided in their March 31, 2020, Integrated Monitoring Reports for Creek Status Monitoring and Stressor/source Identification Projects required in the Previous Permit.~~
- ~~(h)~~ Explain how sampling and analytical methodologies will be regionally consistent.
- (2) Permittees shall implement no later than the deadline set forth in Provision C.8.d.v, the approved or conditionally approved LID Monitoring Plans as meeting the requirements herein (including consideration of countywide and regional representativeness and whether the information generated will reliably address the LID Monitoring management questions).

**ii. Regional Collaboration**

To assist with the development and implementation of scientifically-sound LID Monitoring Plans, to facilitate regional consistency with respect to sampling and analytical methodology, and to make recommendations about allocation of samples between and within different sites, the Permittees shall form and convene a Technical Advisory Group (TAG) which includes impartial science advisors (e.g., SFEI, SCCWRP) and Water Board staff, to review and make recommendations regarding the LID Monitoring Plans (including their study design, analysis methods, results, ~~and~~ conclusions) prior to submission of the LID Monitoring Plans to the Executive Officer. In order to effectuate this review, the Permittees shall submit their draft LID Monitoring Plans to the TAG by ~~January~~March 1, 2023. Prior to the Executive Officer's approval or conditional approval of the LID Monitoring Plans, the TAG shall be convened at least biannually. Thereafter, it shall be convened at least annually to provide continued feedback regarding the implementation of Provision C.8.d, including but not limited to study design, sample locations, and analysis methods.

**iii. Methods**

The Permittees shall implement or cause to be implemented the LID effectiveness monitoring methods listed in Table 8.d.1.

**iv. Parameters and Intensities**

(1) Permittees shall conduct LID Monitoring consistent with the parameters and intensities specified in Table 8.d.2.

(2) Monitoring must be conducted according to test procedures in 40 CFR part 136 for analyses of pollutants unless another method is required under 40 CFR chapter 1, subchapter N. For PFAS, if there are no standard methods in 40 CFR part 136, Permittees may use other methods, such as those recommended by U.S. EPA for non-potable water and other environmental media.

(3) In a given water year, if there are not enough storm events for Permittees to sample (i.e., due to weather/climate), Permittees may certify that in their subsequent LID Monitoring Status Report and perform the missed sample events in the subsequent water year.

**v. Implementation Level** – Permittees shall begin implementation of the approved or conditionally approved LID Monitoring Plans by no later than the start of the 2024 Water Year, which is October 1, 2023.

**vi. Reporting** – The Permittees shall submit their LID Monitoring Plans for Executive Officer approval by ~~March~~May 1, 2023.

Table 8.d.1 LID Monitoring Methods

|   | Management Question   | Monitoring Methods  |
|---|---|---|
| 1 | <p>What are the pollutant removal and hydrologic benefits of LID components, facilities and/or systems (and of different combinations of components, facilities and/or systems), including variations in design and how do they change over time?</p> | <p>Monitoring methods to investigate pollutant removal benefits <del>include</del><u>shall consist of</u>:</p> <ul style="list-style-type: none"> <li>• <u>Required</u>: Collection and analysis of the parameters listed in Table 8.d.2 <del>below</del>, in stormwater <del>runoff</del><u>influent</u> and <del>sediment</del><u>effluent (simultaneously) – using automated samplers to collect flow-weighted composite EMCs (time-weighted composites are allowed if they have many subsamples and can be closely approximated as flow-weighted composites)</u> – at the component, facility, site, and/or <del>on</del><u>a</u> watershed scale; <del>or</del><u>and</u></li> <li>• <del>Other</del><u>Optional</u>: <u>sampling of sediment; and other</u> technically sound and accepted monitoring methods designed to investigate pollutant removal benefits.</li> </ul> <p>Monitoring methods to investigate hydrologic performance (flow) <del>include</del><u>shall consist of</u>:</p> <ul style="list-style-type: none"> <li>• <u>Required</u>: Measurement of stormwater runoff quantity and/or flow at the component, facility, site and/or <del>on a</del><u> watershed scale; in both the influent and effluent of the LID BMP(s).</u></li> <li>• <del>Optional</del><u>Optional</u>: Measurement of stream flow to evaluate watershed scale benefits;</li> <li>• <del>Development</del><u>development</u> of runoff hydrographs;</li> <li>• <del>Water</del><u>water</u> balance monitoring;</li> <li>• <del>Collection</del><u>collection</u> and analysis of infiltration rates or water depth at the facility and/or site scale; or</li> <li>• <del>Other</del><u>other</u> technically sound and accepted monitoring methods designed to investigate hydrologic performance.</li> </ul> <p>Monitoring methods to investigate changes over time include:</p> <ul style="list-style-type: none"> <li>• Longitudinal study(s), using the above monitoring methods applied at the component, facility, and/or system scales, over different time scales.</li> </ul> |

|   |   |  |
|---|---|--|
| 2 | What are the minimum levels of O&M necessary to avoid deteriorated LID facilities, systems, and components that reduce pollutant removal and hydrologic <b>benefit</b> performance? | <ul style="list-style-type: none"> <li>Monitoring methods assigned to Management Question 1 above, applied at the component, facility, system, and/or site scale; and</li> <li>Condition assessments at the component, facility, system, and/or site scale.</li> </ul> |
|---|---|--|

**Table 8.d.2 LID Monitoring Intensities and Parameters**

| Countywide Stormwater Program | Anticipated Type(s) of LID Facilities Monitored                                | Total Minimum Number of Water/Sediment Quality Samples Collected Sample Events During Permit Term (Annual Minimum) <sup>34</sup> | Parameters <sup>35,36</sup>  |
|-------------------------------|--|--|--|
| Alameda                       | High flow rate tree well filters and/or a combination of several LID measures. | <del>36</del> <u>(725)</u> (3)   | <b>Required:</b> <ul style="list-style-type: none"> <li>Total Hg<sub>T,i</sub></li> <li>Total PCBs<sub>T,i</sub></li> <li>TSS</li> </ul> |
| Contra Costa                  | Bioretention and/or other  | <del>30</del> <u>(625)</u> (3)   |  |

<sup>34</sup> This column indicates the total minimum number of ~~samples-sample events~~ that must ~~be collected~~ take place during the Permit term, and the minimum number of ~~samples-sample events~~ that must ~~be collected~~ take place during each year of the Permit term. Samples shall be collected via automated sampler as flow-weighted composite event mean concentrations (EMCs); time-weighted composites are allowed if they have many subsamples and can be closely approximated as flow-weighted composites. In order to assess performance, each sample event must include simultaneous sampling of the influent and effluent. The Permittees are encouraged to additionally collect sediment samples (e.g., to analyze for total PCBs and total mercury), however such sediment sample collection shall not count towards the required water quality samples specified in this column. The LID Monitoring Plans shall propose how to address both of the Management Questions, by ~~suggesting~~ specifying the locations of sampling stations, the matrix (surface water, bedded sediment, etc.), the number of samples to be collected at each site each year in the dry season versus in the wet season, and analytical methods.

<sup>35</sup> ~~Each collected~~ Each flow-weighted (or time-weighted) composite EMC sample shall be analyzed for all of the parameters listed in this column. LID Monitoring Plans may include additional parameters not listed in this column. ~~If a parameter is not appropriate for a given sample LID control site due to the characteristics of the tributary drainage area or if the analysis of the excluded parameter would not inform the relevant LID Monitoring Management Questions, then the Permittee may, with proper justification, exclude that parameter in the LID Monitoring Plan. However, the Executive Officer may disapprove the LID Monitoring Plan if the justification for the exclusion is insufficient, if the exclusion of the parameter is inappropriate considering the drainage area, or if the parameter will inform the relevant LID Monitoring Management Questions...~~

<sup>36</sup> Data must be SWAMP comparable.

|             |  |                         |   |
|-------------|--|-------------------------|---|
|             | infiltration-based LID measures.                       |                         | <ul style="list-style-type: none"> <li>• <del>/SSC, PFAS, Other Emerging Contaminants,</del><sup>37</sup>;</li> </ul>   |
| San Mateo   | Regional multi-benefit stormwater capture facility(s). | <del>28 (525 (3))</del> | <ul style="list-style-type: none"> <li>• <del>TPH,</del><sub>i</sub></li> <li>• <del>Total and Dissolved Copper,</del><sub>i</sub></li> <li>• <del>Flow,</del><sub>i</sub></li> <li>• <del>Total Hardness;</del> and</li> <li>• <del>pH.</del></li> </ul> |
| Santa Clara | Bioretention and/or other LID measures.                | <del>36 (725 (3))</del> | <ul style="list-style-type: none"> <li>• <del>pH.</del></li> </ul>  |
| Solano      | Bioretention and/or other LID measures.                | 12 ( <del>21</del> )    | <p><b>Optional:</b></p> <ul style="list-style-type: none"> <li>• <del>Other emerging contaminants,</del><sup>38</sup> and</li> <li>• <del>Other Ancillary Parameters ancillary parameters.</del><sup>39</sup></li> </ul>                                  |

**C.8.e. Trash Monitoring**

Trash Monitoring is intended to: 1) verify whether Permittees’ trash control actions to-date have effectively prevented trash from their jurisdictions from discharging to receiving waters, and 2) evaluate whether discharges of trash from areas of Permittees’ jurisdictions where full trash capture equivalency (full trash capture devices or other actions verified with on-land visual trash assessments, as referenced in Provision C.10.b.iii) has been achieved are causing and/or contributing to adverse trash impacts in receiving waters.

Trash monitoring shall address the following management and monitoring questions:

**Management Questions**

- Have Permittees’ trash management actions effectively prevented trash from their jurisdictions from discharging to receiving waters?

<sup>37</sup> ~~Other Emerging Contaminants may include but are not limited to: microplastics and tire compounds such as 6PPD-quinone.~~

<sup>38</sup> ~~Other emerging contaminants may include but are not limited to: microplastics and tire compounds such as 6PPD-quinone.~~

<sup>39</sup> Other ~~Ancillary Parameters ancillary parameters~~ may include, but are not limited to: zinc (and other metals), temperature, conductivity, polycyclic aromatic hydrocarbons (PAHs), turbidity, pathogens (FIB), total methylmercury, hardness, temperature, pH, total organic carbon (TOC), dissolved organic carbon (DOC), pesticides of concern to water quality (e.g., pyrethroids, fipronil and its degradants, and neonicotinoids such as imidacloprid), major cations (Ca, Mg, Na, K), and major anions (SO<sub>4</sub>, Cl).

- 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

- 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?
- Does the level of trash in the receiving water correlate strongly with the conditions of the tributary drainage area of the MS4?

#### i. Monitoring Components

Permittees shall implement or cause to be implemented the monitoring components as described below, to address each management and monitoring question. Permittees should use comparable assessment methods to ~~allow for~~ facilitate regional consistency.

To ensure comparable data, for each monitoring site, Permittees shall perform steps 1-6 as specified in the Statewide Trash Monitoring Methods Project Trash Monitoring Playbook.<sup>40</sup> These steps should be repeated for all methods specified in Provision C.8.e.ii, to reflect site information that can be collected regardless of method, and can increase comparability between methods. The six steps are as follows:

- (1) Event Preparation
- (2) Gather Standard Equipment
- (3) Set up the Assessment Area
- (4) Record the Site Information and Assessment Area Dimensions
- (5) Record Assessment Area Photographs
- (6) Determine, Document, and Map the Locations of Storm Drain Outfalls, Homeless Encampments, and Illegal Dumping Hotspots Which May Impact the Assessment Area.

#### ii. Monitoring Methods

- (1) Permittees shall collect and analyze the amount of trash discharged from MS4 outfalls that drain tributary drainage areas controlled to the Low trash generation level. ~~In areas where monitoring at the outfall cannot be~~

<sup>40</sup> <https://sites.google.com/sfei.org/trash/> <https://sites.google.com/sfei.org/trash/>

~~performed, Permittees shall sample the receiving water no further than 150 feet downstream of the outfall, during storm events that will (or that Permittees estimate are likely to) result in discharges of trash through the MS4 system.~~

~~If direct (in-stream) assessment of receiving waters is not possible, Permittees may use the alternative methods specified in Provision C.8.e.ii.(c) to sample the shoreline and/or stream bank (on land), starting within 150 feet downstream of the outfall and extending 300 feet from the starting point.~~

- ~~(2) To distinguish between the background levels of trash in the receiving water and trash discharging through the MS4 outfall, Permittees shall concurrently sample the receiving water on further than 150 feet immediately upstream of the outfall.~~

~~If direct (in-stream) assessment of receiving waters is not possible, Permittees may use alternative methods specified in Provision C.8.e.ii.(c) to sample the shoreline and/or stream bank (on land), starting within 150 feet upstream of the outfall and extending 300 feet from the starting point.~~

~~Sampling of MS4 outfalls may include includes the use of netting devices attached to the end of the outfall pipe (that capture trash discharging through the MS4), or other equivalent in-line or end-of-pipe device methods. Data collection at MS4 outfalls shall include collection of data on material type (by volume or tally). end-of-pipe (or in-line) devices and structures, whether existing, modified, or new. The device used to monitor the trash at the end of the MS4 outfall (or in-line, within the MS4) shall not be used itself as the trash control that grants the Low trash generation status to the tributary drainage area; the monitored tributary drainage area may only be controlled to the Low trash generation level by controls upstream of the monitoring device.~~

- ~~(2) Sampling the receiving water Permittees shall implement a pilot program to directly (in-stream) may include the uses sample sections of receiving waters that receive runoff primarily from MS4 outfalls that drain tributary drainage areas controlled to the Low trash booms with a skirt that extends to the bottom of the water column, seines, or other equivalent in-stream devices and methods designed to capture trash throughout the entire depth and width of the water column generation level, during storm events that may will (or that Permittees estimate are likely to) result in discharges of trash through the MS4 system. Permittees should not select in-stream sites that are downstream of direct discharge sites (e.g., homeless encampments and illegal dumping sites).~~

To the extent feasible, in-stream monitoring sites should be co-located with MS4 outfall monitoring sites, as follows: They should be no further than 300 feet downstream or upstream of them; failing that, they should be no further than 300 feet downstream of them, or, any distance upstream of them; failing that, they should be anywhere within the same receiving water; failing that, in-stream monitoring sites do not have to be co-located with MS4 outfall monitoring sites.

Sampling a receiving water directly (in-stream) involves the use of trawls, nets, or other equivalent devices, that are designed to capture as much of the width and depth of the receiving water's cross section (especially the thalweg) as is feasible and safe, during storm events that will (or that Permittees estimate are likely to) result in discharges of trash through the MS4 system. Data collection in-stream shall include collection of data on material type (by volume or tally).

Indirect sampling of the receiving water via methods (on-land), such as shoreline and/or streambank assessments (on-land) may include the use of, are not a satisfactory surrogate or replacement for these direct measurements of trash within receiving waters.

- (3) Permittees may additionally implement shoreline and/or streambank assessment methods (with an appropriate frequency, timing, and assessment length), not to indirectly measure trash loading in MS4 outfalls and receiving waters, but instead to gain a synoptic view of on-land trash conditions adjacent to MS4 outfall and in-stream monitoring sites. Such methods include: the riverine volumetric method, the riverine quantitative tally method,<sup>32</sup> or other equivalent methods, with no fewer than four monitoring events downstream of the outfall per year per site, and no fewer than four monitoring events upstream of the outfall per year per site, the unoccupied aerial system (UAS) method,<sup>41</sup> or other equivalent methods. The riverine qualitative visual assessment method and the unoccupied aerial system (UAS) method may be merited but require requires additional study, refinement, and calibration, and their use is subject to the Executive Officer's approval.

- (4) Use of the riverine volumetric method In order to be able to characterize loading rather than only concentration, Permittees shall be accompanied by directly measure flow at both MS4 outfall sites (flow through the MS4 pipe) and at in-stream receiving water sites (flow through the receiving water). Examples of methods to collect flow data include stream gages, manning's equation, and other methods recommended in Chapter 3.2 of

<sup>41</sup> <https://sites.google.com/sfei.org/trash>



the International Stormwater BMP Database’s October 2009 Urban Stormwater BMP Performance Monitoring document.<sup>42</sup>

~~(4)(5) All methods shall include collection of data on material type. For example, the volume or tally of cigarette butts collected, and the volume of single use plastic bags collected.~~

**iii. Monitoring Sites, Events, Frequency, and Intervals**

(1) Permittees shall conduct MS4 outfall monitoring annually, starting October 1, ~~2022~~2023, at no less than the number of sites and ~~number of~~ events specified in the table below, according to the approved or conditionally approved Trash Monitoring Plan.

| County       | <b>MS4 Outfall Monitoring</b> |   |
|--------------|-------------------------------|---|
|              | Minimum Number of Sites       | Minimum Number of Wet Weather Monitoring Events <del>at, and upstream of, the Outfall</del> |
| Alameda      | 3                             | 3   |
| Contra Costa | 2                             | 3   |
| Solano       | 1                             | 3   |
| San Mateo    | 2                             | 3   |
| Santa Clara  | 3                             | 3   |

~~(2) For each outfall not sampled directly (in the outfall or at the end of the outfall before it discharges into the receiving water, or, directly in the receiving water) as allowed by Provision C.8.e.ii.(3), Permittees shall conduct indirect sampling (on shorelines and/or streambanks) at 12 outfall sites, with four monitoring events downstream of the outfall per year per site, and four monitoring events upstream of the outfall per year per site.~~

~~(3)(2) Permittees shall implement a pilot program for direct in-stream monitoring. Permittees shall conduct this monitoring annually, starting October 1, 2024, at no less than the number of sites and events specified in the table below, according to the approved or conditionally approved Trash Monitoring Plan.~~

<sup>42</sup> <https://bmpdatabase.org/monitoring>

| <u>County</u>       | <u>Direct In-Stream Monitoring</u> |  |
|---------------------|------------------------------------|--|
|                     | <u>Minimum Number of Sites</u>     | <u>Minimum Number of Wet Weather Monitoring Events</u> |
| <u>Alameda</u>      | <u>2</u>                           | <u>3</u>   |
| <u>Contra Costa</u> | <u>1</u>                           | <u>3</u>   |
| <u>Solano</u>       | <u>0</u>                           | <u>0</u>   |
| <u>San Mateo</u>    | <u>1</u>                           | <u>3</u>   |
| <u>Santa Clara</u>  | <u>2</u>                           | <u>3</u>   |

(4)(3) Permittees should monitor storm events that trigger trash discharge and transport trash through the MS4, (e.g., 0.25 inches of rain over 24 hours), and that are preceded by at least 48 hours of limited or no trash discharge from the tributary drainage area. Each wet season, Permittees should sample the first forecasted significant storm event of each wet season, and, at least one storm event that is forecast to be greater than the one-year, one-hour storm event (i.e., full capture design standard).

(4) To the extent possible, Permittees should monitor the same monitoring sites during each year of the Permit term. With cause, justification, and reporting in the Annual Trash Monitoring Progress Report, they can change monitoring sites.

(5) Tributary drainage areas to monitoring sites should be representative with respect to the types of trash controls present across the region.

For example, some monitoring sites receive runoff from areas controlled primarily by one type of full trash capture device (e.g., an inlet-based device) while other monitoring sites receive runoff from areas controlled primarily by another type of full trash capture device (e.g., a HDS unit). And/or, some monitoring sites receive runoff from areas controlled primarily by full trash capture devices while other monitoring sites receive runoff from areas controlled primarily by Other Actions.

(6) Permittees are exempt from outfall and receiving water sampling during dangerous and unsafe weather conditions.

(7) In a given water year, if there are not enough qualifying storm events for Permittees to sample (i.e., due to weather/climate) – or if safety concerns preclude sampling during a qualifying storm event such that Permittees

would not achieve the mandatory minimums set forth in Provisions C.8.e.iii.(1)-(2) – the Permittees may certify that in their subsequent Annual Trash Monitoring Progress Report, and perform the missed sample events in the subsequent water year.

~~(5)~~(8) Permittees shall use the results of Trash Monitoring to inform and investigate their trash management actions. If Trash Monitoring results indicate that discharges are causing or contributing to adverse impacts in receiving waters, Permittees shall implement new or enhanced actions to comply with the trash discharge prohibition and receiving water limitations. Examples of results that could trigger follow up actions are provided in the Fact Sheet.

#### iv. Regional Trash Monitoring Technical Advisory Group

(1) To assist with the development and implementation of scientifically-sound trash monitoring, the Permittees shall form and ~~annually~~ convene a Technical Advisory Group (TAG), which includes impartial science advisors (e.g., SFEI) and Water Board staff, to review and provide input on ongoing trash monitoring, site selection, analysis methods, results, and conclusions.

Prior to the submission of the Trash Monitoring Plan, the TAG shall meet at least biannually. Subsequent to the submission of the Trash Monitoring Plan, the TAG shall meet at least annually.

- ~~(4)~~(2) The Permittees shall solicit input and feedback from the TAG on:
- (a) The spatial representativeness of each site;
  - (b) The adequacy of the methods employed at each site;
  - (c) The recommended minimum intensity, size, and/or recurrence interval for storms that are sampled;
  - (d) The number of sites and monitoring events, as described in the monitoring schedule in the ~~Initial~~ Trash Monitoring Plan;
  - (e) The timing of sampling during storm events. For example, it is likely that Permittees should prioritize sampling during the rising limb of the hydrograph (and towards the beginning of the rising limb, at that), because that is when most of the trash load is mobilized and discharged to MS4 outfalls and receiving waters;
  - (f) Implementation of Provision C.8.e.iii.(8);
  - ~~(d)~~(g) Permitting; and

~~(e)(h)~~ Recommendations for alternative approaches to answering the management and monitoring questions.

**v. Reporting**

~~vi.v.~~ **Initial Trash Monitoring Plan** - Permittees shall collectively submit ~~an Initial~~ Trash Monitoring Plan by ~~September 30, 2022~~ July 31, 2023, subject to Executive Officer approval, that, at a minimum, includes the following information:

- (1) Selected site locations, (address as well as coordinates), including maps and characteristics (e.g., type of outfall, receiving water;
- (2) For each site, describe the land use, trash conditions/levels, trash controls present, and other relevant characteristics (trash generation rates, types of controls present, etc.) of the tributary drainage areas of the MS4, and also delineate the tributary drainage areas of the MS4;
- (3) ~~Description~~ A description of factors that were considered when selecting monitoring sites and events, including spatial and temporal representativeness;
- (4) For each site, a description of the monitoring methods and protocols that will be used;

~~(5)~~ Provide a monitoring schedule, which shall include the timing, (of sampling during storm events), number and type of monitoring events at each site. ~~The monitoring schedule may result in a greater number of total/annual monitoring sites/events — but shall not result in a lesser number;~~

~~(6)~~ (6) Plans for implementation of ~~total/annual monitoring sites/events — than the minimum required in~~ Provision C.8.e.iii. (8) .;

~~This shall include a power analysis to ensure the number, type and frequency~~ A summary of monitoring sites and events are sufficient to produce statistically valid monitoring results that will reliably answer the management and monitoring questions, using a confidence level of 95 percent and a power level of 80 percent.

~~(7)~~ (7) The number of monitoring sites and events shall be in accordance with the monitoring schedule provided in the Initial Trash Monitoring Plan. permitting efforts;

~~(7)~~ (8) Opportunities provided for input and participation by interested parties and scientific experts other than those participating in the TAG; and

~~(8)~~(9) Input, feedback, and recommendations from the TAG on the capacity of the ~~Initial~~ Trash Monitoring Plan to answer the management and monitoring questions.

~~(9) Annual Progress Report~~ – Permittees shall collectively submit Annual Progress Reports, coincident with the Urban Creeks Monitoring Reports, that include the following information at a minimum, for monitoring conducted during the previous water year and monitoring that is or will be conducted in the current and forthcoming water years:

- ~~(a) Narrative description of monitoring conducted, including the number of sites monitored and the number of monitoring events completed;~~
- ~~(b) Description of storms events that were sampled, including the date(s) and times when samples were collected, intensity and duration of the storm event, a description of where along the hydrograph the storm event was sampled, and justification used to determine the storm event was of appropriate size to displace and/or mobilize the transport of trash through the MS4 system;~~
- ~~(c) Narrative description, including maps, of any MS4 outfalls, homeless encampments and illegal dumping sites, located upstream of each Outfall Monitoring sample site;~~
- ~~(d) Description and the results of data analysis methods, including statistical analyses performed on the data collected, to compare the difference in the level of trash measured from the MS4 outfall, to the level of trash measured immediately upstream of the MS4 outfall;~~
- ~~(e) Results and lessons learned from the data collected;~~
- ~~(f) Data quality assurance procedures that were implemented for samples collected;~~
- ~~(g) Monitoring events (including locations and methods) planned for the subsequent fiscal year(s); and~~
- ~~(h) Updates of required Initial Trash Monitoring Plan elements.~~

~~(10) Trash Monitoring Report~~ – Permittees shall collectively submit a comprehensive Trash Monitoring Report coincident with the Integrated Monitoring Report, which at a minimum, includes all items listed above in C.8.e.v.(a), but for all prior water years.

#### C.8.f. Pollutants of Concern Monitoring

Pollutants of Concern (POC) monitoring is intended to assess inputs of select POCs to the Bay from local tributaries and urban runoff, provide information to assess compliance with receiving water limitations, support implementation of

TMDLs and other pollutant control strategies, assess progress toward achieving wasteload allocations for TMDLs and help resolve uncertainties associated with loading estimates and impairments associated with these pollutants.

In particular, monitoring required by this provision must be directed toward addressing the following four priority POC management information needs:

- (1) **Source Identification** - identifying or confirming which sources or watershed source areas provide the greatest opportunities for reductions of POCs in urban stormwater runoff;
- (2) **Contributions to Bay Impairment** - identifying which watershed source areas contribute most to the impairment of San Francisco Bay beneficial uses (due to source intensity and sensitivity of discharge location);
- (3) **Management Action Effectiveness** - evaluating the effectiveness or impacts of existing management actions, including compliance with TMDLs and other POC requirements and providing support for planning future management actions;
- (4) **Loads and Status** - providing information on POC loads, concentrations, and presence in local tributaries or urban stormwater discharges;
- (5) **Trends** - evaluating trends in POC loading to the Bay and POC concentrations in urban stormwater discharges or local tributaries over time; and
- (6) **Compliance with Receiving Water Limitations – providing information to assess whether receiving water limitations (RWLs) are achieved.**

Not all information needs apply to all POCs (see Table 8.2 below for details).

- i. **Sampling Methods** – The Permittees shall implement or cause to be implemented the monitoring components shown in Table 8.1 to address each of the five POC management information needs.

**Table 8.1 POC Monitoring Methods**

| Monitoring Type | Information Need   | Monitoring Methods  |
|-----------------|--|---|
| 1               | Identify Source Areas  | <p>Monitoring methods to identify watershed sources of POCs shall include:</p> <ul style="list-style-type: none"> <li>• Collection and analysis of POCs (in dissolved phase or on suspended sediment particles as appropriate for pollutant) in urban stormwater runoff transported through MS4s or receiving waters during stormwater runoff events; or</li> <li>• Collection and analysis of POCs (in dissolved phase or on suspended sediment particles as appropriate for pollutant) in urban stormwater runoff at outfall locations (i.e., as runoff from MS4 enters receiving waters) during stormwater runoff events; or</li> <li>• Collection and analysis of POCs on bedded sediments deposited in MS4s, treatment facilities, or receiving waters; or</li> <li>• Collection and analysis of POCs in stormwater runoff or bedded sediments on source area properties (e.g. private property) or public rights of way; or</li> <li>• Other monitoring methods designed to identify specific sources or uses of POCs (e.g., caulk in roadways or building materials) or watershed source areas.</li> </ul> |
| 2               | Identify watershed areas contributing most to Bay impairment         | <p>Monitoring methods to identify watershed areas contributing most to Bay impairment shall include:</p> <ul style="list-style-type: none"> <li>• Methods described for Monitoring Type #1; or</li> <li>• Collection and chemical analysis of small fish tissue (or other relevant indicator) near tributary confluences with the Bay; or</li> <li>• Collection of bedded sediments near tributary confluences with the Bay and analysis for POCs.</li> </ul>   |
| 3               | Effectiveness of, and provide support for future, management actions | <p>Monitoring methods to evaluate effectiveness of, and provide support for future, management actions shall include:</p> <ul style="list-style-type: none"> <li>• Methods described for Monitoring Type #1, but focused on characterizing the effectiveness of specific management actions in reducing or avoiding POCs in MS4 discharges; or</li> </ul>   |

| Monitoring Type | Information Need  | Monitoring Methods   |
|-----------------|---|--|
|                 |   | <ul style="list-style-type: none"> <li>Collection of information to characterize or develop models of control measure performance (e.g., treatment controls, demolition debris program, green infrastructure, etc.). This information could include data for model calibration and validation, or other information needed to estimate or compute model parameters.</li> </ul>   |
| 4               | Provide information on POC loads, concentrations, or presence/absence | Monitoring methods to provide information on POC loads, concentrations, or presence/absence shall include: <ul style="list-style-type: none"> <li>Methods described for Monitoring Type #1, in combination with quantitative modeling associated with quantifying POC loads from MS4s or small tributaries to the Bay; or</li> <li>Collection of information to support development of conceptual models of watershed fate and transport; or</li> <li>Collection of information to support watershed loading models such as data for model calibration and validation or other information needed to estimate or compute model parameters.</li> </ul>  |
| 5               | Evaluate POC trends   | Monitoring methods to provide information on trends in POC loads and concentrations over time shall include methods described for Monitoring Type #1 or #2   |
| <u>6</u>        | <u>RWLs Assessment</u>  | <u>Monitoring in receiving waters to assess compliance with RWLs. Monitoring methods shall include:</u> <ul style="list-style-type: none"> <li><u>Collection and analysis of analytes during the wet season in receiving waters (i.e., creeks and rivers that flow to San Francisco Bay) influenced by urban stormwater runoff.</u></li> <li><u>Collection and analysis of analytes during the dry season in receiving waters (i.e., creeks and rivers that flow to San Francisco Bay) influenced by dry season urban runoff.</u></li> <li><u>Sampling locations for RWLs assessment monitoring shall be spatially and temporally representative of the sampled waterbody. Sampled waterbodies shall be representative of the range of receiving waterbody types.</u></li> </ul> |



ii. **Parameters and Monitoring Frequency** – The Permittees shall conduct POC monitoring consistent with the monitoring intensity and frequency specified in Table 8.2. Monitoring frequencies are described as the total and minimum number of samples that Permittees within a countywide Stormwater Program shall collectively collect and analyze in a Water Year (October 1- September 30). Minimum number of samples that Permittees within a countywide Stormwater Program shall collect by the end of the Permit term to address each monitoring type are also specified.

**Table 8.2 POC Monitoring Parameters, Effort and Type**

| Pollutant of Concern  | Total Samples <sup>a</sup> Collected /Analyzed (yearly minimum) for each Countywide Program: Alameda, Contra Costa, Santa Clara, and San Mateo | Minimum Number of Samples for each Monitoring Type <sup>b</sup>                            |
|---|--|--|
| Polychlorinated Biphenyls (PCBs)  | <del>8075</del> (8) Alameda, Santa Clara<br><del>7065</del> (8) Contra Costa, San Mateo  | 8 samples minimum for monitoring types 1-3 and 16 samples minimum for monitoring types 4-5 |
| Total Mercury   | 60 (8) Alameda, Santa Clara<br>50 (8) Contra Costa, San Mateo  | 8 samples minimum for monitoring types 1-5   |
| Copper  | <del>105</del>   | all samples for monitoring type 4  |
| <b>Emerging Contaminants<sup>c</sup></b><br>Must include but not limited to: <ul style="list-style-type: none"> <li>• contaminants likely in stormwater and associated with vehicles;</li> <li>• per- and polyfluoroalkyl substances (PFAS);</li> <li>• organophosphate ester plastic additives/flame retardants;</li> <li>• bisphenol plastic additives; and</li> <li>• ethoxylated surfactants</li> </ul> | 25<br>See footnote c   | all samples for monitoring type 4<br><br>See footnote c                                    |
| <b>Ancillary Parameters<sup>d</sup>:</b> <ul style="list-style-type: none"> <li>• Total organic carbon</li> </ul>   | as necessary to address management questions for   |  |

|   |   |  |
|---|---|--|
| <ul style="list-style-type: none"> <li>• Suspended sediments (SSC)</li> <li>• Hardness</li> </ul>                           | other POCs – see footnote d                               |  |
| <u>RWLs Assessment: copper, zinc, fecal indicator bacteria, and additional analytes determined under Provision C.8.h.iv</u> | <u>4 wet season samples</u><br><u>1 dry season sample</u> | <u>5 samples for monitoring type 6</u> |

<sup>a</sup> This column indicates the total number of samples, across all applicable monitoring types (i.e., monitoring types 1-5 from Table 8.1), that must be collected during the Permit term. The number in parentheses indicates the minimum number of samples that must be collected, across all applicable monitoring types, during each of the five years of the permit. For example, ~~8075~~ total samples must be collected for total PCBs and 60 total samples for mercury by each set of Santa Clara County and Alameda County during the term of the permit. San Mateo and Contra Costa Counties, because of smaller program size, must collect ~~7065~~ PCBs and 50 total samples for mercury. Permittees must collect a minimum of 8 PCBs and 8 mercury samples every year of the Permit term, including the final year. It is possible that data can satisfy multiple monitoring types. However, the intent of the Permit is to achieve a distribution of monitoring effort across all applicable monitoring information needs. Therefore, no more than 25 percent of samples for any pollutant may be used to satisfy requirements for multiple monitoring categories for that pollutant. This requirement is intended to ensure that monitoring is focused to provide the best information to answer specific management questions.

<sup>b</sup> This column indicates the monitoring types from Table 8.1 that are applicable to this POC along with the minimum number of samples that shall be collected by each set of Permittees (i.e., Santa Clara County, San Mateo County, Alameda County, and Contra Costa County) by the end of the Permit term. The applicable monitoring type(s) is also stated to illustrate the management information need(s) motivating the collected data. For example, each set of Permittees (i.e., the Countywide Programs for Santa Clara, San Mateo, Alameda, and Contra Costa counties) must collect and analyze at least 8 samples to address monitoring types 1-5 in Table 8.1 for both total PCBs and total mercury. Some collected samples may address multiple management questions.

<sup>c</sup> Permittees, collectively, shall produce or cause to be produced a stormwater monitoring strategy for emerging contaminants (ECs) April 1, 2023 that prioritizes ECs for stormwater monitoring listed in this table and possibly others and establishes an approach for sampling stormwater ECs based on specific or likely physico-chemical properties, sources, transport pathways,

and fate of prioritized ECs. Permittees must conduct or cause to be conducted ECs stormwater monitoring to execute the ECs stormwater monitoring strategy at a level of effort indicated in the table. This level of effort can be satisfied either through sampling and analysis of the number of samples indicated in this table or through augmentation of the San Francisco Bay Regional Monitoring Program Emerging Contaminants Monitoring Strategy in the amount of \$100,000 per year for all Permittees combined.

<sup>d</sup>Total Organic Carbon (TOC) data are not used independently. Rather, TOC can be useful for normalizing PCBs data collected in water and sediment. TOC shall be collected concurrently with PCBs data that should be normalized to TOC. Similarly, suspended sediment concentrations (SSC) samples should be collected and analyzed when water samples are collected that will be used to assess loads, loading trends, or BMP effectiveness for PCBs and Mercury. Hardness data are used in conjunction with copper concentrations collected in fresh water.

- iii. **POC Parameters and Analytical Methods** – Samples collected consistent with Table 8.2 shall be analyzed for parameters listed in Table 8.3. Where no laboratory method is listed in Table 8.3, Permittees shall use U.S. EPA or SWAMP-approved methods. There are no analytical methods listed in Table 8.3 for ECs as there are not U.S. EPA-approved methods for most of these contaminants. Monitoring for ECs is investigatory monitoring to provide information on EC loads, concentrations, and presence/absence rather than compliance determination. Accordingly, specification of analytical method is not mandatory. Moreover, the sampling and analysis is likely to be conducted through the San Francisco Bay Regional Monitoring Program, which has a robust and well-established quality assurance process, and the laboratories chosen for the EC analyses will be applying state-of-the-science analytical methods for the detection and quantification of ECs in stormwater samples.

**Table 8.3 POC Analytes and Analytical Methods**

| <b>Pollutant of Concern</b>             | <b>Matrix</b>   | <b>Analyte(s) or Test Species</b> | <b>Laboratory Analytical Methods</b>   |
|---|-----------------|-----------------------------------|--|
| <b>Polychlorinated Biphenyls (PCBs)</b> | Water           | Total PCBs                        | U.S. EPA 1668 (RMP 40)   |
|   |                 | Total Organic Carbon              | <a href="#">SM5310B</a>  |
|   |                 | Suspended sediments (SSC)         | <a href="#">ASTM D3977-97</a>  |
|   | Bedded Sediment | Total PCBs                        | As appropriate to address the management information need: U.S. EPA 1668 (RMP 40), 8082A, or 8270D modified by Method 1625 |
| Total organic carbon                    |                 | <a href="#">U.S. EPA 9060</a>     |  |
| <b>Mercury</b>                          | Water           | Total Mercury                     | <a href="#">U.S. EPA 1631 Rev E</a>  |
|   | Bedded Sediment | Total Mercury                     | <a href="#">U.S. EPA 7473</a>  |
| <b>Copper</b>                           | Water           | Total Copper                      | <a href="#">U.S. EPA 200.7</a>   |
|   |                 | Dissolved Copper                  | <a href="#">U.S. EPA 200.8</a>   |
|   |                 | Hardness                          | <a href="#">U.S. EPA 130.1 or 130.2</a>  |

**C.8.g. Pesticides and Toxicity Monitoring**

Permittees shall conduct wet and dry weather monitoring of pesticides and toxicity in urban creeks. If a statewide coordinated pesticides and pesticides-related toxicity monitoring program begins collecting data on an ongoing basis during the Permit term, Permittees may request the Water Board modify, reduce or eliminate this monitoring requirement, provided the resultant change would result in overall improvement of pesticide monitoring data collection.

In fulfilling the requirements of Provision C.8.g, Permittees may collaborate with the California Department of Pesticide Regulation (CDPR) for data collection and analysis. For data collected through such collaboration, CDPR's standard operating procedures and quality assurance/quality control methods

may be used in place of the SWAMP comparability requirements in subprovisions C.8.b and in C.8.g.

**i. Toxicity in Water Column - Dry Weather**

- (1) Field and Laboratory Method – Permittees shall collect grab samples of receiving water using applicable SWAMP comparable methodology. These samples shall be analyzed for the test organisms listed, and by the methods described, in Table 8.4.

Toxicity shall be evaluated using the Test of Significant Toxicity (TST) statistical approach.<sup>43</sup> Each sample shall be subject to determination of “Pass” or “Fail” and shall indicate “Percent Effect” from toxicity using nondiluted samples. The TST null hypothesis shall be “mean sample response  $\leq 0.75 \times$  mean control response.” A test result that rejects this null hypothesis shall be reported as “Pass.” A test result that does not reject this null hypothesis shall be reported as “Fail.” The relative “Percent Effect” of the sample is defined and reported as:  $((\text{Mean control response} - \text{Mean sample response}) \div \text{Mean control response}) \times 100$ .

- (2) Sample Design/Locations – Sample locations may be selected by Permittees to monitor locations where toxicity could be likely; to coincide with ~~bioassessment sites; to coincide with~~ creek restoration sites; or to resample a location where toxicity has been found in the past.
- (3) Frequency, Timeframe and Number of Sites – Permittees shall annually collect in the dry season at least the minimum number of samples as shown below.

| Permittees   | Minimum Number of Sample Sites                     |
|--|--|
| Alameda County Permittees  | 2 per year   |
| Santa Clara County Permittees                                      | 2 per year   |
| Contra Costa County Permittees                                     | 1 per year   |
| San Mateo County Permittees  | 1 per year   |
| <del>Fairfield-Suisun &amp; Vallejo Solano County Permittees</del> | 1 <del>each</del> by the end of water year 2023-24 |

<sup>43</sup> National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA 833-R-10-003, 2010), Appendix A, Figure A-1, and Table A-1.

**Table 8.4 Water Column Aquatic Toxicity Analytical Procedures**

| Test Species                               | Test Endpoint(s)           | Units  | U.S. EPA Method   |
|--|----------------------------|--|---|
| Pimephales promelas (Fathead Minnow)       | Larval Survival and Growth | Pass or Fail using TST, % Effect               | EPA-821-R-02-013 <sup>44</sup> EPA 833-R-10-003 <sup>45</sup> |
| Ceriodaphnia dubia (Freshwater Crustacean) | Survival <sup>a</sup>      | Pass or Fail, % Effect <25% Passes, >25% Fails | EPA-821-R-02-013<br>EPA 833-R-10-003                          |
| Ceriodaphnia dubia (Freshwater Crustacean) | Reproduction               | Pass or Fail using TST, % Effect               | EPA-821-R-02-013<br>EPA 833-R-10-003                          |
| Selenastrum capricornutum (Green Algae)    | Growth                     | Pass or Fail using TST, % Effect               | EPA-821-R-02-013<br>EPA 833-R-10-003                          |
| Hyalella azteca (Freshwater Amphipod)      | Survival                   | Pass or Fail using TST, % Effect <sup>b</sup>  | EPA-821-R-02-012 <sup>46</sup><br>EPA 833-R-10-003            |
| Chironomus dilutus (midge)                 | Survival                   | Pass or Fail using TST, % Effect <sup>b</sup>  | EPA-821-R-02-012<br>EPA 833-R-10-003                          |

<sup>a</sup> The *Ceriodaphnia dubia* chronic toxicity test design for the survival endpoint is not amenable to the TST, Welch's t-test so the survival endpoint will be determined as a percent effect using the TST approach. A percent effect less than 25 percent will be considered a "pass," and a percent effect equal to or greater than 25 percent will be considered a "fail."

<sup>b</sup> For *Hyalella* and *Chironomus* acute toxicity test methods, the test result will be considered a "pass," regardless of a TST determination of "fail" if the percent survival in the receiving water is equal to or greater than 90 percent.

<sup>44</sup> Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms. EPA/821/R-02/013, 2002; Table IA, 40 CFR Part 136.

<sup>45</sup> National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA 833-R-10-003) 2010.

<sup>46</sup> *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (EPA/821/R-02/012, 2002; Table IA, 40 CFR Part 136). See Appendix B, page 238, for *H.azteca* and *C.dilutus* methods.

**ii. Toxicity, Pesticides and Other Pollutants in Sediment - Dry Weather**

- (1) Field and Laboratory Method – The Permittees shall collect grab samples of creek sediment using applicable SWAMP-comparable methodology. These samples shall be analyzed for the pollutants and organisms listed and by the methods described on Table 8.5. Where no laboratory method is listed in Table 8.5, Permittees shall use U.S. EPA- or SWAMP-approved methods.
- (2) Sample Design/Locations – Samples shall be collected at fine-grained depositional locations. Such sample locations may be selected by the Permittees to monitor locations where toxicity could be likely, ~~to coincide with bioassessment sites~~, or to resample a location where toxicity has been found in the past, for example.

**Table 8.5 Sediment Toxicity & Pollutants Analytical Procedures**

| Test Species or Pollutant  | Units                                      | Laboratory Method                           |
|--|--|---|
| <i>Hyalella azteca</i> and <i>Chironomus dilutus</i> survival <sup>a</sup>                                     | Pass/Fail using TST, % Effect <sup>a</sup> | EPA-600/R-99-064 <sup>47</sup>              |
| Pyrethroids: bifenthrin, cyfluthrin, cypermethrin, deltamethrin, esfenvalerate, lambda-cyhalothrin, permethrin |  | EPA 3540C followed by EPA 8270D by NCI-GCMS |
| Fipronil and its degradates (fipronil-sulfone, fipronil-desulfinyl, fipronil sulfide)                          |  |   |
| Total PAHs   |  |   |
| Arsenic, Cadmium, Chromium, Copper, Lead, Nickel, Zinc   |  |   |
| Total organic carbon   |  |   |
| Grain size   |  |   |

<sup>a</sup> For *Hyalella* and *Chironomus* acute toxicity test methods, the test result will be considered a "pass," regardless of a TST determination of "fail" if the percent survival in the receiving water is equal to or greater than 90 percent. The false positive rate (beta error) is 0.05 and the negative rate (alpha error) is 0.25 for these test methods.

- (3) Sample Design/Locations – Samples shall be collected at fine-grained depositional locations. Such sample locations may be selected by the Permittees to monitor locations where toxicity could be likely, to coincide

<sup>47</sup> *Methods for Measuring the Toxicity and Bioaccumulation of Sediment-associated Contaminants with Freshwater Invertebrates* (EPA 600/R-99-064) Second Edition. March 2000.

with bioassessment sites, or to resample a location where toxicity has been found in the past, for example.

- (4) Frequency, Timeframe, and Number of Sites – Permittees shall collect at least the minimum number of samples annually as shown:

| Permittees   | Minimum Number of Sample Sites                     |
|--|--|
| Alameda County Permittees  | 2 per year   |
| Santa Clara County Permittees                                      | 2 per year   |
| Contra Costa County Permittees                                     | 1 per year   |
| San Mateo County Permittees  | 1 per year   |
| <del>Fairfield-Suisun &amp; Vallejo Solano County Permittees</del> | 1 <del>each</del> by the end of water year 2023-24 |

**iii. Wet Weather Pesticides and Toxicity Monitoring**

- (1) Field and Laboratory Method – Permittees shall collect water column samples and analyze them for the following parameters using the methods specified in Tables 8.4 and 8.5. For imidacloprid, Permittees shall specify an analytical method that achieves a reporting level of 0.01 ppb.
- Pyrethroids: bifenthrin, cyfluthrin, cypermethrin, deltamethrin, esfenvalerate, lambda-cyhalothrin, permethrin
  - Imidacloprid
  - Fipronil and its degradates fipronil-sulfone, fipronil-desulfinyl, fipronil sulfide and fipronil amide (amide is optional - do it if lab offers the suite)
  - Toxicity
- (2) Sample Design/Locations – Permittees shall collect samples annually during storm events. Sample locations shall be representative of urban watersheds (i.e., bottom of watershed locations).
- (3) Frequency, Timeframe, and Number of Sites – If this (Provision C.8.g.iii) sampling is conducted by the RMC on behalf of all Permittees, a total of ten (10) samples shall be collected over the Permit term, with a minimum of six (6) samples collected by the end of the third water year of the permit term. If this (Provision C.8.g.iii) sampling is conducted by Countywide



Stormwater Programs, Permittees shall collect at least the minimum number of samples as shown below:

| Permittees   | Minimum Number of Sample Sites                     |
|--|--|
| Alameda County Permittees                                      | 2 per year   |
| Santa Clara County Permittees                                  | 2 per year   |
| Contra Costa County Permittees                                 | 1 per year   |
| San Mateo County Permittees                                    | 1 per year   |
| <u>Fairfield-Suisun &amp; Vallejo Solano County Permittees</u> | 1 <del>each</del> by the end of water year 2023-24 |

iv. **Follow-up** – Permittees shall provide notification in the next Urban Creeks Monitoring Report when analytical results indicate any of the following:

- (1) A toxicity test of growth, reproduction, or survival of any test organism is reported as “fail” in both the initial sampling and a second, follow-up sampling, and both have  $\geq 50\%$  Percent Effect;
- (2) A pollutant is present at a concentration exceeding its water quality objective in the Basin Plan; or
- (3) For pollutants without water quality objectives, results exceed Probable Effects Concentrations or Threshold Effects Concentrations.<sup>48</sup>

**C.8.h. Reporting**

i. **Water Quality Standard Exceedance** – When data collected pursuant to Provisions C.8.a.- C.8.g. indicate that discharges are causing or contributing to an exceedance of an applicable water quality standard, the Permittees shall notify the Water Board within no more than 30 days of such a determination and submit a follow-up report in accordance with Provision C.1 requirements. This reporting requirement shall not apply to continuing or recurring exceedances of water quality standards previously reported to the Water Board or to exceedances of pollutants that are addressed pursuant to

<sup>48</sup> TEC and PEC are found in MacDonald, D.D., G.G. Ingersoll, and T.A. Berger. 2000. Development and Evaluation of Consensus-based Sediment Quality Guidelines for Freshwater Ecosystems. *Archives of Environ. Contamination and Toxicology* 39(1):20–31. More recent TECs and PECs may be used if lower than stated in MacDonald 2000.

Provisions C.9 through C.12, C.14, C.18, and C.19, consistent with Provision C.1.

- ii. **Electronic Reporting** – The Permittees shall submit to the California Environmental Data Exchange Network (CEDEN) all results from monitoring conducted pursuant to Provisions C.8.d. LID Monitoring, ~~ii.~~ Trash **Receiving Water** Monitoring, ~~ii.~~ Pollutants of Concern, and ~~C.8.g~~**C.8.g**. Pesticides and Toxicity. Data that CEDEN cannot accept are exempt from this requirement.
- (1) Data shall be submitted in SWAMP formats and with the quality controls required by CEDEN.
  - (2) Data collected during the previous October 1–September 30 period shall be submitted by March 31 of each year.
- iii. **Urban Creeks Monitoring Report** – The Permittees shall submit a comprehensive Urban Creeks Monitoring Report at the countywide level no later than March 31 of each year, reporting on all data collected during the foregoing October 1–September 30 period. Each Urban Creeks Monitoring Report shall contain summaries of LID Monitoring, Trash **Receiving Water** Monitoring, Pollutants of Concern Monitoring, and Pesticides and Toxicity Monitoring, including the following:
- (1) A **LID Monitoring Status Report**, which, at a minimum, includes the following information:
    - (a) A summary of the LID Monitoring Methods and study designs used in the preceding water year, at each sampled LID component, facility or system.
    - (b) A summary table that lists monitoring samples collected during the preceding water year during the Permit term, including at a minimum, the following information for each sample location: Site ID; the name or ID of the LID component, facility or system name; latitude and longitude of the LID component, facility or system; type of LID component, facility or system (e.g., bioretention); characteristics and land use of the tributary drainage area of the LID component, facility or system; other management actions and controls present in the tributary drainage area of the LID component, facility or system; sample dates; and concentrations of parameters measured.
    - (c) A summary of lessons learned, progress made, and interim conclusions, for all samples collected during the previous water year.
    - (d) For all data generated during the preceding water year, a statement of data quality.

- (e) The raw data generated by the preceding water year, made available to the Water Board and third parties.
- (f) An outline of steps (including but not limited to study designs, methods and sites) for the upcoming water year.

~~(g) For all data, a statement of the data quality.~~

(g) An analysis of the data, including the following:

(i) Identification and analysis of any trends in stormwater or receiving water quality.

(ii) A discussion of the data for each monitoring program component, which includes:

a. Monitoring data relative to prior conditions, beneficial uses and applicable water quality standards as described in the Basin Plan, the Ocean Plan, the California Toxics Rule, and other applicable water quality control plans;

b. Where appropriate, hypotheses to investigate regarding pollutant sources, trends, and BMP effectiveness;

c. Identification and prioritization of water quality problems;

d. Identification of potential sources of water quality problems;

e. Description of follow-up actions;

f. Evaluation of the effectiveness of existing control measures; and

g. Identification of management actions needed to address water quality problems.

(2) An Annual Trash Monitoring Progress Report,<sup>49</sup> which, at a minimum, includes the following information:

(a) Narrative description of monitoring conducted, including the number of sites monitored and the number of monitoring events completed;

(b) Description of storms events that were sampled, including the date(s) and times when samples were collected, intensity and duration of the storm event, a description of where along the hydrograph the storm event was sampled, and justification used to determine the storm

<sup>49</sup> The Annual Trash Monitoring Progress Report shall be a single collective regionwide report. With their UCMRs, all Permittees shall include a copy of the Annual Trash Monitoring Progress Report.

event was of appropriate size to displace and/or mobilize the transport of trash through the MS4 system;

- (c) Narrative description, including maps, of any MS4 outfalls, homeless encampments and illegal dumping sites, located upstream of each Outfall Monitoring sample site;
- (d) Description and the results of data analysis methods, including statistical analyses;
- (e) Results and lessons learned;
- (f) Data quality assurance procedures that were implemented for samples collected;
- (g) Monitoring events (including locations and methods) planned for the subsequent fiscal year(s);
- (h) A comprehensive detailed discussion of implementation of Provision C.8.e.iii.(8); and
- (i) Updates of required Trash Monitoring Plan elements.
- ~~(h) An analysis of the data, including the following:
  - ~~(i) Identification and analysis of any trends in stormwater or receiving water quality.~~
  - ~~(ii) A discussion of the data for each monitoring program component, which includes:
    - ~~a. Monitoring data relative to prior conditions, beneficial uses and applicable water quality standards as described in the Basin Plan, the Ocean Plan, the California Toxics Rule, and other applicable water quality control plans;~~
    - ~~b. Where appropriate, hypotheses to investigate regarding pollutant sources, trends, and BMP effectiveness;~~
    - ~~c. Identification and prioritization of water quality problems;~~
    - ~~d. Identification of potential sources of water quality problems;~~
    - ~~e. Description of follow-up actions;~~
    - ~~f. Evaluation of the effectiveness of existing control measures; and~~
    - ~~g. Identification of management actions needed to address water quality problems.~~~~~~

~~(2)~~(3) A Pesticides and Toxicity Monitoring Status Report, which includes the following information:

- (a) A complete Water Year Summary Table that lists the monitoring sites, with a row for each site. The table columns contain: Site ID; creek name; latitude; longitude; permittee jurisdiction(s); water column toxicity (acute); water column toxicity (chronic); sediment toxicity (acute); sediment toxicity (chronic); and sediment chemistry. For each site, list the site information and check the parameters sampled at that site. Provide a statement of the data quality and an analysis of the data, including:
  - (i) Discuss monitoring data relative to prior conditions, beneficial uses and applicable water quality standards as described in the Basin Plan, Ocean Plan, and California Toxics Rule and other applicable water quality control plans;
  - (ii) Where appropriate, develop hypotheses to investigate regarding pollutant sources, trends, and BMP effectiveness;
  - (iii) Identify and prioritize water quality impairments;
  - (iv) Identify and potential sources (and actual, if known) of water quality impairments, and provide sufficient justification for those potential sources;
  - (v) Describe follow-up actions;
  - (vi) evaluate the effectiveness of existing management actions; and
  - (vii) identify additional management actions needed to address water quality impairments.

#### iv. Pollutants of Concern Monitoring Reports

- (1) — In each Urban Creeks Monitoring Report, the Permittees shall submit a report describing the allocation of sampling effort for POC monitoring for the forthcoming year (i.e., the water year that began October 1 of that year) and what was accomplished for POC monitoring during the preceding water year. The report shall include (for preceding year and projected for forthcoming year): monitoring locations, number and types of samples collected, purpose of sampling (management question addressed), and analytes measured. Any data not reportable to CEDEN should also be included in the Urban Creeks Monitoring Report due annually on March 31.

(2) Receiving Water Limitations Assessment Report

(a) By no later than March 31, 2023, Permittees shall submit a report with the following information:

(i) Relevant water quality objectives against which to compare monitoring data;

(ii) Analytes in addition to those listed in Table 8.2 to monitor based on assessment of the potential that discharges of these analytes may result in levels in receiving waters approaching or exceeding water quality objectives and the basis of the determination; and

(iii) Identification of waterbodies to be sampled, sampling locations within those waterbodies, and sampling schedule consistent with the requirements in Tables 8.1 and 8.2.

(b) The report shall be subject to approval by the Executive Officer for compliance and technical adequacy. Upon approval by the Executive Officer, Permittees shall augment the RWLs assessment monitoring required in Tables 8.1 with the analytes identified in the report. By no later than March 31, 2026, or as part of the Integrated Monitoring Report, Permittees shall submit an updated Receiving Water Limitations Assessment Report with proposed monitoring to be conducted during the next permit term.

**v. Integrated Monitoring Report** – By no later than March 31, 2026, Permittees shall submit an Integrated Monitoring Report in lieu of the annual Urban Creeks Monitoring Report. This report will be part of the next Report of Waste Discharge for the reissuance of this Permit. The Integrated Monitoring Report shall report on all the data collected since the previous Integrated Monitoring Report<sup>50</sup> and shall contain the following:

(1) The information described in ~~Provision~~Provisions C.8.h.iii.(1)-(3), pertaining to the monitoring data collected during the preceding ~~(fourth)~~third water year of the Permit term;

~~(1) A comprehensive analysis of all data collected pursuant to Provision C.8. -~~

~~(2) Asince the previous Integrated Monitoring Report,~~<sup>50</sup> and may include other pertinent studies.

For LID Monitoring and Trash Monitoring, this shall additionally include a summary of the ~~LID Monitoring~~ methods and study designs used in all preceding water years, at each ~~sampled LID component, facility or~~

<sup>50</sup> Excluding Creek Status Monitoring conducted subsequent to the submittal of the Integrated Monitoring Report during the Previous Permit.

~~system. A sample location. And, a~~ summary of ~~LID Monitoring~~ lessons learned, progress made, data, results, analyses, and conclusions, for all samples collected during all prior water years during the Permit term;

~~(2) The information described in Provision C.8.h.iii.(2), pertaining to the monitoring data collected during the preceding (fourth) water year of the Permit term;~~

~~(3) A comprehensive analysis of all data collected pursuant to Provision C.8. since the previous Integrated Monitoring Report, and may include other pertinent studies;~~

~~(4)(3)~~ For POCs, methods, data, calculations, load estimates, and source estimates for each POC parameter, as applicable;

~~(5)(4)~~ A budget summary for each monitoring requirement (for each year of the Permit term); and

~~(6)(5)~~ With cause and justification, recommendations for changes to any of the elements of Provision C.8 in future Permit terms.

**vi. Comprehensive Bioassessment Final Report** – By no later than March 31 ~~of the first year of the Permit term, 2024~~, the Permittees shall collectively submit a comprehensive analysis of all bioassessment monitoring conducted by the RMC during MRP 1 and MRP 2, for Water Years 2012-2021.

**vii. Standard Report Content** – All monitoring reports shall be clear, concise, and well-organized, and shall include the following information:

- (1) An Executive Summary;
- (2) The purpose of the monitoring and brief description of the study design rationale;
- (3) Quality Assurance/Quality Control summaries for sample collection and analytical methods, including a discussion of any limitations of the data;
- (4) Brief descriptions of sampling protocols and analytical methods;
- (5) Sample location description, including water body name and segment and latitude and longitude coordinates;
- (6) Sample ID, collection date (and time if relevant), media (e.g., water, filtered water, bed sediment, tissue);
- (7) Concentrations detected, measurement units, and detection limits;
- (8) Assessment, analysis, and interpretation of the data for each monitoring program component;

- (9) A listing of volunteer and other non-Permittee entities whose data are included in the report; and
- (10) Assessment of compliance with applicable water quality standards.

Revised Tentative Order



## C.9. Pesticides Toxicity Control

To prevent the impairment of urban streams by pesticide-related toxicity, the Permittees shall implement a pesticide toxicity control program that addresses, within their jurisdictions, their own and others' use of pesticides that pose a threat to water quality and that have the potential to enter the municipal conveyance system.

This provision implements requirements of the TMDL for Diazinon and Pesticide-Related Toxicity for Urban Creeks in the region. The TMDL includes urban runoff allocations for Diazinon of 100 ng/l and for pesticide-related toxicity of 1.0 Acute Toxicity Units (TUa) and 1.0 Chronic Toxicity Units (TUc) to be met in urban creek waters. U.S. EPA phased out urban uses of diazinon in the mid-2000s, and diazinon is no longer detected in urban creeks in the region. Pesticide-related toxicity continues to occur because State and federal pesticide regulatory programs, as currently implemented, allow pesticides to be used in ways that cause or contribute to aquatic toxicity. In adopting the TMDL implementation plan, the Water Board recognized that (1) Permittees must control their own use of pesticides, but Permittees are not solely responsible for attaining the allocations, because their authority to regulate others' pesticide use is constrained by federal and State law; and (2) because a realistic date for achieving allocations cannot be discerned given the current framework for pesticide regulation, reviewing the implementation strategy every five years, at permit reissuance, is the appropriate timeline. Accordingly, the Permittees' requirements for addressing the allocations are set forth in the TMDL implementation plan and are included in this provision.

Urban-use pesticides of concern (Pesticides of Concern) to water quality include: diamides (chlorantraniliprole and cyantraniliprole); diuron, fipronil and its degradates; indoxacarb; organophosphorous insecticides (chlorpyrifos, diazinon, and malathion); pyrethroids (metofluthrin, bifenthrin, cyfluthrin, beta-cyfluthrin, cypermethrin, deltamethrin, esfenvalerate, lambda-cyhalothrin, and permethrin); carbamates (e.g., carbaryl and aldicarb); and neonicotinoids (e.g., imidacloprid, acetamiprid, and dinotefuran).

### C.9.a. Maintain and Implement an Integrated Pest Management Policy or Ordinance and Standard Operating Procedures

All Permittees have developed a pesticide toxicity control program for use of pesticides in municipal operations and on municipal property based on the concepts of Integrated Pest Management (IPM)<sup>51</sup> and have adopted an IPM policy or ordinance and standard operating procedures to implement the policy or ordinance.

<sup>51</sup> The Glossary attached to this Permit includes IPM definitions adapted from the [draft](#) UP Provisions.

- i. **Task Description** – The Permittees shall implement their IPM policies or ordinances and standard operating procedures and update their IPM policies or ordinances and standard operating procedures as needed to ensure their use of pesticides does not cause or contribute to pesticide-related toxicity in receiving waters.
- ii. **Implementation** – Each Permittee shall require municipal employees and contractors to adhere to its IPM policy or ordinance and standard operating procedures in all the Permittee’s municipal operations and on all municipal property.
- iii. **Reporting**
  - (1) In each Annual Report, Permittees shall certify they are implementing their IPM policy or ordinance and standard operating procedures, report trends in quantities and types of pesticide active ingredients used, and explain any increases in use of Pesticides of Concern to water quality.
  - (2) In each Annual Report, Permittees shall provide a brief description (e.g., one or two sentences) of two IPM tactics or strategies implemented in the reporting year. Examples could include non-chemical strategies such as monitoring, mowing weeds, mulching, and redesign of problematic landscapes; preventive actions such as sealing holes and gaps in structures, improving sanitation, and outreach to employees about how their actions contribute to pest presence; and integration of several strategies, such as tackling a rat problem by educating building occupants, improving sanitation, trimming trees away from buildings, sealing holes in the structure, and trapping rodents. To the extent possible, different IPM actions should be described each year, so that a range of IPM actions is described over the permit term.
  - (3) In their 2023 Annual Reports, the Permittees shall provide links to their IPM policies or ordinances and IPM standard operating procedures. Permittees shall submit updated links in subsequent Annual Reports, if those links change.

**C.9.b. Train Municipal Employees**

- i. **Task Description** – The Permittees shall ensure that all municipal employees who, within the scope of their duties, apply or use pesticides are trained in IPM practices and the Permittee’s IPM policy and/or ordinance and standard operating procedures. This training may also include other training opportunities, such as the Bay-Friendly Landscape Maintenance Training & Qualification Program, provided both structural and landscape pest control training are provided.

**ii. Reporting**

- (1) In each Annual Report, Permittees shall report the percentage of municipal employees who apply pesticides who have received training in the Permittees' IPM policy and/or ordinance and IPM standard operating procedures within the last year. This report shall briefly describe the nature of the training, such as tailgate training provided by a Permittee's IPM coordinator, IPM training through the Pesticide Applicators Professional Association, etc.
- (2) The Permittees shall submit training materials (e.g., course outline, date, and list of attendees) upon request.

**C.9.c. Require Contractors to Implement IPM**

- i. Task Description** – The Permittees shall include contract specifications requiring contractors to implement IPM, so that all contractors practice IPM on municipal properties. The Permittees shall monitor contractor pesticide applications to ensure that contractors implement their contract specifications in accordance with the Permittee's IPM policies and/or ordinances and standard operating procedures. Contractor certification as a pest control advisor (PCA) alone is not evidence of IPM implementation. Similarly, IPM certifications awarded to a pest control company may not guarantee that an individual employee will always use IPM strategies. Thus, periodic Permittee observation and verification of contractor performance is necessary.
- ii. Implementation** – Permittees shall periodically monitor their contractors' activities to verify full implementation of IPM techniques. This shall include, at a minimum, evaluation of lists of pesticides and amounts of active ingredient used.
- iii. Reporting** – In each Annual Report, Permittees shall describe how they verified contractor compliance with IPM policies and any actions taken or needed to correct contractor performance.

**C.9.d. Interface with County Agricultural Commissioners**

- i. Task Description** – The Permittees shall maintain communications with county agricultural commissioners to (a) get input and assistance on urban pest management practices and use of pesticides, (b) inform them of water quality issues related to pesticides, and (c) report any observed or citizen-reported violations of pesticide regulations (e.g., illegal handling and applications of pesticides) associated with stormwater management, particularly the California Department of Pesticide Regulation (DPR) surface water protection regulations for outdoor, nonagricultural use of pyrethroid pesticides by any person performing pest control for hire (<https://www.cdpr.ca.gov/docs/legbills/calcode/040501.htm#a6970>).

- ii. **Reporting** – In each Annual Report, Permittees shall briefly describe the communications they have had with county agricultural commissioners and report follow-up actions to correct violations of pesticide regulations.

**C.9.e. Public Outreach**

- i. **Task Description** – Permittees shall undertake outreach programs to (a) encourage communities within the Permittee’s jurisdiction to reduce reliance on pesticides that threaten water quality; (b) encourage public and private landscape irrigation management that minimizes pesticide runoff; and (c) promote appropriate disposal of unused pesticides.

- ii. **Implementation** – The Permittees shall conduct each of the following:

- (1) **Point of Purchase Outreach:** The Permittees shall:

- Conduct outreach to consumers at the point of purchase;
- Provide targeted information on proper pesticide use and disposal, potential adverse impacts on water quality, and less toxic methods of pest prevention and control; and
- Participate in and provide resources for the “Our Water, Our World” program or a functionally equivalent pesticide use reduction outreach program.

- (2) **Pest Control Contracting Outreach:** The Permittees shall conduct outreach to residents who use or contract for structural pest control and landscape professionals by (a) explaining the links between pesticide usage and water quality; and (b) providing information about IPM in structural pest management certification programs and landscape professional trainings; and (c) disseminating tips for hiring structural pest control operators and landscape professionals, such as the tips prepared by the University of California Extension IPM Program (UC-IPM).

- (3) **Outreach to Pest Control Professionals:** The Permittees shall conduct outreach to pest control operators, urging them to promote IPM services to customers and to become IPM-certified by EcoWise Certified or a functionally equivalent certification program. Permittees are encouraged to work with the Pesticide Applicators Professional Association; the California Association of Pest Control Advisors; DPR; county agricultural commissioners; UC-IPM; BASMAA; EcoWise Certified Program (or functionally equivalent certification program); Bio-integral Resource Center and others to promote IPM to pest control operators.

- iii. **Reporting** – In each Annual Report, Permittees shall describe their actions taken in the three outreach categories above. Outreach conducted at the

county or regional level shall be described in Annual Reports prepared at that respective level; reiteration in individual Permittee reports is discouraged. Reports shall include a brief description of outreach conducted in each of the three categories, including level of effort, messages and target audience.

~~The effectiveness of outreach efforts required by Provision C.9.e shall be evaluated at least once during the Permit term, by no later than June 30, 2026, and a summary of that evaluation shall be included with the 2026 Annual Reports.~~

**C.9.f. Track and Participate in Relevant Regulatory Processes**

- i. Task Description** – The Permittees shall conduct the following activities, which may be done at a county, regional, or statewide level:
- (1) The Permittees shall track U.S. EPA pesticide evaluation and registration activities as they relate to surface water quality and, when necessary, encourage U.S. EPA to coordinate implementation of the Federal Insecticide, Fungicide, and Rodenticide Act and the CWA and to accommodate water quality concerns within its pesticide registration process;
  - (2) The Permittees shall track DPR pesticide evaluation activities as they relate to surface water quality and, when necessary, encourage DPR to coordinate implementation of the California Food and Agriculture Code with the California Water Code and to accommodate water quality concerns within its pesticide evaluation process;
  - (3) The Permittees shall assemble and submit information (such as monitoring data) as needed to assist DPR and county agricultural commissioners in ensuring that pesticide applications comply with WQS; and
  - (4) As appropriate, the Permittees shall submit comment letters on U.S. EPA and DPR re-registration, re-evaluation, and other actions relating to pesticides of concern for water quality.
- ii. Reporting** – In each Annual Report, Permittees shall summarize participation efforts, information submitted, and how regulatory actions were affected. Permittees who contribute to a county, regional, or statewide effort shall submit one report at the county or regional level. Duplicate reporting is discouraged.

**C.9.g. Evaluate Implementation of Pesticide Source Control Actions**

- i. Task Description** – This task is necessary to gauge how effective the implementation actions taken by Permittees are in (a) achieving TMDL targets and (b) avoiding future pesticide-related toxicity in urban creeks. Once during

the permit term, Permittees shall conduct a thoughtful evaluation of their IPM efforts, how effective these efforts appear to be, and how they could be improved.

- ii. **Implementation** – The Permittees shall evaluate the effectiveness of the pesticide control measures implemented by their staff and contractors, evaluate attainment of pesticide concentration and toxicity targets for water and sediment from monitoring data (collected by Permittees, research agencies, and/or State agencies), and identify additions and/or improvements to existing control measures needed to attain targets, with an implementation time schedule.
- iii. **Reporting** – In their 2025 Annual Reports, the Permittees shall submit this evaluation, which shall include an assessment of the effectiveness of their IPM efforts required in Provisions C.9.a-f; (including the effectiveness of outreach efforts required by Provision C.9.e); a discussion of any improvements made in these efforts in the preceding five years; and any changes in water quality regarding pesticide toxicity in urban creeks. This evaluation shall also include a brief description of one or more pesticide-related area(s) the Permittee will focus on enhancing during the subsequent permit term. Work conducted at the county or regional level shall be evaluated at that respective level; reiteration in individual Permittee evaluation reports is discouraged.

## C.10. Trash Load Reduction

The Permittees shall demonstrate compliance with Discharge Prohibition A.1, for trash discharges, Discharge Prohibition A.2, and trash-related Receiving Water Limitations through the timely implementation of control measures and other actions to reduce trash loads from municipal separate storm sewer systems in accordance with the requirements of this provision. Flood management agencies are not subject to these trash reduction requirements except for those included in Provision C.10.c.

### C.10.a. Trash Reduction Requirements

Permittees shall implement trash load reduction control actions in accordance with the following schedule and trash generation area management requirements, including mandatory minimum full trash capture systems, to meet the goal of 100 percent trash load reduction or no adverse impact to receiving waters from trash by June 30, 2025.

- i. **Schedule** - Permittees shall reduce trash discharges from 2009 levels, described below, to receiving waters in accordance with the following schedule:

- (1) 90 percent by June 30, 2023; and
- (2) 100 percent by June 30, 2025.

Permittees that do not attain the 90 percent compliance benchmark by June 30, 2023, shall submit a revised trash load reduction plan as described in Provision C.10.d and a schedule of implementation of additional trash load reduction control actions sufficient to achieve compliance with the 90 percent compliance benchmark within a reasonable timeframe, and the 100 percent compliance benchmark by June 30, 2025.

- ii. **Trash Generation Area Management** - Permittees shall demonstrate attainment of the Provision C.10.a.i trash discharges percentage-reduction requirements by management of mapped trash generation areas within their jurisdictions delineated on Trash Generation Area Maps included with their Long-Term Trash Reduction Plans, submitted in February 2014, in accordance with the requirements and accounting set forth in this provision. The February 2014 maps provide the 2009 trash levels and delineate trash generation areas within Permittees' jurisdictions into the following trash generation rate categories:

- Low = less than 5 gal/acre/yr;
- Moderate = 5-10 gal/acre/yr;
- High = 10-50 gal/acre/yr; and
- Very High = greater than 50 gal/acre/yr.

Permittees also designated trash management areas on their February 2014 maps encompassing one or more trash generation areas, within which they will implement trash control actions. With the 2024 Annual Report, Permittees shall submit a revised Trash Generation Area Map that includes trash management areas, as well as private land drainage areas (See Provision C.10.a.ii.b) that will be retrofitted with full trash capture devices, or equivalent, by June 30, 2025. The updated trash generation map(s) shall include GIS layers and appropriate metadata (including tables etc.) that ~~identifies~~identify locations and associated drainage areas of full trash capture systems, and other trash control actions, and shall highlight any revisions or changes from the previous map(s). Permittees may provide access to multilayered GIS maps that account for other trash control action details and locations rather than submitting that information in a document. Maps and data generated through this effort may be used to illustrate progress toward achieving the trash reduction requirements in Provision C.10.a.i.

- (a) Permittees shall implement trash prevention and control actions, including full trash capture systems or other trash management actions, or combinations of actions, with trash discharge control equivalent to or better than full trash capture systems, to reduce trash generation to a Low trash generation rate or better.

A full capture system is any single device or series of devices that traps all particles retained by a 5 mm mesh screen and has a design treatment capacity of not less than the peak flow rate resulting from a one-year, one-hour, storm in the sub-drainage area or designed to carry at least the same flow as the storm drain connected to the inlet. The device(s) must also have a trash reservoir large enough to contain a reasonable amount of trash safely without overflowing trash into the overflow outlet between maintenance events. Types of systems certified by the State Water Resources Control Board are deemed full capture systems. A stormwater treatment facility implemented in accordance with Provision C.3 is also deemed a full capture system if the facility, including its maintenance, prevents the discharge of trash to the downstream MS4 and receiving waters and discharge points from the facility, including overflows, are appropriately screened or otherwise configured to meet the full trash capture screening specification for storm flows up to the full trash capture one-year, one-hour storm hydraulic specification ~~(Provision C.10.a.iii.)~~.

Actions equivalent to full trash capture are actions that send no more trash down the storm drain system than a full trash capture device would allow, which is essentially no trash discharge except in very



large storm flows. The Provision C.10.a.i percent reductions shall be demonstrated by percent of 2009 Very High, High, and Moderate trash generation areas reduced to lower trash generation categories or Low trash generation by the Provision C.10.a.i mandatory deadlines.

- (b) By July 1, 2025, Permittees shall ensure that private lands draining that are moderate, high, or very high trash generating, and that drain to storm drain inlets that theyPermittees do not own or operate, (private), but that are plumbed to Permittees' storm drain systems ~~in Very High, High, and Moderate trash generation areas~~ are equipped with full trash capture systems or are managed with trash discharge control actions equivalent to or better than full trash capture systems. The efficacy of the latter actions equivalent to or better than full trash capture systems shall be assessed with visual assessments in accordance with Provision C.10.b.iiiii. If there is a full trash capture device downstream of these private lands that is designed, operated, and maintained to control trash discharges from that land area, no other trash control is required.

#### C.10.b. Demonstration of Trash Reduction Outcomes

- i. **Full Trash Capture Systems** – Permittees shall maintain, and provide for inspection and review upon request, documentation of the design, operation, and maintenance of each full trash capture system, including the mapped location and drainage area served by each system. Permittees shall provide their respective vector control agencies with the names and locations of new and existing full trash capture devices.
- (a) **Inspection and Maintenance** – Permittees shall inspect and maintain full trash capture devices to ensure that they are operating appropriately and have sufficient operating capacity to capture trash consistent with the requirements of this Provision. The inspection and maintenance of each full capture device shall be at a frequency sufficient to prevent plugging, including plugging of the 5 mm screen leading to trash overflow and bypass, flooding, or a full condition of the device's trash reservoir causing bypassing of trash. At a minimum, all full trash capture devices shall be inspected and maintained once per year. In High and Very High trash generation areas, all full trash capture devices shall be inspected at least twice per year (and maintained as necessary), with the inspections spaced at least three months or more apart.
- (b) For catch basin insert type full capture systems, if any such device is found to have a plugged or blinded screen, or is 50 percent full or greater, during an inspection or a maintenance event, the inspection

and maintenance frequency shall be increased so that the device is neither plugged nor 50 percent or more full of trash at the next inspection or maintenance event. For high-flow capacity ~~types of full capture systems devices~~, if any such device is found to have a plugged or blinded screen, or exhibits a condition that exceeds the manufacturer's guidelines for requiring maintenance, the inspection and maintenance frequency shall be increased so that the device is neither plugged nor exceeds the manufacturer's guidelines during the next inspection or maintenance event.

ii. **Maintenance Records** – Permittees shall retain device-specific maintenance records, including, at a minimum: device type, date of installation, location, drainage area, date(s) of inspection and maintenance, the capacity condition of the device at the time of inspection and maintenance (full and overflowing or with storage capacity remaining), any special problems such as flooding, screen blinding or plugging from leaves, plastic bags, or other debris causing overflow, any damage reducing function, or other negative conditions. A summary of this information shall be reported in each Annual Report and may be limited to the number of full capture devices maintained that exhibited a plugged, 50 percent or more full, or overflowing condition upon inspection or maintenance.

(a) **Certification** – Permittees shall certify annually that each full trash capture system is operated and maintained to meet full trash capture system requirements. Drainage areas served by an adequately maintained full trash capture system will be considered equivalent to or better than a Low trash generation rate area.

~~(b) With their 2024 Annual Report, Permittees shall submit a program-wide operation and maintenance summary report that identifies the frequency and approach used by Permittees for the inspection and maintenance of full trash capture devices. This report shall include, but not be limited to, a detailed description of common issues associated with the operation and maintenance of full trash capture devices, device siting and access issues, device types that are prone to plugging or other factors that may impact effective operation, and device types that require frequent maintenance.~~

iii. **Other Trash Management Actions** – Permittees shall maintain, and provide for inspection and review upon request, documentation of non-full trash capture system trash control actions that verifies implementation of each action. Permittees shall also conduct assessment of the action that verifies effectiveness of the action or combination of actions and maintain, and provide for inspection and review upon request, documentation of assessments.

- (a) **Implementation Documentation** – Permittees shall maintain documentation of trash control actions that describes each action or combination of actions, the level of implementation, the timing and frequency of implementation, standard operating procedures if applicable, location(s) of implementation actions including mapped location(s) and drainage area(s) affected or description of areal extent, tracking and enforcement procedures if applicable, and other information relevant to effective implementation of the action or combination of actions.
- (b) **Visual Assessment of Outcomes of Other Trash Management Actions** – Permittees shall conduct visual on-land assessment, including photo documentation, or other acceptable assessment method (see ~~Provision C~~Provision C.10.b.iii.(b)-(iv)), of each trash generation area within which it is implementing other trash management actions or combination of actions other than full trash capture, to determine or verify the effectiveness of the action or combination of actions. Permittees may assess and account for one or more trash generation areas in a single trash management area within which a control action or combination of control actions is implemented. The visual on-land assessment method used shall meet or exceed the following criteria:
- (i) Conduct observations of the sidewalk, curb and gutter within each trash management area, or locations associated with sources of trash.
  - (ii) Conduct observations at randomly selected locations covering at least ten percent of a trash management area's street miles or at strategic locations, provided they are representative of trash generation in the management area and they will represent the effectiveness of the control action(s) implemented or planned in the management area.
  - (iii) Conduct observations at a frequency consistent with known or estimated trash generation rate(s) within a trash management area and the time frequency of the control action(s) implemented or planned in the management area. Conduct observations for effectiveness approximately at the halfway point of the interval between instances of recurring trash control actions such as street sweeping and on-land cleanup.
  - (iv) Permittees may put forth substantive and credible evidence that certain management actions or sets of management actions when performed to a specified performance standard yield a certain

trash reduction outcome reliably. Permittees shall submit such evidence to the Executive Officer as a submittal separate from any other submittals or reports. If this evidence is accepted by the Executive Officer, the Permittees may claim a similar trash reduction outcome by demonstrating that they have performed these management actions at the specified performance standard.

- iv. Percentage Discharge Reduction** – Percentage discharge reduction from 2009 from Very High generation areas reduced to High, Moderate, and Low, High generation areas reduced to Moderate and Low, and Moderate trash generation areas reduced to Low trash generation category to meet the required total percent reduction (% Reduction) shall be calculated based on the following formula:

$$\% \text{ Reduction} = 100 [(12A_{VH(2009)} + 4A_{H(2009)} + A_{M(2009)}) - (12A_{vh} + 4A_h + A_M)] / (12A_{VH2009} + 4A_{H2009} + A_{M2009})$$

where:

$A_{VH(2009)}$  = total amount of the 2009 very high trash generation category jurisdictional area

$A_{H(2009)}$  = total amount of the 2009 high trash generation category jurisdictional area

$A_{M(2009)}$  = total amount of the 2009 moderate trash generation category jurisdictional area

$A_{VH}$  = total amount of very high trash generation category jurisdictional area in the reporting year

$A_H$  = total amount of high trash generation category v jurisdictional area in the reporting year

$A_M$  = total amount of moderate trash generation category jurisdictional area in the reporting year

12 = Very High to Moderate weighing ratio

4 = High to Moderate weighing ratio

100 = fraction to percentage conversion factor

- v. Source Control** – Permittee jurisdiction-wide actions to reduce trash at the source, particularly persistent trash items other than those addressed under previous Permits (foam foodware and single-use plastic bags) may be valued toward trash load reduction compliance by up to ten percent load reduction total for all such actions. To claim a load percentage reduction value,

Permittees must provide substantive and credible evidence that new source control actions are being implemented jurisdiction-wide and reduce trash by the claimed value. A Permittee may support its claimed source reduction value with reference studies from other jurisdictions provided that it also provide credible evidence that the chosen source control action would achieve comparable trash reduction if implemented in the Permittee's jurisdiction.

A jurisdiction-wide source control load reduction value cannot be claimed after June 30, 2025. However, Permittees may demonstrate and claim full trash capture equivalence of a source control in specific trash generation areas or in combination with other controls in an area if the control or combination of controls are documented, assessed, and verified in accordance with Provision C.10.b.iii.

**vi. Partial Trash Reduction – Curb Inlet Screens** – Studies conducted by the Permittees during MRP 2 assessed the benefit of other control measures, such as curb inlet screens in combination with street sweeping, in reducing the amount of trash discharged through MS4s. However, additional information is needed to determine the effectiveness of curb inlet screens in reducing trash within a given trash management area. Permittees may demonstrate through further assessment and study, as described below, that the installation and appropriate maintenance of curb inlet screens, accompanied by street sweeping at an appropriate frequency, within Moderate trash generation areas can effectively reduce the trash generation rate to Low under the following conditions:

- (a) Permittees shall propose an acceptable method to verify that the area where curb inlet screens have been or will be installed are Moderate trash generating. Permittees shall also propose an appropriate method and frequency of verification, post installation, on the change (if any) in the trash generation rate following the installation of curb inlet screens.
- (b) Permittees shall propose an appropriate street sweeping frequency where curb inlet screens are installed that, when implemented, effectively reduces the area's trash generation rate to Low.
- (c) At a minimum, Permittees shall evaluate street sweeping effectiveness based on multiple factors other than frequency, and sufficient to allow a determination of proper and effective street sweeper access. Examples of additional evaluations that could be completed include effectiveness associated with enhanced street/curb accessibility via proper signage, ticketing, and towing vehicles when appropriate.

- (d) The inspection and maintenance of each curb inlet screen shall be conducted at a frequency sufficient to ensure the screen is functioning appropriately, e.g., a screen is not stuck in an open position or plugged, including plugging of the screen leading to opening of the screen under flows less than those described in Provision C.10.a. ~~iii~~.ii.(a).
- (e) Permittees shall propose an appropriate method of covering/blocking horizontal surface grates during street sweeping events (to prevent trash from being swept into the grates), and an appropriate method for capturing smaller pieces of trash/debris from entering the MS4 via the horizontal surface grates.
- (f) Permittees shall submit the results of the additional study, as described above, for Executive Officer approval. The report must appropriately describe and demonstrate the conditions under which the combined use of curb inlet screens and street sweeping effectively reduce the trash generation rate of an area from Moderate to Low.

#### **C.10.c. Requirements for Flood Management Agencies**

Flood management agencies must continue to implement requirements for trash ~~full~~ capture systems, as specified in Table 10-1, below. Flood management agencies must also implement trash control measures such as trash pickups and installation of trash receptacles, to control Moderate, High, and Very High trash generation areas within their jurisdiction including, but not limited to, parking lots, trailhead areas, and along recreational paths and trails, and demonstrate effectiveness of these trash control measures as specified in Provision C.10.b. ~~iii~~.

**Table 10-1. Requirements for Flood Management Agencies**

| Flood Management Agency  | Trash Capture Requirement  |
|--|--|
| Santa Clara Valley Water District                                    | 4 trash booms or 8 outfall capture devices (minimum 2 ft. diameter outfall) or equivalent measures |
| Alameda County Flood Control Agency                                  | 3 trash booms or 6 outfall capture devices (minimum 2 ft. diameter outfall) or equivalent measures |
| Alameda Co. Zone 7 Flood Control Agency                              | 1 trash boom or 2 outfall capture devices (minimum 2 ft. diameter outfall) or equivalent measures  |
| Contra Costa County Flood Control Agency                             | 2 trash booms or 4 outfall capture devices (minimum 2 ft. diameter outfall) or equivalent measures |
| San Mateo County Flood and Sea Level Rise Resiliency District        | 1 trash boom or 2 outfall capture devices (minimum 2 ft. diameter outfall) or equivalent measures  |
| Vallejo <del>Sanitation and</del> Flood & <u>Wastewater</u> District | 1 trash boom or 2 outfall capture devices or equivalent measures (minimum 2 ft. diameter outfall)  |

**C.10.d. Trash Load Reduction Plans**

- i. Permittees shall maintain, and provide for inspection and review upon request, a Trash Load Reduction Plan, including an implementation schedule to meet the Provision C.10.a Trash Load Reduction requirements. A summary of any new revisions to the Plan shall be included in the Annual Report. The Plan shall describe trash load reduction control actions being implemented or planned and the trash generation areas or trash management areas where the actions are or will be implemented, including jurisdiction-wide actions such as source control ordinances. The Plans may include actions to control sources outside of the Permittees’ jurisdictions that are causing or contributing to adverse trash impacts in the receiving water(s). Permittees that choose to implement such control actions may account for them towards meeting the Provision C.10.a Trash Load Reduction requirements as long as they can demonstrate the controls will be sustained, and they quantify the sustained load reduction benefit (relative to control actions in the trash generation areas or trash management areas in their jurisdiction that drained to the affected receiving water).

- ii. Permittees shall calculate their trash load reduction, relative to 2009 baseline conditions, without the trash load reduction offsets described in Provision C.10.f, as of June 30, 2023. If that reduction is less than 90 percent, then Permittees shall develop and implement an updated Trash Load Reduction Plan. ~~The Pursuant to Provision C.22.c, the updated~~ Trash Load Reduction Plan shall include ~~detailed~~ a schedule of additional trash load reduction implementation actions sufficient to achieve compliance with the 90 percent compliance benchmark within a reasonable timeframe, and ~~a schedule to attain at the~~ 100 percent reduction from 2009 levels, achieved through implementation of full trash capture, or other equivalent actions, consistent with the requirements of this Provision, by June 30, 2025. Permittees shall submit their updated Trash Load Reduction Plans with their 2023 Annual Report.
- iii. Permittees unable to attain 100 percent trash load reduction, relative to 2009 baseline conditions, by June 30, 2025, while accounting for credits from new source controls (as described in Provision C.10.b.v) may be granted additional time until June 30, 2026, to achieve 100 percent reduction via full trash capture, or equivalent, contingent on developing and implementing an approved Direct Discharge Control Plan as described in Provision C.10.f.ii.

**C.10.e. ~~Trash Reduction~~ Impracticability Report**

Permittees may collectively submit a programmatic report by March 31, 2023, for the approval of the Executive Officer, that describes conditions under which it is impracticable to control trash via full trash capture devices ~~or equivalent actions.~~ The impracticability report ~~should~~ shall include, but not be limited to, the following:

- i. A description of the engineering constraints that prevent the installation of full trash capture devices ~~or implementation of non-structural controls.~~
- ii. A process for evaluating and determining impracticability of full trash capture devices ~~or implementation of non-structural controls.~~
- iii. ~~Alternative Controls:~~ The report shall include alternative controls or a combination of controls that may be implemented to reduce trash loads to meet the maximum extent practicable ("alternative controls") requirements and deadlines in Provision C.10.a. Examples of alternative controls include, but are not limited to, requiring businesses or property owners to pick up litter, successful implementation of excess trash receptacles and collection services, increased code enforcement or parking enforcement/ticketing/towing, additional trash pick-ups, street sweeping, ~~and~~ assessment and execution of cooperative implementation opportunities with Caltrans or neighboring Permittees.



~~iv.iii. The report should include a detailed description and timeline of implementation of partial benefit actions that can be implemented to control trash to the maximum extent practicable in areas where full trash capture equivalency is deemed impracticable. Partial benefit actions may include the installation of curb inlet screens, or other maintenance measures that may be implemented over the long term to control trash in areas where full trash capture, or the equivalent, is currently impracticable. Some examples of long-term actions may include: curb inlet screens, and long term measures such as pump station or storm drain retrofits, implementation of green stormwater infrastructure that controls trash, or changes to the catchment to allow effective implementation of full trash capture measures, or the equivalent. The impracticability report should include a process for both evaluating impracticability and implementing partial benefit actions to the maximum extent practicable.~~

~~v.iv. A Permittee~~ **Permittees** shall use an approved trash impracticability report in developing the updated Trash Load Reduction Workplans required by Provision C.10.d.

#### **C.10.f. Optional Trash Load Reduction Offset Opportunities**

- i. Creek and Shoreline Cleanup** – A Permittee may offset part of its Provision C.10.a trash load percent reduction requirement by conducting cleanup of creek and shoreline areas. The creek and shoreline cleanup efforts should be conducted at a minimum frequency of twice per year, and sufficient to demonstrate sustained improvement of the creek or shoreline area. The maximum offset that may be claimed is ten percent. Offsets for creek and shoreline cleanups will no longer be applicable after June 30, 2025.

A Permittee may claim a load reduction offset of one percent for the June 30, 2023 mandatory trash reduction compliance benchmark for each total of trash volume removed from cleanups that is ten percent of the Permittees' 2009 trash load volume estimates, based on its trash generation maps and average categorical trash generation rates (see Provision C.10.a.ii), in accordance with the following formula:

1% Reduction Offset (Volume) =  $(12 + 4 A_{H(2009)} + A_{M(2009)}) OF$

where:

$A_{VH(2009)}$  = total amount of 2009 very high trash generation category jurisdictional area

$A_{H(2009)}$  = total amount of 2009 high trash generation category jurisdictional area

$A_{M(2009)}$  = total amount of 2009 moderate trash generation category jurisdictional area

12 = Very High to Moderate weighing ratio

4 = High to Moderate weighing ratio

$OF$  = offset factor equal to  $(7.5 \times 0.1)$  for the 2023 mandatory trash load reduction deadline, where 7.5 is the conversion from acres to gallons based on trash generation rates and 0.1 is the ten to one offset ratio.

- ii. **Direct Trash Discharge Controls** – Permittees with an approved Direct Discharge Control Plan (DDCP) may claim up to fifteen percent using the Provision C.10.f.i formula towards offsetting their Provision C.10.a trash load percent reduction requirement. The DDCP shall include a detailed description of control measures the Permittee will implement to control the direct discharge of trash to receiving waters from non-storm drain system sources. Offsets for direct discharge controls will no longer be applicable after June 30, 2025.

Permittees wishing to submit a new DDCP pursuant to Provision C.10.d.iii shall submit the DDCP for approval no later than April 1, 2024. Permittees with an existing DDCP approved during the Previous Permit shall submit an updated DDCP for approval no later than September 1, 2022, in order to continue claiming trash load percent reduction offsets. DDCPs shall be sufficient to provide trash reduction benefits equivalent to or greater than the areas not yet in compliance, as calculated using the formula in Provision C.10.b.iv, and shall include:

- (a) A description of sources of the directly discharged trash;
- (b) A description of control actions that will be implemented during the permit term to prevent or reduce direct discharge trash loads, including those associated with unsheltered homeless populations and illegal dumping, in a systematic and comprehensive manner;
  - (i) For Permittees whose DDCPs address significant discharges from populations experiencing unsheltered homelessness, systematic

and comprehensive implementation of control actions shall include a commitment to, and a plan for, increasing the provision of emergency, transitional, and/or permanent housing, and the following services: trash and sanitary services, and other services which are necessary to ~~meet the needs of people experiencing~~ reduce discharges associated with unsheltered homelessness, such as RV safe parking areas and pump out services, and social services ~~such as health care, means that can help the unsheltered homeless transition~~ to provide food, and job training housing.

The DDCP shall prioritize providing housing and services to people experiencing unsheltered homelessness who are living near receiving waters.

The DDCP shall document the existing capacities for housing and services as of the time of the DDCP's submittal, and include projections of changes to those capacities for each subsequent year during the Permit term.

- (ii) For Permittees whose DDCPs address significant discharges from illegal dumping, systematic and comprehensive implementation of control actions shall include a commitment to, and a plan for, actions that will prevent direct discharges of trash to receiving waters from illegal dumping. Such actions include, but are not limited to, abating illegal dumping sites, providing dumping vouchers (particularly to socioeconomically disadvantaged communities), holding free waste drop-off events, and implementing onsite structural BMPs to prevent direct discharges from illegal dumping sites to receiving waters.

The DDCP shall prioritize addressing illegal dumping that occurs near receiving waters.

The DDCP shall document existing sites where illegal dumping occurs, controls at illegal dumping sites, voucher and free waste drop-off programs, and include projections for reductions in illegal dumping, increases of controls at illegal dumping sites, and expansions of (or the creation of) programs to control illegal dumping, such as dumping voucher programs and waste drop-off events, for each subsequent year during the Permit term.

- (iii) For Permittees whose DDCPs address significant discharges from both unsheltered homeless populations and illegal dumping sites, Permittees shall submit DDCPs in compliance with both Provisions C.10.f.ii.b.(i) and C.10.f.ii.b.(ii).

- (c) A map of the affected receiving water area and associated watershed;  
and
- (d) A description of how effectiveness of controls will be assessed,  
including documentation of controls, quantification of trash volume  
controlled, and assessment of resulting improvements to receiving  
water conditions.

### C.10.g. Reporting

Each Permittee shall provide the following in each Annual Report or otherwise  
by the date specified:

- i. With each Annual Report, a summary of trash control actions within each trash  
management area, including the types of actions, levels of implementation,  
areal extent of implementation, and whether the actions are ongoing or new,  
including initiation date.
- ii. With their 2024 Annual Report, Permittees shall submit a revised trash  
generation area map or maps, as described in Provision C.10.a.ii.
- iii. With each Annual Report, a summary of implementation actions and progress  
toward meeting the July 1, 2025, requirement for all private lands to implement  
full trash capture systems, or be managed with trash discharge control actions  
equivalent to or better than full trash capture systems, as required in Provision  
C.10.a.ii. ~~(b-)~~.
- iv. With each Annual Report, certification that each of its full trash capture  
systems is operated and maintained to meet full trash capture system  
requirements; a description of any system(s) that did not meet full trash  
capture system requirements (e.g., due to plugging or overflowing); and any  
corrective actions taken.
- ~~v. With their 2023 Annual Report, a program wide operation and maintenance  
summary report as described in Provision C.10.b.ii.b, identifying frequency,  
approach, issues, and corrective action associated with full trash capture  
devices.~~
- ~~vi.v.~~ With each Annual Report, an accounting of its non-full trash capture system  
trash control actions assessments by providing a summary description of  
assessments in each of its trash management areas, including the number  
and dates of observations.
- ~~vii.vi.~~ Permittees unable to attain the 90 percent mandatory trash reduction  
compliance benchmark by June 30, 2023, via full trash capture, or equivalent,  
shall, by June 30, 2023, submit a notice of noncompliance, pursuant to  
Provision C. ~~2322~~.c and an updated Trash Load Reduction Plan as described  
in Provision C.10.d.ii.

**viii.vii.** With their 2023 Annual Report, Permittees shall submit a report evaluating their trash reduction, relative to 2009 baseline conditions, as of June 30, 2023, without including offsets. Permittees unable to meet the 90 percent mandatory trash reduction compliance benchmark without the trash load reduction offsets described in Provision C.10.f shall submit, with their 2023 Annual Report, an updated Trash Load Reduction Plan as described in Provision C.10.d.ii.

**ix.viii.** Permittees unable to attain 100 percent trash load reduction, relative to 2009 baseline conditions, by June 30, 2025, while accounting for credits from new source control (as described in Provision C.10.b.v) shall, by June 30, 2025, submit a notice of noncompliance pursuant to Provision C.23.c, including a plan to come into compliance with the 100 percent trash load reduction requirement. Permittees may be granted additional time until June 30, 2026, to achieve 100 reduction via full trash capture, or equivalent, contingent on developing and implementing a direct discharge control plan (DDCP) as described in Provision C.10.f.ii.

**x.ix.** By March 31, 2023, Permittees may collectively submit a programmatic report for the approval of the Executive Officer, that describes typical conditions where it may be impracticable to control trash via full trash capture devices ~~or~~ **equivalent actions**, as described in Provision C.10.e.

**xi.x.** With the 2024 Annual Report, Permittees that offset part of their Provision C.10.a trash load percent reduction requirement through additional cleanup of creek and shoreline areas, as described in Provision C.10.f.i, shall submit a summary of the additional cleanup actions implemented, and the benefit to water quality achieved through those actions.

**xii.xi.** Permittees with approved DDCPs shall provide the following information in each Annual Report for which they use an offset from the implementation of Provision C.10.f.ii towards their trash load percent reduction:

- (1) For Permittees whose DDCPs address significant discharges from unsheltered homeless populations, the following information for the current year, and for each prior year of the Permit term:

The estimated number of people experiencing unsheltered homelessness in their jurisdiction; the estimated number of people experiencing unsheltered homelessness living within **approximately** 500 feet of receiving waters; the estimated portion of those populations provided housing as described in Provision C.10.f.ii.b.(i); the estimated portion of those populations served with the services described in Provision C.10.f.ii.b.(i); the number and scope of sanitation controls and services provided to homeless encampments; the number and scope of trash controls and services provided to homeless encampments; and the number and scope of sanitary cleanouts and other services provided to

RVs. Each of these reporting elements shall be accompanied by a narrative description.

- (2) For Permittees whose DDCPs address significant discharges from illegal dumping sites, the following information for the current year, and for each prior year of the Permit term:

The total number of active illegal dumping sites; the number of active illegal dumping sites within approximately 500 feet of receiving waters; the number of illegal dumping sites where trash was collected and the amount of material collected; dumping vouchers provided (and who they are provided to); dumping vouchers used; and outreach and education provided to the public regarding illegal dumping and the availability of dumping vouchers. Each of these reporting elements shall be accompanied by a narrative description.

- (3) For Permittees whose DDCPs address significant discharges from both unsheltered homeless populations and illegal dumping sites, the Permittees shall report on both Provision C.10.g.xi.(1) and C.10.g.xi.(2) in each Annual Report.

## C.11. Mercury Controls

The Permittees shall implement the following control program for mercury. This control program consists of load reduction assessment, source control measures, treatment control measures, measures to reduce risk to consumers of Bay fish, and reporting on all these measures according to the provisions below. The provisions implement the urban runoff requirements of the San Francisco Bay and Guadalupe River Watershed mercury TMDLs for those waters identified therein and reduce mercury loads by approximately 10 kg/yr, making substantial progress toward achieving the urban runoff mercury load allocations established for the TMDLs. The San Francisco Bay mercury TMDL implementation plan calls for attainment of the regionwide, urban runoff wasteload allocation of 82 kg/yr by February 2028. This mercury wasteload allocation represents a load reduction from all urban runoff sources to the Bay of approximately 78 kg/yr compared to loads estimated using data collected prior to development of the TMDL. To measure progress, the TMDL implementation plan calls for attainment of an interim loading milestone by February 2018 of 120 kg/yr, halfway between the 2003 estimated load, 160 kg/yr, and the aggregate allocation. This interim loading milestone has been achieved. The Permittees may comply with any requirement of this Provision through a collaborative effort and are encouraged to do so.

### C.11.a. Assess Mercury Load Reductions from Stormwater

- i. **Task Description** – The Permittees shall implement an assessment methodology and data collection program to quantify, in a technically sound manner, mercury loads reduced through implementation of pollution prevention, source control, and treatment control, green stormwater infrastructure and other measures taken as part of the mercury control program defined by this provision. A technically sound load reduction accounting system is described in the Fact Sheet and is based on information submitted by Permittees in the January 2014 Integrated Monitoring Report and updated through reporting during the last Permit term as part of Reasonable Assurance Analysis reporting submitted by all Programs in September 2020. This accounting system describes calculation methodologies, data requirements, and model parameters used to quantify the load reduction for each type of control measure. The Permittees shall use the assessment methodology to demonstrate the load reductions achieved during this Permit term as well as progress toward achieving the MRP program area mercury TMDL wasteload allocations. The Permittees shall update this assessment methodology as necessary for use in the subsequent permit term.
- ii. **Implementation Level** – The Permittees shall quantify the mercury load reductions achieved through all the pollution prevention, source control, green stormwater infrastructure, and other treatment control measures implemented

during this Permit term as described in Provisions C.11.b through C.11.e. For this Permit term, the Permittees will achieve a regionwide total load reduction of approximately 10 kg mercury/yr if they implement effective mercury control measures consistent with all requirements of Provisions C.11.b through C.11.g. The Permittee-specific portion of the regionwide mercury load reduction estimate shall be based on the proportion of county population in each municipality.

**iii. Reporting**

- (1) In each Annual Report, Permittees shall submit documentation confirming that all control measures effectuated during the previous Permit term for which load reduction credit was recognized continue to be implemented at an intensity sufficient to maintain the credited load reduction.
- (2) In the 2026 Annual Report, Permittees shall report the total loads reduced using the assessment methodologies described and cited in the Fact Sheet to demonstrate cumulative mercury load reduced from each control measure implemented since the beginning of the Permit term. This report shall also include an estimate of load reductions from control measures taking place after the 2026 Annual Report submittal but before the end of the permit term. Permittees shall submit all supporting data and information necessary to substantiate the load reduction estimates.
- (3) In their 2026 Annual Report, the Permittees shall submit, for Executive Officer approval, any refinements, if necessary, to the measurement and estimation methodologies to assess mercury load reductions from control measures in the subsequent Permit. Any refinements to the methodologies shall be subject to public review.

**C.11.b. Program for Source Property Identification and Abatement**

- i. **Task Description** – Permittees shall investigate, using both conventional sampling and laboratory analysis techniques, land areas that likely contribute mercury to municipal separate storm sewer system (MS4s). These investigations will likely focus on land areas where industrial activities occurred prior to 1980 and continue today (i.e., old industrial land use areas). For those properties or land areas found to be contributing substantial amounts of mercury or where high mercury concentrations are found (generally areas with sediment concentrations greater than 0.5 mg Hg/kg), Permittees shall take action to abate the mercury sources into their MS4s or refer the properties to the Water Board for follow-up measures. Historical monitoring data suggest that mercury concentrations on or near source properties are similar to those found in urban areas in general so identification of source properties for referral may be based on presence of high PCBs concentrations (generally 0.5 mg PCBs/kg) alone. For each source property referred to the Water Board,



Permittees shall implement interim enhanced operation and maintenance (enhanced O&M) measures in the street or storm drain infrastructure adjacent to the referred source property or implement a stormwater treatment system downstream of the property. These enhanced O&M measures shall be sufficient to intercept historically deposited contaminated sediment in the vicinity of the source area and prevent further contaminated sediment from being discharged from the source area to the storm drain system.

**ii. Implementation Level** – Permittees shall investigate the following acreage of likely mercury source properties (accomplished through C.12.b investigations) during the permit term.

- Alameda County: 2,620 acres
- Contra Costa County: 1,700 acres
- San Mateo County: 1,411 acres
- Santa Clara County: 913 acres
- Solano County: 21 acres

If high mercury concentrations associated with a likely source property are detected, Permittees may submit monitoring information to support estimation of the aerial yield to receive mercury load reduction credit, contingent upon implementation of interim enhanced O&M measures in the street or storm drain infrastructure adjacent to the source property or implementation of a stormwater treatment system downstream of the property.

**iii. Reporting**

- (1) In each of the 2022 through 2026 Annual Reports, Permittees shall report progress on the acreage of land areas investigated, including progress toward investigation of 100 percent of the old industrial land use indicated above. The reporting shall indicate what action was taken for the parcels investigated (e.g., abatement, referral, enforcement, etc.). Permittees shall submit all supporting data and information including referral reports.
- (2) Permittees shall report annually on ongoing enhanced O&M activities associated with all past contaminated property referrals. Prior to all new referrals, Permittees shall submit, for staff review and comment, a detailed description of the enhanced O&M plan for the referred properties.
- (3) In their 2026 Annual Report, Permittees shall report as part of reporting under Provision C.11.a.iii(2) on total acreage of land area investigated, area and description of properties referred, description of enhanced O&M measures, and the estimated total mercury mass load reduced (consistent with the approved accounting procedures) resulting from implementing this control measure.

### C.11.c. Program for Control Measure Implementation in Old Industrial Areas

i. **Task Description** – Permittees shall implement or cause to be implemented treatment control measures, stormwater diversion to wastewater treatment facilities, redevelopment (provided GSI is implemented in compliance with C.3.b), or other control measures to achieve mercury load reductions. Permittees have substantial (totaling over 33,100 acres) areas of old industrial land use draining to an MS4 that have not been redeveloped or treated with green stormwater infrastructure or other treatment controls.

- Alameda County: 9,374 acres
- Contra Costa County: 11,199 acres
- San Mateo County: 4,450 acres
- Santa Clara County: 6,647 acres
- Solano County: 1,426 acres

Implementation of treatment control measures on 33,102,580 acres (which is 10~~9~~nearly 8 percent of the land area shown above) will result in a total estimated load reduction of about 140,108 g mercury/yr (~~33,100~~33,102,580 acres ~~x 10% of area~~ x 70% efficiency x 60 mg mercury/acre/yr estimated yield from old industrial areas, see Fact Sheet) in the area covered by the Permit.

Implementation of control measures with efficiency lower than 70% will result in reduced acreage credit (for those lower efficiency control measures) toward fulfillment of the total acreage requirement shown below. The acres credited will be proportional to the ratio of implemented control measure efficiency relative to the efficiency of treatment controls (see Fact Sheet for more explanation and examples). The old industrial land use acreages to be addressed by control measure implementation by the end of the permit term and the estimated mercury load reductions (for 70% control measure efficiency) are shown below. Permittees may comply with this provision element either through implementation of control measures on the following amounts of old industrial land use, based on implementation of 70% efficient control measures, or through accounting for the mass reduction of mercury shown in parentheses. If control measures are less than 70% efficient, the required acreage shall be calculated as set forth above.

- Alameda County: 937,664 acres (39,28 grams/yr)
- Contra Costa County: 1,119,664 acres (47,28 grams/yr)
- San Mateo County: 445 acres (19 grams/yr)
- Santa Clara County: 664 acres (28 grams/yr)
- Solano County: 142 acres (6 grams/yr)

ii. **Implementation Level** – Permittees shall, within the permit term, implement or cause to be implemented control measures (treatment controls, diversion to wastewater treatment plants, redevelopment (provided GSI implemented in compliance with Provision C.3.b), enhanced operation and treatment maintenance controls, or other controls) to comply with the performance metrics in Provision C.11.c.i. Use of conditionally-approved sizing criteria cited in section C.3.j(3)(b) for treatment control systems will be considered provided an analysis is performed, acceptable to the Executive Officer, to determine the reduced effectiveness of the facility sized according to these alternative criteria. If a Permittee chooses to comply by demonstrating mercury load reductions, it shall use accounting methods consistent with Provision C.11.a. Implementation of treatment controls and stormwater diversion in mercury-contaminated catchments not designated as old industrial may count toward fulfillment of the required acreage. In choosing locations for treatment controls and diversions, Permittees should focus on public rights-of-way and storm drain infrastructure in catchments containing known or suspected source areas or evidence of moderate to high mercury or PCBs soil concentrations (generally soil/sediment concentrations greater than 0.3 mg mercury/kg or 0.2 mg PCBs/kg). Treatment control systems must be designed and sized consistent with Provision C.3.d – (Numeric Sizing Criteria for Stormwater Treatment Systems). Permittees may choose to implement diversions to wastewater treatment systems to address this requirement. Because of the higher removal efficiency of wastewater treatment facilities, each acre addressed by routing stormwater to wastewater treatment facilities will be credited as 1.3 acres toward satisfying the treatment requirements provided that the diversion facilities are sized and operated consistent with the sizing requirements used for non-diversion treatment facilities.

iii. **Reporting**

- (1) ~~In their 2022 Annual Report~~ By March 31, 2023, Permittees shall submit plans and schedules for implementing control measures and stormwater diversion to wastewater treatment facilities in old industrial areas to address mercury load reduction requirements included in this provision. This reporting shall include maps of the areas where control measures are to be implemented, the acreage of these catchments, and a description of design and sizing features all control measures, treatment devices and stormwater diversion facilities implemented for each treated catchment.
- (2) Beginning in 2023, in each Annual Report Permittees shall submit an account of control measure and stormwater diversion implementation consistent with the plan submitted in the 2022 Annual Report and any modifications thereto. Reporting shall include maps of the areas treated, the acreage of catchments addressed, and a description of all control

measures, installed treatment devices and routing facilities for each treated catchment.

- (3) In their 2026 Annual Report, Permittees shall report as part of reporting under Provision C.11.a.iii(2) on all control measures and stormwater diversion measures implemented during the permit term and provide the total acreage treated and an estimate of the total mercury mass load reduced resulting from this implementation.

#### **C.11.d. Mercury Collection and Recycling Implemented throughout the Region**

- i. Task Description** – Permittees shall promote, facilitate, and/or participate in collection and recycling of mercury containing consumer products, devices, and equipment (e.g., thermometers, thermostats, switches, bulbs). Mercury is found in a wide variety of consumer products (e.g., fluorescent bulbs, thermostats, thermometers) that are subject to recycling requirements. These recycling efforts are already happening throughout the Region, and Provision C.11.d requires promotion, facilitation and/or participation in these region-wide recycling efforts to increase effectiveness and public participation.
- ii. Implementation Level** – Permittees shall promote recycling of mercury-containing products and make efforts to increase effectiveness of these recycling efforts throughout the region. Recycling of mercury-containing bulbs and thermostats alone results in a regionwide load reduction of approximately 10 kg mercury per year.<sup>52</sup>
- iii. Reporting**
  - (1) In each of the 2023 through 2026 Annual Reports, Permittees shall report on efforts to promote recycling of mercury-containing products and efforts to increase effectiveness of these recycling efforts. Permittees shall also report on the mass of mercury-containing material collected throughout the region along with an estimate of the mass of mercury contained in recycled material using the methodology contained in load reduction accounting system described and cited in the Fact Sheet.

#### **C.11.e. Plan and Implement Green Stormwater Infrastructure to Reduce Mercury Loads**

- i. Task Description** – Permittees shall implement green stormwater infrastructure (GSI) projects during the term of the Permit consistent with implementing requirements in Provision C.3.j. Implementation of green stormwater infrastructure will result in a total estimated load reductions of 108 g mercury/yr (see Fact Sheet for basis of estimate).

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<sup>52</sup> Geosyntec Consultants and San Francisco Estuary Institute. 2010. "Desktop Evaluation of Controls for Polychlorinated Biphenyls and Mercury Load Reduction."

ii. **Implementation Level** – The level of implementation is determined by the requirements of Provision C.3.fj.

iii. **Reporting**

(1) In their 2026 Annual Report, Permittees shall report as part of Provision C.11.a.iii(2)) on all green stormwater projects (e.g., parcel-based, street ROW, and regional projects) implemented during the permit term and provide the total acreage treated and an estimate of the total mercury mass load reduced resulting from this implementation. This reporting shall include summary descriptions of the implemented projects including GSI type, location, and area.

**C.11.f. Prepare Implementation Plan and Schedule to Achieve TMDL Wasteload Allocations**

i. **Task Description** – In 2020, Permittees submitted a Reasonable Assurance Analysis and plan (RAA) demonstrating that sufficient control measures will be implemented to attain the mercury TMDL wasteload allocations by 2028. Permittees shall evaluate the effectiveness of all mercury control measures and update the RAA as necessary. Updates can be focused on those control measures for which new information is available and for control measures not evaluated in previous efforts. Permittees shall also prepare detailed implementation plans for all control measures to be implemented in and inform permit requirements for the subsequent permit term.

ii. **Implementation level** – Permittees shall update, as necessary, their mercury control measures implementation plan and corresponding reasonable assurance analysis from the previous permit term (2015-2020, MRP 2). The update may be focused on control measures for which new information is available or for those control measures not previously evaluated. The long-term plan must:

- (1) Identify all technically and economically feasible mercury control measures to be implemented (including GSI projects); and
- (2) Include a schedule according to which these technically and economically feasible control measures will be fully implemented; and
- (3) Provide an evaluation and quantification of the mercury load reduction of such measures as well as an evaluation of costs, control measure efficiency and significant environmental impacts resulting from their implementation.

Additionally, Permittees shall identify all specific control measures to be implemented, the intensity of control measure implementation, and the

estimated load reduction benefit from control measures implemented during the subsequent permit term. This implementation plan must include:

- (4) Identification of all control measures implemented during the current permit term and any additional control measures to be implemented in the subsequent permit term;
- (5) A description of the intensity or extent of control measure implementation (e.g., acres treated, acres investigated for source areas, types of roadway projects for which protocols applied, etc.);
- (6) Identification of accountability metrics to track during the subsequent permit corresponding to the proposed implementation intensity; and
- (7) Estimates for load reductions to be achieved through implementation of control measures during subsequent permit term at the proposed intensity.

iii. **Reporting** – Permittees shall submit the updated plan and schedule no later than March 31, 2026.

**C.11.g. Fate and Transport Study of Mercury: Urban Runoff Impact on San Francisco Bay Margins**

- i. **Task Description** – The Permittees shall conduct or cause to be conducted studies concerning the fate, transport, and biological uptake of mercury discharged from urban runoff to San Francisco Bay margin areas. The studies should focus on near-shore areas contaminated with mercury from historical activity and the expected trajectory of recovery as sources from local watersheds are reduced.
- ii. **Implementation Level** – The specific information needs include understanding the in-Bay transport of mercury discharged in urban runoff, the sediment and food web mercury concentrations in margin areas receiving urban runoff, the influence of urban runoff on the patterns of food web mercury accumulation, especially in Bay margins, and the identification of drainages where urban runoff mercury are particularly important in food web accumulation.
- iii. **Reporting** – The Permittees shall submit in their 2023 Annual Report a workplan describing the specific manner in which these information needs will be accomplished and describing the studies to be performed with a preliminary schedule. The Permittees shall report on status of the studies in their 2023 Annual Report. The Permittees shall report in the March 15, 2026, Integrated Monitoring Report the findings and results of the studies completed, planned, or in progress as well as implications of studies on potential control measures to be investigated, piloted, or implemented in future permit cycles.

**C.11.h. Implement a Risk Reduction Program**

- i. Task Description** – The Permittees shall conduct an ongoing risk reduction program to address public health impacts of mercury in San Francisco Bay/Delta fish. The fish risk reduction program shall take actions to reduce actual and potential health risks in those people and communities most likely to consume San Francisco Bay-caught fish, such as subsistence fishers and their families. The risk reduction framework developed in the previous permit term, which funded community-based organizations to develop and deliver appropriate communications to appropriately targeted individuals and communities, is an appropriate approach. Permittees should work with local health departments, the Bay Area Clean Water Agencies, and the Western States Petroleum Association to leverage resources for this program and to appropriately target at-risk populations.
- ii. Implementation Level** – At a minimum, Permittees shall conduct or cause to be conducted an ongoing risk reduction program with the potential to reach 3,000 individuals annually who are likely consumers of San Francisco Bay-caught fish. Permittees are encouraged to collaborate with San Francisco Bay industrial and wastewater discharger agencies in meeting this requirement. In year four of the Permit term, Permittees shall evaluate the effectiveness of their risk reduction program.
- iii. Reporting** – The Permittees shall report on the status of the risk reduction program in each of their Annual Reports, including a brief description of actions taken, an estimate of the number of people reached, and why these people are deemed likely to consume Bay fish. The Permittees shall report the findings of the effectiveness evaluation of their risk reduction program in their 2026 Annual Report.

## C.12. Polychlorinated Biphenyls (PCBs) Controls

The Permittees shall implement the following control program for PCBs. This control program consists of load reduction assessment, source control measures, treatment control measures, measures to reduce risk to consumers of Bay fish, and reporting on all these measures according to the provisions below. The provisions implement the urban runoff requirements of the PCBs TMDL for those waters identified therein. By implementing the PCBs control measure program requirements, Permittees will make substantial progress (an estimated 1.647 kg/yr of additional load reduction) toward achieving the urban runoff PCBs wasteload allocation from the TMDL. Of the 2 kg/yr overall load allocation for urban runoff sources for the entire region, 1.647 kg/yr has been allocated to Permittees, and loads must be reduced to this level by March 2030. This PCBs wasteload allocation represents a load reduction from all urban runoff sources to the Bay of approximately 18 kg/yr (14.4 kg/yr from Permittees) compared to loads estimated using data collected in 2003. The Permittees may comply with any requirement of this Provision through a collaborative effort and are encouraged to do so.

### C.12.a. Assess PCBs Load Reductions from Stormwater

- i. **Task Description** – The Permittees shall implement an assessment methodology and data collection program to quantify, in a technically sound manner, PCBs loads reduced through implementation of pollution prevention, source control, and treatment control, green stormwater infrastructure and other measures taken as part of the PCBs control program defined by this provision. A technically sound load reduction accounting system is described in the Fact Sheet and is based on information submitted by Permittees in the January 2014 Integrated Monitoring Report and updated through reporting during the last Permit term as part of Reasonable Assurance Analysis reporting submitted by all Programs in September 2020. This accounting system describes calculation methodologies, data requirements, and model parameters used to quantify the load reduction for each type of control measure. The Permittees shall use the assessment methodology to demonstrate the load reductions achieved during this Permit term as well as progress toward achieving the MRP program area PCBs TMDL wasteload allocations. The Permittees shall update this assessment methodology as necessary for use in the subsequent permit term.
- ii. **Implementation Level** – The Permittees shall quantify the PCBs load reductions achieved through all the pollution prevention, source control, green stormwater infrastructure, and other treatment control measures implemented during this Permit term as described in Provisions C.12.b through C.12.g. For this Permit term, the Permittees will achieve an estimated regionwide total load reduction of 1.647 kg/yr PCBs if they implement effective PCBs control



measures consistent with all requirements of Provisions C.12.b through C.12.g. The Permittee-specific portion of the regionwide PCBs load reduction estimate shall be based on the proportion of county population in each municipality.

**iii. Reporting**

- (1) In each Annual Report, Permittees shall submit documentation confirming that all control measures effectuated during the previous Permit term for which load reduction credit was recognized continue to be implemented at an intensity sufficient to maintain the credited load reduction.
- (2) In the 2026 Annual Report, Permittees shall report the total loads reduced using the assessment methodologies described and cited in the Fact Sheet to demonstrate cumulative PCBs load reduced from each control measure implemented since the beginning of the Permit term. This report shall also include an estimate of load reductions from control measures taking place after the 2026 Annual Report submittal but before the end of the permit term. Permittees shall submit all supporting data and information necessary to substantiate the load reduction estimates.

In their 2026 Annual Report, the Permittees shall submit, for Executive Officer approval, any refinements, if necessary, to the measurement and estimation methodologies to assess PCBs load reductions from control measures in the subsequent Permit. Any refinements to the methodologies shall be subject to public review.

**C.12.b. Program for Source Property Identification and Abatement**

- i. **Task Description** – Permittees shall investigate, using both conventional sampling and laboratory analysis techniques, land areas that likely contribute PCBs to MS4s. These investigations will likely focus on land areas where industrial activities occurred prior to 1980 and continue today (i.e., old industrial land use areas). For those properties or land areas found to be contributing substantial amounts of PCBs or where high PCBs concentrations are found (generally areas with sediment concentrations greater than 0.5 mg PCBs/kg), Permittees shall take actions to abate the PCB sources into their MS4s or refer the properties to the Water Board for follow-up measures. For each source property referred to the Water Board, Permittees should implement interim enhanced operation and maintenance (enhanced O&M) measures in the street or storm drain infrastructure adjacent to the referred source property or implement a stormwater treatment system downstream of the property. These enhanced O&M measures shall be sufficient to intercept historically deposited contaminated sediment in the vicinity of the source area and prevent further contaminated sediment from being discharged from the source area to the storm drain system.

ii. **Implementation Level** – Permittees shall investigate the following acreage of likely PCBs source properties during the permit term.

- Alameda County: 2,620 acres
- Contra Costa County: 1,700 acres
- San Mateo County: 1,411 acres
- Santa Clara County: 913 acres
- Solano County: 21 acres

Based on data collected through investigating land areas for the presence of source properties during the previous permit terms, this level of implementation will result in PCBs load reductions of approximately 740 g PCBs/yr, 50 percent of which would be credited during this permit term contingent upon implementation of interim enhanced operation and maintenance (enhanced O&M) measures in the street or storm drain infrastructure adjacent to the referred source property or implementation of a stormwater treatment system downstream of the property.

iii. **Reporting**

- (1) In each of the 2022 through 2026 Annual Reports, Permittees shall report progress on the acreage of land areas investigated, including progress toward investigation of 100 percent of the old industrial land use indicated above. The reporting shall indicate what action was taken for the parcels investigated (e.g., abatement, referral, enforcement, etc.). Permittees shall submit all supporting data and information including referral reports.
- (2) Permittees shall report annually on ongoing enhanced O&M activities associated with all past contaminated property referrals. Prior to all new referrals, Permittees shall submit, for staff review and comment, a detailed description of the enhanced O&M plan for the referred properties.
- (3) In their 2026 Annual Report, Permittees shall report as part of reporting under Provision C.12.a.iii(2) on total acreage of land area investigated, area and description of properties referred, description of enhanced O&M measures, and the estimated total PCBs mass load reduced (consistent with the approved accounting procedures) resulting from implementing this control measure.

#### C.12.c. Program for Control Measure Implementation in Old Industrial Areas

- i. **Task Description** – Permittees shall implement or cause to be implemented treatment control measures, stormwater diversion to wastewater treatment facilities, redevelopment (provided GSI is implemented in compliance with

Provision C.3.b), or other control measures to achieve PCBs load reductions. Permittees have substantial (totaling over 33,100 acres) areas of old industrial land use draining to an MS4 that have not been redeveloped or treated with green stormwater infrastructure or other treatment controls.

- Alameda County: 9,374 acres
- Contra Costa County: 11,199 acres
- San Mateo County: 4,450 acres
- Santa Clara County: 6,647 acres
- Solano County: 1,426 acres

Implementation of treatment control measures on ~~33102,580~~ 33102,580 acres (which is ~~10~~ about 8 percent of the land area shown above) will result in a total estimated load reduction of about ~~600467~~ 600467 g PCBs/yr (~~33,1002,580~~ 33,1002,580 acres x 10% of area x 70% efficiency x 259 mg PCBs/acre/yr estimated yield from old industrial areas, see Fact Sheet) in the area covered by the Permit.

Implementation of control measures with efficiency lower than 70 percent will result in reduced acreage credited (for those lower efficiency control measures) toward fulfillment of the total acreage requirement shown below. The acres credited will be proportional to the ratio of implemented control measure efficiency relative to the efficiency of treatment controls (see Fact Sheet for more explanation and examples). The old industrial land use acreages to be addressed by control measure implementation by the end of the permit term and the estimated PCBs load reductions (for 70 percent control measure efficiency) are shown below. Permittees may comply with this provision element either through implementation of control measures on the following amounts of old industrial land use, based on implementation of 70 percent efficient control measures, or through accounting for the mass reduction of PCBs shown in parentheses. If control measures are less than 70 percent efficient, the required acreage shall be calculated as set forth above.

- Alameda County: ~~937664~~ 937664 acres (~~170121~~ 170121 grams/yr)
- Contra Costa County: ~~1,119664~~ 1,119664 acres (~~203121~~ 203121 grams/yr)
- San Mateo County: 445 acres (81 grams/yr)
- Santa Clara County: 664 acres (121 grams/yr)
- Solano County: 142 acres (26 grams/yr)

- ii. **Implementation Level** – Permittees shall, within the permit term, implement or cause to be implemented control measures (treatment controls, diversion to wastewater treatment plants, redevelopment (provided GSI implemented in compliance with Provision C.3.b), enhanced operation and treatment/maintenance controls, or other controls) to comply with the performance metrics in Provision C.12.c.i. If a Permittee chooses to comply by

demonstrating PCBs load reductions, it shall use accounting methods consistent with Provision C.12.a. Implementation of treatment controls and stormwater diversion in PCBs-contaminated catchments not designated as old industrial may count toward fulfillment of the required acreage. In choosing locations for treatment controls and diversions, Permittees should focus on public rights-of-way and storm drain infrastructure in catchments containing known or suspected source areas or evidence of moderate to high PCBs soil concentrations (generally soil/sediment concentrations greater than 0.3 mg mercury/kg or 0.2 mg PCBs/kg). Treatment control systems must be designed and sized consistent with Provision C.3.d (Numeric Sizing Criteria for Stormwater Treatment Systems). Use of conditionally-approved sizing criteria cited in section C.3.i(3)(b) for treatment control systems will be considered provided an analysis is performed, acceptable to the Executive Officer, to determine the reduced effectiveness of the facility sized according to these alternative criteria. Permittees may choose to implement diversions to wastewater treatment systems to address this requirement. Because of the higher removal efficiency of wastewater treatment facilities, each acre addressed by routing stormwater to wastewater treatment facilities will be credited as 1.3 acres toward satisfying the treatment requirements provided that the diversion facilities are sized and operated consistent with the sizing requirements used for non-diversion treatment facilities.

### iii. Reporting

- (1) In their 2022 Annual Report By March 31, 2023, Permittees shall submit plans and schedules for implementing control measures and stormwater diversion to wastewater treatment facilities in old industrial areas to address PCBs load reduction requirements included in this provision. This reporting shall include maps of the areas where control measures are to be implemented, the acreage of these catchments, and a description of design and sizing features all control measures, treatment devices and stormwater diversion facilities implemented for each treated catchment.
- (2) Beginning in 2023, in each Annual Report Permittees shall submit an account of control measure and stormwater diversion implementation consistent with the plan submitted in the 2022 Annual Report and any modifications thereto. Reporting shall include maps of the areas treated, the acreage of catchments addressed, and a description of all control measures, installed treatment devices and routing facilities for each treated catchment.
- (3) In their 2026 Annual Report, Permittees shall report as part of reporting under Provision C.12.a.iii(2) on all control measures and stormwater diversion measures implemented during the permit term and provide the

total acreage treated and an estimate of the total PCBs mass load reduced resulting from this implementation.

**C.12.d. Program for Controlling PCBs from Bridges and Overpasses**

- i. **Task Description** – Permittees shall implement a Caltrans specification (to be developed through proposed requirement in Caltrans stormwater permit, see Fact Sheet for details) to manage, as part of bridge and overpass roadway replacement or major repair, potential PCBs-containing material in bridge roadway expansion joints. Implementation of this specification will result in a total estimated load reductions of 300 g PCBs/yr (see Fact Sheet for calculation details in the program area). Countywide programs and their member municipalities will be credited with a portion of this total load reduction in proportion to their share of population. Load reduction credit for this program will begin upon submittal of documentation demonstrating full implementation of the Caltrans specification for applicable roadway structures.
- ii. **Implementation Level** – Permittees shall track the development of the Caltrans specification and develop an inventory of bridges in their jurisdictions that includes bridge ownership and a replacement/repair schedule. Finally, Permittees shall, by December 31, 2022, or six months after availability of the specification, implement or cause to be implemented the Caltrans specification during applicable replacement activities that are under the direction of the Permittee.
- iii. **Reporting**
  - (1) In their 2022 Annual Report or the Annual Report immediately following availability of the specification, Permittees shall include a description of the Caltrans specification for managing PCBs-containing materials in bridge or roadway expansion joints during roadway replacement or repair.
  - (2) In their ~~2022~~2023 Annual Report, Permittees shall submit an inventory of bridges in the program area that includes bridge ownership and the bridge roadway replacement schedule.
  - (3) In their 2022 through 2026 Annual Reports, Permittees shall submit documentation confirming the use of the Caltrans specification (once it is available) during all instances of bridge roadway replacement or repair in their jurisdiction during that reporting year and provide an estimate of the volume of material managed and total PCBs mass load reduced resulting from implementation of the specification.
  - (4) In their 2026 Annual Report, Permittees shall report as part of reporting under Provision C.12.a.iii.(2) an estimate of the total PCBs mass load reduced, consistent with approved accounting procedures, resulting from implementing this control measure.

**C.12.e. Program for Controlling PCBs from Electrical Utilities**

- i. Task Description** – Permittees shall (1) develop and implement a program to manage PCBs in oil-filled electrical equipment (OFEE) for municipally-owned electrical utilities in the MRP program area and (2) collaborate with the Water Board to determine PCBs loadings in OFEE from non-municipally owned electrical utilities.
- ii. Implementation Level** – Permittees shall do the following:

  - (1) Develop or improve standard operating procedures to respond to, clean up, and report spills and releases from municipally owned OFEE and fully implement these procedures.
  - (2) Develop and implement a plan to maintain and upgrade municipally owned OFEE.
  - (3) Document the PCBs loads avoided through existing and ongoing OFEE removal and replacement programs.
  - (4) Collaborate with the Water Board to request information from non-municipally owned electrical utilities. Permittees shall utilize the information to (a) determine the locations of PCBs-containing OFEE, (b) improve estimates of the total baseline mass of PCBs in OFEE in the MRP permit area, (c) evaluate the actions the non-municipally owned electrical utilities are taking to reduce or prevent the release of PCBs from their equipment and to respond to potential releases of PCBs from their equipment; and (d) identify opportunities to improve the response and cleanup protocols.
- iii. Reporting**

  - (1) Permittees shall submit in their 2023 Annual Report the estimated PCBs loads avoided (along with supporting documentation) resulting from the removal of municipally-owned PCBs-containing OFEE through maintenance programs and system upgrades for the period 2002 to the beginning of this permit term (2023).
  - (2) Permittees shall submit in their 2023 Annual Report a description of the improved spill response and reporting practices implemented by municipally owned electrical utilities.
  - (3) Permittees shall submit in their 2024 Annual Report a summary of their plans to maintain and upgrade OFEE for municipally owned electrical utilities.
  - (4) Permittees shall submit in every Annual Report, beginning with the ~~2022~~2023 report, a summary of the actions undertaken during that

reporting year that remove municipally owned PCBs-containing OFEE along with the loads avoided and the details of the calculations and assumptions used to estimate the load reduced.

- (5) Permittees shall submit in their 2026 Annual Report, as part of reporting under Provision C.12.a.iii(2), the estimated PCBs loads reduced during the permit term associated with municipally owned OFEE removal resulting from maintenance programs and system upgrades.
- (6) Within 12-months of the Water Board transmitting to the Permittees information from the non-municipally owned electrical utilities, Permittees shall submit a report discussing the following, to the extent possible given any data limitations: (a) locations of the PCBs-containing OFEE still in service, (b) previous locations of PCBs-containing OFEE, and (c) opportunities to improve non-municipally owned electrical utilities' standard operating procedures for spill response, reporting, cleanup, and sampling and analysis.

**C.12.f. Plan and Implement Green Stormwater Infrastructure to reduce PCBs loads**

i. **Task Description** – Permittees shall implement green stormwater infrastructure (GSI) projects during the term of the Permit consistent with implementing requirements in Provision C.3.j. Implementation of green stormwater infrastructure will result in a total estimated load reductions of 200 g PCBs/yr (see Fact Sheet for basis of estimate).

ii. **Implementation Level** – The level of implementation is determined by the requirements of Provision C.3.j.

**iii. Reporting**

- (1) In their 2026 Annual Report, Permittees shall report as part of Provision C.12.a.iii(2) on all green stormwater projects (e.g., parcel-based, street right-of-way, and regional projects) implemented during the permit term and provide the total acreage treated and an estimate of the total PCBs mass load reduced resulting from this implementation. This reporting shall include summary descriptions of the implemented projects including GSI type, location, and area.

**C.12.g. Manage PCB-Containing Materials and Wastes During Building Demolition Activities**

i. **Task Description** – ~~Permittees shall ensure that buildings are tested for PCBs-containing material prior~~ Prior to issuing a demolition permit ~~by implementing~~, Permittees shall implement the protocol developed during the previous permit term (see Fact Sheet for protocol description) for managing

PCB-containing materials and wastes during building demolition so that PCBs do not enter MS4s. Permittees shall also ensure construction sites are inspected during demolition and obtain verification that materials from demolished buildings are appropriately disposed.

Provision C.12.g. applies to applicable structures containing building materials with PCBs concentrations of 50 ppm or greater at the time such structures undergo demolition. PCBs from these structures can enter storm drains during and/or after demolition through vehicle track-out, airborne releases, soil erosion, or stormwater runoff. Applicable structures include, at a minimum, commercial, public, institutional, and industrial structures constructed or remodeled between the years 1950 and 1980. Single-family residential and wood frame structures are exempt.

Structures that are constructed or remodeled between the years 1950 and 1980 and require emergency demolition to protect public health and/or safety are exempt from implementing the protocol, but they must be reported in accordance to Provision C.12.g.iii.(3)(d)

The Town of Clayton is exempt from the requirements of Provision C.12.g. because it has demonstrated it has no applicable structures. Other Permittees may be exempted from the requirements in Provision C.12.g. if they provide evidence acceptable to the Executive Officer in their 2023 Annual Report that the only structures that existed pre-1980 within its jurisdiction were single-family residential and/or wood-frame structures.

Implementation of this protocol will result in a total estimated load reduction of 2 kg PCBs/yr (see Fact Sheet for calculation details) in the program area. This constitutes an ongoing rather than a new load reduction.

## ii. Implementation Level

- (1) Permittees shall implement their established protocol ~~to ensure that buildings are tested for PCBs-containing material~~ prior to issuing a demolition permit.
- (2) For demolition of applicable structures containing building materials with PCBs concentrations of 50 ppm or greater approved beginning July 1, 2023, Permittees shall require demolition contractors to provide notification to the Permittees, the Water Board, and U.S. EPA at least one week before any demolition is to occur.
- (3) Beginning the 2023 rainy season, Permittees shall inspect demolition sites with applicable structures containing building materials with PCBs concentrations of 50 ppm or greater pursuant to Provision C.6 to ensure that effective construction pollutant controls are used to prevent discharge into the MS4.



- (4) Permittees shall enhance their construction site control program to minimize migration of PCBs into the MS4 from applicable structures containing building materials with PCBs concentrations of 50 ppm or greater during demolition activities ~~into the MS4~~. Enhancements may include inspecting demolition sites monthly during demolition activities in the dry season (May – September) and requiring the demolition contractors to sweep the project sites and the streets around the property with street sweepers that will effectively remove sediment and dust. Implementation of enhancements shall begin no later than May July 1, 2023.
- (5) For demolition of applicable structures containing building materials with PCBs concentrations of 50 ppm or greater approved after July 1, 2023, Permittees shall verify that PCBs in demolished buildings are properly managed to minimize transport to the MS4 by obtaining official documentation that the building materials with PCBs concentrations of 50 ppm or greater in these demolished applicable structures were disposed appropriately according to state and federal regulations.
- (6) Permittees may elect to update for use in the subsequent permit term the assessment methodology and data collection program to quantify PCBs loads reduced through implementation of the protocol for controlling PCBs during demolition of applicable structures.

### iii. Reporting

- (1) Each Permittee seeking exemption from Provision C.12.g requirements based on lack of applicable structures must submit in its 2023 Annual Report documentation, such as historic maps or other historic records, that clearly demonstrates that the only structures that existed pre-1980 were single-family residential and/or wood-frame structures.
- (2) In their 2023 Annual Report, Permittees shall discuss enhancements to their construction site control program to minimize migration of PCBs from demolition activities into the MS4.
- (3) ~~In each~~ Beginning with their 2023 Annual Report, the Permittees shall provide ~~documentation of~~ each of the following items:
  - (a) The number of applicable structures that applied for a demolition permit during the reporting year;
  - (b) A running list of the applicable structures that applied for a demolition permit since July 1, 2019, the number of samples each structure collected, and the concentration of PCBs in each sample.

- (c) For each applicable structure, with PCBs concentrations of 50 mg/kg or greater, include the following: the project address, the demolition date, and a brief description of the PCBs-containing materials.
- (d) For each structure that was constructed or remodeled between the years 1950 and 1980 and requires emergency demolition to protect public health and/or safety, provide the following: address, date building was constructed, and date of demolition.
- (4) Beginning with their 2024 Annual Report, Permittees shall provide the following: whether the site was inspected during demolition, and, for those cases where notification and advance approval from the U.S. EPA is not required and were approved for demolition after June 30, 2023, the hazardous waste manifest prepared for transportation of the material to a disposal facility.
- (5) In their 2026 Annual Report, Permittees shall submit an evaluation of the effectiveness of the protocol for controlling PCBs during building demolition as well as supporting data. This should be conducted and reported at the regional level on behalf of all Permittees and shall be considered the Report of Waste Discharge for Provision C.12.g for the next permit reissuance.
- (6) In their 2026 Annual Report, Permittees may submit for use in the subsequent permit term an updated assessment methodology and data collection program to quantify PCBs loads reduced through implementation of the protocol for controlling PCBs-containing materials and wastes during demolition of applicable structures.

**C.12.h. Prepare Implementation Plan and Schedule to Achieve TMDL Wasteload Allocations**

- i. **Task Description** – In 2020, Permittees submitted a Reasonable Assurance Analysis and plan (RAA) demonstrating that sufficient control measures will be implemented to attain the PCBs TMDL wasteload allocations by 2030. Permittees shall evaluate the effectiveness of all PCBs control measures and update the RAA as necessary. Updates can be focused on those control measures for which new information is available and for control measures not evaluated in previous efforts. Permittees shall also prepare detailed implementation plans for all control measures to be implemented in and inform permit requirements for the subsequent permit term.
- ii. **Implementation level** – Permittees shall update, as necessary, their PCBs control measures implementation plan and RAA. The update may be focused on control measures for which new information is available or for those control measures not previously evaluated. The long-term plan must:

- (1) Identify all technically and economically feasible PCBs control measures to be implemented (including GSI projects); and
- (2) Include a schedule according to which these technically and economically feasible control measures will be fully implemented; and
- (3) Provide an evaluation and quantification of the PCBs load reduction of such measures as well as an evaluation of costs, control measure efficiency and significant environmental impacts resulting from their implementation.

Additionally, Permittees shall identify all specific control measures to be implemented, the intensity of control measure implementation, and the estimated load reduction benefit from control measures implemented during the subsequent permit term. This implementation plan must include:

- (a) Identification of all control measures implemented during the current permit term and any additional control measures to be implemented in the subsequent permit term;
- (b) A description of the intensity or extent of control measure implementation (e.g., acres treated, acres investigated for source areas, types of roadway projects for which protocols applied);
- (c) Identification of accountability metrics to track during the subsequent permit corresponding to the proposed implementation intensity; and
- (d) Estimates for load reductions to be achieved through implementation of control measures during subsequent permit term at the proposed intensity.

**iii. Reporting** – Permittees shall submit the updated plan and schedule no later than March 31, 2026.

**C.12.i. Fate and Transport Study of PCBs: Urban Runoff Impact on San Francisco Bay Margins**

**i. Task Description** – The Permittees shall conduct or cause to be conducted studies concerning the fate, transport, and biological uptake of PCBs discharged from urban runoff to San Francisco Bay margin areas. The studies should focus on near-shore areas contaminated with PCBs from historical activity and the expected trajectory of recovery as sources from local watersheds are reduced.

**ii. Implementation Level** – The specific information needs include understanding the in-Bay transport of PCBs discharged in urban runoff, the sediment and food web PCBs concentrations in margin areas receiving urban

runoff, the influence of urban runoff on the patterns of food web PCBs accumulation, especially in Bay margins, and the identification of drainages where urban runoff PCBs are particularly important in food web accumulation.

- iii. **Reporting** – The Permittees shall submit in their 2023 Annual Report a workplan describing the specific manner in which these information needs will be accomplished and describing the studies to be performed with a preliminary schedule. The Permittees shall report on status of the studies in their 2023 Annual Report. The Permittees shall report in the March 15, 2026, Integrated Monitoring Report the findings and results of the studies completed, planned, or in progress as well as implications of studies on potential control measures to be investigated, piloted, or implemented in future permit cycles.

#### C.12.j. Implement a Risk Reduction Program

- i. **Task Description** – The Permittees shall conduct an ongoing risk reduction program to address public health impacts of PCBs in San Francisco Bay/Delta fish. The fish risk reduction program shall take actions to reduce actual and potential health risks in those people and communities most likely to consume San Francisco Bay-caught fish, such as subsistence fishers and their families. The risk reduction framework developed in the Previous Permit term, which funded community-based organizations to develop and deliver appropriate communications to appropriately targeted individuals and communities, is an appropriate approach. Permittees should work with local health departments, the Bay Area Clean Water Agencies, and the Western States Petroleum Association to leverage resources for this program and to appropriately target at-risk populations.
- ii. **Implementation Level** – At a minimum, Permittees shall conduct or cause to be conducted an ongoing risk reduction program with the potential to reach 3,000 individuals annually who are likely consumers of San Francisco Bay-caught fish. Permittees are encouraged to collaborate with San Francisco Bay industrial and wastewater discharger agencies in meeting this requirement. In year four of the Permit term, Permittees shall evaluate the effectiveness of their risk reduction program.
- iii. **Reporting** – The Permittees shall report on the status of the risk reduction program in each of their Annual Reports, including a brief description of actions taken, an estimate of the number of people reached, and why these people are deemed likely to consume Bay fish. The Permittees shall report the findings of the effectiveness evaluation of their risk reduction program in their 2026 Annual Report.

### C.13. Copper Controls

The Permittees shall implement the following control program for copper. The Permittees shall implement the control measures and accomplish the reporting on those control measures according to the provisions below. The purpose of these provisions is to implement the control measures identified in the Basin Plan amendment necessary to support the copper site-specific objectives in San Francisco Bay. The Permittees may comply with any requirement of Provision C.13 through a collaborative effort.

#### C.13.a. Manage Waste Generated from Cleaning and Treating of Copper Architectural Features, Including Copper Roofs, during Construction and Post-Construction.

i. **Task Description** – The Permittees shall prohibit the discharge of wastewater to storm drains generated from installing, cleaning, treating, or washing copper architectural features, including copper roofs.

ii. **Implementation Level**

- (1) The Permittees shall require, when issuing building permits, use of appropriate BMPs for managing copper-containing waste during and post-construction.
- (2) The Permittees shall educate installers and operators on appropriate BMPs for managing copper-containing wastes.
- (3) The Permittees shall enforce against noncompliance.

iii. **Reporting**

- (1) In the 2022 Annual Report, those Permittees that have not previously done so shall certify that legal authority currently exists to prohibit the discharge of wastewater to storm drains generated from the installation, cleaning, treating, and washing of copper architectural features, including copper roofs.
- (2) In the 2022 Annual Report, the Permittees shall report how copper architectural features are addressed through the issuance of building permits.
- (3) The Permittees shall report annually permitting and enforcement activities.

#### C.13.b. Manage Discharges from Pools, Spas, and Fountains that Contain Copper-Based Chemicals

i. **Task Description** – Permittees shall prohibit discharges to storm drains from pools, spas, and fountains that contain copper-based chemicals.

- ii. **Implementation Level** – The Permittees shall either: 1) require installation of a sanitary sewer discharge connection for pools, spas, and fountains, including connection for filter backwash, with a proper permit from the POTWs; or 2) require diversion of discharge for use in landscaping or irrigation.

iii. **Reporting**

- (1) In the 2022 Annual Report, the Permittees that have not previously done so shall certify that legal authority currently exists to prohibit the discharges to storm drains of water containing copper-based chemicals from pools, spas, and fountains.
- (2) In the 2022 Annual Report, the Permittees shall report how copper-containing discharges from pools, spas, and fountains are addressed to accomplish the prohibition of the discharge.
- (3) The Permittees shall report annually on any enforcement activities.

**C.13.c. Industrial Sources**

- i. **Task Description** – The Permittees shall ensure industrial facilities do not discharge elevated levels of copper to storm drains by ensuring, through industrial facility inspections, that proper BMPs are in place.

ii. **Implementation Level**

- (1) As part of industrial site controls required by Provision C.4, the Permittees shall identify facilities likely to use copper or have sources of copper (e.g., plating facilities, metal finishers, auto dismantlers) and include them in their inspection program plans.
- (2) The Permittees shall educate industrial inspectors on industrial facilities likely to use copper or have sources of copper and proper BMPs for them.
- (3) As part of the industrial inspection, inspectors shall ensure that proper BMPs are in place at such facilities to minimize discharge of copper to storm drains, including consideration of roof runoff that might accumulate copper deposits from ventilation systems on site.

iii. **Reporting**

The Permittees shall highlight copper reduction results in the industrial inspection component in the Provision C.13 portion of each Annual Report.

## C.14. Bacteria Control for Impaired Water Bodies

Provisions C.2 through C.7 contain requirements to control sources of pollutants to the Permittees' MS4s. Implementation of these requirements should control sources of bacteria<sup>53</sup>; still, exceedances of bacteria water quality objectives occur in some water bodies that receive urban runoff. The requirements of this Provision apply to Permittees with discharges identified as causing or contributing to exceedances of bacteria water quality objectives in a receiving water. Permittees identified in this Provision shall demonstrate compliance with bacteria related Receiving Water Limitations during this Permit term through the timely implementation of control measures and other actions to reduce bacteria discharges from their municipal separate storm sewer systems in accordance with the requirements of this Provision. Provision C.14.a applies to the cities of Mountain View and Sunnyvale for their discharges that are causing or contributing to exceedances of bacteria water quality objectives in Stevens Creek, Calabazas Creek, and Sunnyvale East Channel/Guadalupe Slough, water bodies without bacteria TMDLs. Provision C.14.b applies to Permittees with San Pedro Creek and Pacifica State Beach Indicator Bacteria TMDL wasteload allocations, Provision C.14.c applies to Permittees with San Francisco Bay Beaches Bacteria TMDL wasteload allocations, ~~Provision C.14.d applies to Permittees with Petaluma River Bacteria TMDL wasteload allocations~~, and Provision C.14.ed applies to Permittees with Pillar Point Harbor Beaches and Venice Beach Bacteria TMDL wasteload allocations.

### C.14.a. Enhanced Bacteria Control

Enhanced bacteria control requirements are applicable to the cities of Mountain View and Sunnyvale for discharges that are causing or contributing to exceedances of applicable bacteria water quality objectives in Stevens Creek (both cities), Calabazas Creek (Sunnyvale), and Sunnyvale East Channel, ~~respectively.~~<sup>54</sup> ~~"Permittees/Guadalupe Slough (Sunnyvale).~~<sup>55</sup>"Cities" as used in this Provision C.14.a refers to these cities~~..~~.

The actions described in this Provision shall be implemented where controllable bacteria sources are located within the Cities' jurisdiction, in order to reduce bacteria inputs to the water body with bacteria exceedances.

<sup>53</sup> Bacteria as used herein refers to fecal indicator bacteria.

<sup>54</sup> ~~Where sampling data exceed the Statistical Threshold Value for the water contact recreation beneficial use in Basin Plan Table 3-2, additional sampling is needed to determine if the geometric mean is exceeded. When ten percent or more of the geometric mean values exceed the objective over a ten-month data collection period, the water body exceeds the objective.~~

<sup>55</sup> Where sampling data exceed the Statistical Threshold Value for the water contact recreation beneficial use in Basin Plan Table 3-1, additional sampling is needed to determine if the geometric mean is exceeded. When ten percent or more of the geometric mean values exceed the objective over a ten-month data collection period, the water body exceeds the objective.

**i. Municipal Operations Bacteria Control**

- (1) **Task Description** – Evaluate the potential for municipal operations to generate and cause bacteria to be transported to surface waters. ~~Develop~~Where such potential is determined to exist, develop and implement BMPs to minimize the transport of bacteria.
- (2) **Implementation Level** – The ~~Permittees~~Cities shall develop and implement BMPs to minimize potential bacteria sources, including, but not limited to, trash, human and animal fecal sources, and excessive biofilm, for the following municipal operations:
  - (a) Street and road cleaning
  - (b) Parks and municipal open space maintenance
  - (c) Sidewalk, plaza, and pavement cleaning
  - (d) MS4 component maintenance, such as cleaning biofilm from catch basins, piping, and pump stations.
- (3) **Reporting** – In each Annual Report, the ~~Permittees~~Cities shall describe the BMPs, frequency and location for actions taken to reduce bacteria sources related to municipal operations.

**ii. Industrial/Commercial Site Bacteria Control and Illicit Discharge Detection and Elimination**

- (1) **Task Description** – Train municipal staff responsible for inspecting and enforcing industrial and commercial site controls and for detecting and eliminating illicit discharges to enhance their focus on potential bacteria sources. ~~Permittees~~The Cities shall use enforcement authorities to ensure bacteria sources are controlled.
- (2) **Implementation Level** – The ~~Permittees~~Cities shall enhance their efforts to ensure transport to surface waters from the following potential bacteria sources is minimized:
  - (a) Roof and exterior washoff of commercial and industrial structures and surfaces, where these sources are likely to contain bacteria, such as from rodent and bird wastes, and are likely to be discharged to receiving water
  - (b) Outdoor garbage and recycle bins
  - (c) Outdoor floor-mat washoff
  - (d) Portable toilets
  - (e) Illicit discharges to the MS4



- (3) **Reporting** –In each Annual Report, the Permittees/Cities shall describe ~~the~~ BMP, frequency, and location for actions taken to reduce bacteria sources related to Industrial and Commercial Site Bacteria Control and Illicit Discharge Detection and Elimination.

### iii. Control of Bacteria Sources Related to Unsheltered Homeless Populations

- (1) **Task Description** – Evaluate the potential for bacteria transport to surface waters from areas inhabited by unsheltered homeless persons. ~~Develop~~ Where such potential is determined to exist, develop and implement BMPs to minimize such bacteria sources and transport.
- (2) **Implementation Level** – The Permittees/Cities shall minimize the transport of bacteria from areas inhabited by unsheltered homeless persons by taking actions that may include, but are not limited to, the following:
  - (a) Provide pump-out stations, mobile pumping services, or voucher programs for proper disposal of sanitary sewage where unsheltered homeless persons reside in recreational vehicles
  - (b) Provide sanitation services, including access to running water, where feasible, at locations where homeless people live or congregate.
  - (c) Establish and update sidewalk, street, and/or plaza cleaning standards for the cleanup and appropriate disposal of human waste
- (3) **Reporting** – In each Annual Report, the Permittees/Cities shall describe the BMPs, numbers or frequency (as applicable), and locations of actions taken to reduce bacteria discharges from areas inhabited by unsheltered persons.

### iv. Pet and Livestock Bacteria Source Control

- (1) **Task Description** – Evaluate the potential for domestic animal sources, such as pet waste, kennels, horse boarding facilities and trails, to generate and cause ~~bacteria~~ to be transported to surface waters. ~~Develop~~ Where such potential is determined to exist, develop and implement BMPs to minimize such bacteria sources and prevent transport.
- (2) **Implementation Level** – The Permittees/Cities shall ensure transport of bacteria from domestic animal sources to surface waters is minimized by taking the following actions:
  - (a) Enhance numbers of, and maintenance of, pet waste stations
  - (b) Inspect pet boarding facilities to ensure pet waste is managed to prevent offsite discharges

(c) Inspect horse boarding facilities, if any, to ensure manure is managed to prevent offsite discharges. Notify Water Board staff of facilities that should enroll in the Confined Animal Facility program.

(3) **Reporting** – In each Annual Report, the Permittees/Cities shall describe the BMPs, numbers or frequency (as applicable), and locations of actions taken to reduce bacteria from domestic animal sources.

**v. Public Outreach on Bacteria Source Control**

(1) **Task Description** – Evaluate public outreach currently conducted to encourage bacteria pollution prevention and determine how to improve such outreach, such as, for example, by focusing outreach on certain populations or at certain locations.

(2) **Implementation Level** – The Permittees/Cities shall enhance public outreach where it is likely to improve human behavior regarding bacteria pollution prevention practices, such as, but not limited to, the following:

- (a) Cleaning up pet waste
- (b) Eliminating litter
- (c) Eliminating outdoor restaurant floor mat washdown
- (d) Using proper BMPs for sidewalk cleaning
- (e) Covering trash storage areas
- (f) Maintaining porta-potties properly.

(3) **Reporting** – In each Annual Report, the Permittees/Cities shall describe the outreach messages, methods of delivery, audiences, and number of repetitions.

**vi. Coordination with Sanitary Sewerage System Entities**

(1) **Task Description** – Overflows and leaks from sanitary sewage conveyance systems can cause bacteria to be transported to MS4s, and commonly the Permittees/Cities are not responsible for maintenance and repair of the sanitary sewerage system. This task encourages the Permittees/Cities to collaborate with the entities responsible for the sanitary sewerage system to minimize overflows and leaks.

(2) **Implementation Level** – The Permittees/Cities shall, to the extent necessary and within the limits of their authorities, collaborate with their counterparts who are responsible for maintenance of the sanitary sewerage system to assist with the following:

- (a) Prioritize maintenance and repair in areas contributing to bacteria loads to surface waters with elevated bacteria
  - (b) Ensure rapid and thorough response to cleanup sanitary sewer system overflows
  - (c) Develop lateral maintenance and replacement programs for consideration by the appropriate legal authority.
- (3) **Reporting** – In each Annual Report, the ~~Permittees~~Cities shall describe the status of any actions taken to coordinate with sanitary sewer entities.

#### vii. Prioritize Trash Removal to Control Bacteria Sources

- (1) **Task Description** – Evaluate the potential bacteria-reduction benefit of prioritizing trash control efforts required in Provision C.10 in areas where trash generation may be contributing to bacteria exceedances in local surface waters. Where such benefit appears significant, reprioritize trash control actions accordingly.
- (2) **Implementation Level** – The ~~Permittees~~Cities shall focus some of their trash reduction efforts to areas where trash generation likely contributes to bacteria exceedances in local surface waters.
- (3) **Reporting** – In each Annual Report, the Cities shall describe how the bacteria-reduction benefit of focused trash-control efforts was evaluated, the conclusions reached, and any actions taken during the reporting period to reprioritize trash control areas.

#### viii. Water Quality Monitoring

**Task Description** – ~~Develop~~The Cities shall develop and implement a monitoring program to identify and characterize potential bacteria sources to receiving waters that have been found to exceed ~~the~~ bacteria water quality objective ~~and(s)~~, to help focus source control efforts, and evaluate effectiveness of controls, and to ultimately demonstrate attainment

(1) Implementation Level – ~~Permittees shall conduct monitoring to identify sources of bacteria to the receiving water and to determine whether~~limitations. The monitoring program shall be designed and adapted to answer the following questions:

- (a) What is the spatial and temporal extent of dry weather flows in the bacteria-objective has been MS4?
- (b) Are indicators of human fecal material present in both dry and wet weather flows observed in the MS4?
- (c) If so, in which stormwater catchments are sources most prominent?

(d) Where are the likely locations of these sources in the catchments?

(e) What measures can be implemented to control these sources?

(f) Are water quality objectives being achieved during dry weather?

(g) Are water quality objectives being achieved during wet weather?

~~(1)~~(2) **Implementation Level** – ~~Appropriate~~At a minimum, the monitoring ~~tasks~~program shall include the following:

(a) Sampling of all MS4 outfalls with flow during three dry weather creek walks. One to be scheduled during July / August 2022, one to be scheduled January / February 2023, and one in April / May 2023;

~~(a)~~(b) Desktop and field methods based on elements described in the California Microbial Source Identification Manual: A Tiered Approach to Identifying Fecal Pollution Sources to Beaches (Griffith et al. 2013);

~~(b) Receiving water monitoring to evaluate if bacteria control actions are reducing bacteria densities.~~

(c) ~~GIS~~Geographic information system analysis of potential sources and existing bacteria control action locations to evaluate existing and identify and optimize additional bacteria controls.;

(d) MS4 bacteria characterization monitoring at least monthly through September 2023, including two events that coincide with wet weather discharges, at a minimum of 14 sites each year to identify sources of bacteria discharges to and from the MS4 using microbial source tracking techniques to detect human genetic markers (i.e., HF183) and to evaluate effectiveness of bacteria controls, including the following:

(i) Identification of stormwater catchments where monitoring will be conducted;

(ii) Characterization of indicator bacteria, i.e., E coli, densities in subwatersheds, storm drains, outfalls, and pump stations that drain to receiving waters with excessive levels of indicator bacteria; and

(iii) Determination of baseline (or current) conditions against which future monitoring results can be compared following new, enhanced, or ongoing control measure implementation.

(e) Receiving water monitoring at least monthly, from October 2023 through September 2024, including two events that coincide with, or within 48 hours, of a storm event forecasted to be at least 0.5 inch in 24 hours, to determine E. coli densities, where salinity is less than 1

ppt, and Enterococci densities, where salinity is greater than 1 ppt, at a minimum total of 5 sites in Steven's Creek, 3 sites in Calaveras Creek, and 1 site in Sunnyvale East Channel, including the following:

- (i) Stevens Creek immediately downstream of Homestead;
- (ii) Stevens Creek La Avenida;
- (iii) Sunnyvale East Channel upstream of Tasman (above tidal influence);
- (iv) Calabazas Creek downstream of Homestead; and
- (v) Calabazas Creek upstream of Tasman.

- ~~(2)~~ **Reporting** – In each Annual Report, ~~describe the the~~ Cities submit the results of all monitoring conducted the previous year, including parameters analyzed, frequencies, and locations, and results of all planned monitoring conducted under Provision C.14.
- (3) **Planning** for ~~Phase Two Action~~ the current year, including parameters, frequencies, and locations.

#### **ix. Compliance with Receiving Water Limitations**

~~(4)~~(1) **Task Description** – ~~Permittees~~ The Cities shall determine ~~if whether~~ discharges from their MS4s are causing or contributing to exceedances of bacteria water quality objectives are being met in receiving waters after implementation of control measures required by Provision C.14.a.i-vii. The Cities are expected to meet Receiving Water Limitations B.2 for applicable bacteria water quality objectives by June 30, 2027. If receiving water limitations are not met, despite a diligent effort to quantify levels and the sources of bacteria in MS4 discharges and documentation of completion of controls required by C.14.a.i-vii and, if not, then the Cities shall submit a plan for additional actions to attain the receiving water quality objective limitations.

(2) **Implementation Level** – ~~Permittees~~ The Cities shall provide a comprehensive assessment of bacteria sources and bacteria controls if to demonstrate compliance with receiving water limitations for applicable bacteria water quality objectives are not. If compliance cannot be achieved by the end of the Permit term. This June 30, 2027, the assessment shall describe additional control measures or increased levels of implementation for existing control measures, with an implementation schedule, and proposed milestones, that will be implemented to attain bacteria receiving water limitations as soon as possible.

(3) Reporting – The Cities shall submit a Mid-Permit Interpretive Report and a Final Interpretive Report.

(a) The Mid-Permit Interpretive Report shall be submitted by March 31, 2025, which includes the following:

- (i) All data collected through September 2024 and description of data validation and quality;
- (ii) Description of progress towards answering questions in C.14.a.viii.(1);
- (iii) Description of specific bacteria sources and/or specific geographic areas that receive implementation of existing control measures, as well as. recommended new, modified, or enhanced control that will be evaluated or implemented;
- (iv) Description of monitoring, subject to approval by the Water Board through a Permit amendment, to be conducted through the remainder of the Permit term to answer the questions in C.14.a.viii.(1). The monitoring shall be as comprehensive, systematic, and robust as what is required in Provision C.14.a.viii while being commensurate with the need to address and resolve bacteria exceedances in the receiving waters.

(b) The Final Interpretive Report shall be submitted by December 31, 2026, which includes the following:

- (i) All data collected through September 2026 and description of data validation and quality;
- (ii) Description of progress towards answering questions in C.14.a.viii.(1);
- (iii) Description of specific bacteria sources and/or specific geographic areas that received implementation of existing control measures, as well as. new, modified, or enhanced control that were evaluated or implemented;
- (iv) Determination if bacteria receiving water limitations have or will be met, by June 30, 2027; and
- (i)(v) If bacteria receiving water limitations will not be met by June 30, 2027, description of additional control measures or increased levels of implementation for existing control measures, with an implementation schedule, and proposed milestones, that will be implemented to attain bacteria water quality objectives receiving water limitations as soon as possible, and a proposed monitoring

program designed to answer the questions in C.14.a.viii.(1) that will be implemented in the next permit term.

~~(5) **Reporting**—Submit the assessment and plan of actions no later than 180 days prior to Permit expiration.~~

#### **C.14.b. City of Pacifica and San Mateo County Bacteria Controls**

The City of Pacifica (City) and San Mateo County (County) Permittees shall implement the actions in this subprovision to control fecal indicator bacteria. The City and County shall focus implementation of bacteria control measures in areas where benefits are most likely to accrue. The goal of this subprovision is to implement the urban runoff (stormwater runoff and dry weather flows) requirements of the San Pedro Creek and Pacifica State Beach Indicator Bacteria TMDL. In accordance with the TMDL, the City and County are required to meet the wasteload allocations for Pacifica State Beach by August 1, 2021, and for San Pedro Creek by August 1, 2028. The City and County may comply with any requirement of this provision through a collaborative effort.

##### **i. Control Measures to Achieve Indicator Bacteria Wasteload Allocations**

(1) **Task Description** – The City and County shall implement bacteria control measures and pollution prevention strategies to prevent or reduce discharges of bacteria from their storm drain systems to meet the stormwater TMDL wasteload allocations in the San Pedro Creek (Creek) watershed and Pacifica State Beach (Beach) Indicator Bacteria TMDL (TMDL Project Area).

(2) **Implementation Level** – To comply with this element:

(a) The City and County, as appropriate, shall prohibit potential illicit discharges into their storm sewer system from sanitary sewer overflows or the sanitary sewer lines within their jurisdictions as follows:

(i) Ensure all sanitary sewer lines within a 2,000-foot radius of the Creek and Beach are inspected, assessed, and repaired, as needed, within 60 months of the Permit effective date;

(ii) Ensure at least 20 percent of the storm sewer system discharging to San Pedro Creek or Pacifica State Beach is evaluated and addressed for illicit sanitary sewer connections each year to prevent discharges from the sanitary sewer lines; and

(iii) Coordinate with the responsible sanitary sewer collection agency to identify and implement BMPs to prevent sanitary sewer overflows, such as developing or Coordinate with the responsible

sanitary sewer collection agency to identify and implement BMPs to prevent sanitary sewer overflows, such as developing or enhancing a spill response plan for significant sanitary sewer overflow incident areas to decrease potential sewage discharges into the storm sewer system.

- (b) The County shall continue to address bacteria discharges from commercial horse and dog kennel facilities (facilities) into its storm sewer system as follows:
  - (i) Inspect each facility annually for code compliance by June 30 of each year.
  - (ii) Review each facility's current manure, stormwater, and drainage management plans for code compliance by June 30 of each year.
  - (iii) Provide a copy of the facilities inspection and review reports to the Water Board in each annual report.
  - (iv) Take progressive enforcement, as needed, for facilities found to be noncompliant with the County's Confined Animal Ordinance.
- (c) The City shall continue to address bacteria discharges from commercial horse facilities (facilities) into its storm sewer system as follows:
  - (i) Review each facility's compliance with the City's Administrative Policy on "Standards for Keeping Animals."
  - (ii) Review each facility's compliance with the City's Municipal Code on "Animal Excreta."
  - (iii) Conduct annual compliance review and inspection of each facility by June 30 of each year.
  - (iv) Provide a copy of the facilities inspection and review reports to the Water Board in each annual report.
  - (v) Take progressive enforcement action(s), as needed, to bring noncompliant facilities into compliance with the City's Administrative Policy on "Standards for Keeping Animals" and Municipal Code on "Animal Excreta."
- (d) The City shall continue to maintain existing and any new dog waste clean-up signs, waste bag dispensers, and trash cans within the TMDL Project Area.
- (e) The City shall continue to implement a visual inspection and cleanup plan for high dog waste accumulation areas along the Creek and its



tributaries. From April 1 through October 31, inspections and cleanups shall, at a minimum, be conducted on a quarterly basis (e.g., once each in April, July, and October). From November 1 through March 31, inspections and cleanups shall be conducted prior to forecast rain events with a forecast rainfall depth of 0.2 inches or more (as measured at Half Moon Bay Airport (KHAF) Meteorological Station, or comparable site), and at a frequency of no less than once a month.

- (f) The City shall continue to implement a pet waste public outreach and education campaign that, at a minimum, includes all the following:
- (i) Establish a public pet waste management stakeholder group (e.g., formal or informal dog owners club).
  - (ii) Prepare and implement public service announcements regarding pet waste management and associated impacts to the Creek and Beach to play on the local television station and to include in print ads in the Pacifica Tribune.
  - (iii) Distribute a mailer with an informational brochure to residents and businesses describing proper pet waste management, the linkage of the watershed to the Creek and Beach, and the adverse impact on those water bodies and those recreating in them from improper pet waste management.
  - (iv) Maintain a web page to the City website with information on the TMDL and the water quality monitoring and BMP implementation activities, as well as information about proper pet waste management and the impact of improperly deposited waste on water quality of the Creek and Beach and public health.
  - (v) Create and implement a pre-rain pet waste cleanup email alert to residents, reminding them to cleanup accumulated pet waste in their yards that could otherwise get washed into the Creek and Beach.
  - (vi) Participate in local events and festivals to distribute pet waste management materials (educational fliers, dog waste bags, etc.).
- (g) The City and County, based on the results of the source characterization and BMP effectiveness, and wasteload allocation attainment analyses described in Provision C.14.b-iii, shall modify or refocus control measure implementation efforts as appropriate, at a frequency of no less than every two years.
- (3) **Reporting** – No later than March 15 of each year, the City and County shall submit a comprehensive TMDL Status and Monitoring Report,

reporting on the specific control measures (as listed in Provision C.14.b.1.ii) that have been implemented in the TMDL Project Area during the foregoing October 1 through September 30 period. This report shall include:

- (a) The number, type, and locations and/or frequency (if applicable) of control measures;
- (b) The description, scope, and start date of pollution prevention measures; and
- (c) Clear statements of the responsibilities of each participating Permittee for implementation of pollution prevention or control measures.

**ii. Water Quality Monitoring to Assess Attainment of Wasteload Allocations**

- (1) **Task Description** – Permittees shall determine whether the TMDL wasteload allocations are attained.
- (2) **Implementation Level** – The City and County shall conduct attainment water quality monitoring activities as follows:
  - (a) **Sample Locations** – Two stations shall be monitored: the mouth of San Pedro Creek (Creek Mouth) and Pacifica State Beach (the original ~~Linda Mar #5~~ station, as of the TMDL’s adoption date of November 2012, which was located approximately 300 feet north of the Creek mouth, and at shin depth). originally referred to as Linda Mar #5 in the TMDL Staff Report, but currently referred to as Linda Mar #7). The locations of these stations are shown in the TMDL Staff Report.
  - (b) **Sampling Frequency** – The two attainment stations shall be monitored weekly on an ongoing basis for fecal indicator bacteria. The weekly sampling shall occur year-round regardless of weather conditions, provided the conditions are safe for field staff to collect the samples.
  - (c) **Sampling Constituents** – Samples collected from the Creek Mouth shall be analyzed for *E. coli* and total coliform. Samples collected from Linda Mar #5 station shall be analyzed for *Enterococcus*, fecal coliform, and total coliform.
  - (d) The City and County shall analyze the results of the attainment monitoring and compare the results to applicable bacterial water quality objectives and the allowable exceedances of those objectives as specified in the TMDL.

- (3) **Reporting** – In Annual TMDL Status and Monitoring Reports submitted on March 15 each year, the City and County shall analyze, summarize, and report the results of the ongoing attainment monitoring, as follows:
- (a) The City and County shall complete a data evaluation, which shall focus on determining whether the TMDL wasteload allocations are being attained in the Creek and at the Beach.
  - (b) The indicator bacteria results from the attainment monitoring stations (Creek Mouth and original Linda Mar #5 station, (currently called Linda Mar #7), located 300 feet north of the Creek mouth at shin depth) shall be compared to applicable bacterial water quality objectives and the allowable exceedances of those objectives as specified in the TMDL (Total Maximum Daily Load for Bacteria in San Pedro Creek and at Pacifica State Beach: Final Staff Report for Proposed Basin Plan Amendment. Water Board, 2012. Accessible at: [https://www.waterboards.ca.gov/sanfranciscobay/water\\_issues/programs/TMDLs/pacificabacteria/Final%20Staff%20Report.pdf](https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/TMDLs/pacificabacteria/Final%20Staff%20Report.pdf)).
  - (c) The data evaluation shall include tabulation and review of local rainfall data to determine whether the weekly attainment monitoring sampling events occurred during dry weather or wet weather.
  - (d) An ongoing quantitative analysis of trends (from initial year) in bacteria densities and exceedances of applicable water quality objectives at the two attainment stations shall be conducted and reported annually.
  - (e) A detailed and comprehensive assessment of wasteload allocation attainment by the end of year 4 of the Permit term shall be completed. If wasteload allocations are not achieved by the end of the Permit term, no later than 180 days prior to Permit expiration, the City and County shall submit a plan in their Report Of Waste Discharge, acceptable to the Executive Officer, that describes additional control measures or increased levels of existing control measures that will be implemented to prevent or reduce discharges of bacteria to storm sewer systems to attain wasteload allocations. The plan shall include implementation methods, an implementation schedule, and proposed milestones.

**iii. Water Quality Monitoring – Characterize Bacteria Sources, Assess BMP Effectiveness**

- (1) **Task Description** – The purpose of characterization monitoring is to better characterize indicator bacteria contributions from specific sources and to evaluate control measure effectiveness. The characterization monitoring shall provide data to:

- (a) Characterize indicator bacteria densities in subwatersheds, storm drain outfalls, and pump stations that have not been sampled in the past. Results of the investigation may be used to drive future control measure actions.
  - (b) Establish baseline (or current) conditions against which future monitoring results can be compared following new or ongoing control measure implementation.
  - (c) Characterization monitoring shall be conducted every other year on a water year basis (i.e., October 1 through September 30), continuing on the existing ongoing monitoring schedule. Characterization monitoring shall assess E. coli densities throughout the San Pedro Creek watershed. Human-, horse-, and dog-specific genetic markers shall be analyzed for a subset of the samples to investigate whether these species contribute fecal contamination to the Creek. The characterization monitoring shall be iterative in nature and allow for flexibility of design and details in future years. Subsequent years of characterization monitoring, at a minimum, shall have the same level of effort as previous years; however, in future years, based on the results of the previous monitoring, alternative sampling stations may be targeted, sampling intensities may be modified, sampling frequencies may be adjusted, and/or the species-specific genetic marker sampling may be revised.
- (2) **Implementation Level** – The City and County shall conduct characterization monitoring activities as follows:
- (a) **Sampling Locations** – while based on the previous year’s results appropriate sampling locations can be selected for each monitoring year, the “Creek Mouth” site shall always be sampled during events when species-specific genetic marker samples are collected.
  - (b) **Number of Samples** – in each monitoring year, a minimum of one hundred ten (110) fecal indicator bacteria samples shall be collected.
  - (c) **Sampling Frequency** – the characterization stations shall be sampled a minimum of eight times over the course of the water year, as follows:
    - (i) **Wet season** – four sampling events shall be conducted during the wet season months (November through March). To the extent possible, wet season sampling events shall occur during wet weather, which as defined in the TMDL is any day (e.g. 24-hour period) with 0.1 inch of rain or more and the following three days;

- (ii) Dry season – four sampling events shall be conducted during the dry season months (May through September).
  - (iii) In subsequent monitoring years, based on the results of the previous year’s monitoring, the sampling frequency may be modified, as appropriate, to provide the most useful results.
  - (d) Constituents – All samples shall be analyzed for *E. coli*. In addition, during each monitoring year, at a minimum, samples collected at four stations during four sampling events (two wet season, two dry season) shall be analyzed for human-, horse-, and dog-specific genetic markers to assess temporal and spatial fecal waste contributions from the targeted host species to the Creek and Beach.
  - (e) Monitoring Protocols and Data Quality – Where applicable, monitoring data must be SWAMP comparable. Minimum data quality shall be consistent with the latest version of the SWAMP Quality Assurance Project Plan (QAPP) for applicable parameters, including data quality objectives, field, equipment, and laboratory blanks, field duplicates, laboratory spikes, and clean techniques, using the most recent SWAMP Standard Operating Procedures.
  - (f) Future Revisions – Any and all changes to the characterization monitoring plan in future years shall be submitted to the Executive Officer for review and acceptance no later than 90 days prior to implementation.
- (3) Reporting
- (a) In their Annual TMDL Status and Monitoring Reports the City and County shall submit a comprehensive Characterization Monitoring Report reporting on any data collected during the preceding October 1 through September 30 monitoring period.
  - (b) Data evaluation shall focus on addressing the following questions:
    - (i) Which land uses and/or sources contribute most to bacteria impairments in San Pedro Creek watershed?
    - (ii) Are controllable sources of fecal contamination (e.g., human, horses, and dogs) present in the San Pedro Creek watershed?
    - (iii) What are the multi-year indicator bacteria density trends in the Creek and at the Beach (i.e., do control measures appear to be reducing bacteria)?

- (c) As appropriate, the Report shall include the following:
- (i) Immediately following the Table of Contents, a Data Tables section that includes all the data collected pursuant to Provision C.14.b.iii. and contains the following information pertaining to the foregoing monitoring period:
    - a. A map showing all monitoring locations;
    - b. Immediately following the map, a single completed Locations and Parameters Table containing the following columns or rows for each location sampled: numeric site identifier, a short-hand site name such as "Creek Mouth," latitude, longitude, and parameters assessed;
    - c. Immediately following the Locations and Parameters Table, a single completed Results Table containing the following columns or rows for each location sampled: the short-hand site name and datum/result for each constituent analyzed. Constituents that exceed applicable water quality objectives shall be highlighted.
  - (ii) For all data, a statement of the data quality.
  - (iii) An analysis of the data, which includes the following:
    - a. Basic descriptive statistics using indicator bacteria data;
    - b. Identification and evaluation of any controllable sources of fecal contamination (e.g., human, horses, and dogs) present in the San Pedro Creek watershed;
    - c. Identification and analysis of any trends in stormwater or receiving water quality; and
    - d. Consideration of variability in the data sets.
  - (iv) A discussion of the data, which shall:
    - a. Discuss monitoring data relative to prior conditions, beneficial uses and applicable water quality standards as described in the Basin or the Ocean plans;
    - b. Where appropriate, develop hypotheses to investigate regarding pollutant sources, trends, and BMP effectiveness;
    - c. Identify and prioritize water quality problems;
    - d. Identify potential sources of water quality problems;

- e. Describe follow-up actions;
- f. Evaluate the effectiveness of existing control measures; and
- g. Identify management actions needed to address water quality problems.

**C.14.c. City of San Mateo Marina Lagoon Beaches Bacteria Controls**

The City of San Mateo (City) shall implement the actions in this subprovision to control fecal indicator bacteria. For each requirement, the City shall focus implementation in areas where benefits are most likely to accrue, i.e., where bacteria reduction is likely to reduce bacteria densities in San Mateo Lagoon and particularly at Parkside Aquatic Park Beach and Lakeshore Park Beach. Many of the required implementation actions are described in the City's TMDL Basin Plan Amendment Implementation Plan, 2018 (TMDL Implementation Plan). This subprovision implements the urban runoff requirements of the San Francisco Bay Beaches Bacteria TMDL (TMDL) applicable to the City.

**i. Control Measures to Achieve Indicator Bacteria Wasteload Allocations**

- (1) **Task Description** – The City shall implement bacteria control measures and pollution prevention strategies to prevent or reduce discharges of bacteria from their storm drain systems to San Mateo Lagoon to the maximum extent practicable.
- (2) **Implementation Level** – In order to comply with this element:
  - (a) The City shall enhance its efforts to prohibit potential illicit discharges into its storm sewer system.
  - (b) The City shall expand or enhance dog waste management strategy, including installing and/or maintaining dog waste clean-up signs, waste bag dispensers, and trash cans at a minimum of two parks/open spaces near San Mateo Lagoon beaches.
  - (c) The City shall enhance its public outreach and education regarding proper management of pet waste management, dumpsters and garbage bins; proper outdoor washdown procedures (restaurant mats, dining areas, commercial areas, mobile cleaner operations) by taking a minimum of three of the following actions:
    - (i) Prepare and implement public service announcements regarding pet waste management and associated impacts to the Lagoon.
    - (ii) Distribute a mailer to residents and businesses describing the adverse impact on water quality and recreation of improper pet waste management.

- (iii) Add information to the City website about the TMDL and the water quality monitoring and BMP implementation activities, as well as information about proper pet waste management and the impact of improperly deposited waste on water quality of the Lagoon and public health.
  - (iv) Create and broadcast a pre-rain pet waste cleanup public service announcement to residents, reminding them to cleanup accumulated pet waste in their yards that could otherwise get washed into the Lagoon.
  - (v) Participate in local events and festivals to distribute pet waste management materials (educational fliers, dog waste bags, etc.).
  - (d) The City shall continue its goose control program, as described in its TMDL Implementation Plan.
  - (e) The City shall continue implementing its “Illegal Dumping Screening Program,” its “Spill, Dumping, and Complaint Response Program,” and its “Commercial/Industrial Business Inspection Plans,” including implementing associated enforcement, with a focus near the beaches as appropriate.
  - (f) Once during the Permit term, determine if boaters in San Mateo Lagoon could be a source of bacteria; if yes, conduct or enhance outreach to improved boaters’ behaviors regarding bacteria sources (e.g., litter and human waste).
- (3) Reporting
- (a) In each Annual Report, the City shall summarize the actions it took to satisfy the requirements in Provision C.14.c.i.(2). during the foregoing October 1 through September 30 period. This report shall include:
    - (i) The number, type, and locations and/or frequency (if applicable) of control measures; and
    - (ii) The description and scope of pollution prevention measures; and
    - (iii) A data table and graphs showing Enterococcus data collected during the reporting year for the two San Mateo Lagoon beaches, Parkside Aquatic Park Beach and Lakeshore Park Beach.
  - (b) For the Annual Report due in 2023, quantitatively and qualitatively evaluate the effectiveness of the City’s actions toward wasteload allocation attainment and modify or refocus control measure implementation efforts as appropriate.



**ii. Phase Two Measures**

- (1) **Task Description** – If wasteload allocations are not met by December 13, 2021, the City shall implement additional bacteria control measures and pollution prevention strategies to prevent or reduce discharges of bacteria from their storm drain systems to San Mateo Lagoon.
- (2) **Implementation Level** – In order to comply with this element:
  - (a) By July 1, 2022, the City shall submit a plan describing BMPs being implemented and additional BMPs that will be implemented to reduce discharges of bacteria to the beach. The plan shall include all actions described in Provision C.14.a that are likely to reduce bacteria loads to San Mateo Lagoon and particularly at Parkside Aquatic Park Beach and Lakeshore Park Beach. The plan also shall include an implementation schedule and milestones.
  - (b) By July 1, 2022, the City shall implement this plan.
  - (c) By September 30, 2022, the City shall submit a supplemental monitoring plan (supplemental to ongoing beach monitoring) to investigate remaining bacteria sources to the beach. This plan may develop data and a quantitative rationale to support (i) locations and types of enhanced bacteria BMPs, and/or (ii) revision of the numeric targets to reflect bacteria contributions from non-controllable sources. Include an implementation schedule.
- (3) **Reporting** – Starting with the 2023 Annual Report and for Annual Reports submitted in following years, the City shall summarize the actions it took to satisfy the requirements in Provision C.14.c.ii.(2) during the foregoing October 1 through September 30 period. This report shall include:
  - (a) The number, type, and locations and/or frequency (if applicable) of control measures; ~~and~~
  - (b) The description and scope of pollution prevention measures; and
  - (c) A data table and graphs showing enterococcus data collected during the reporting year for the two San Mateo Lagoon beaches, Parkside Aquatic Park Beach and Lakeshore Park Beach.

**iii. Planning for Future Actions**

- (1) **Task Description** – If wasteload allocations are not met by December 13, 2026, Permittees shall prepare a plan for additional actions to attain the water quality objective in the next permit term.
- (2) **Implementation Level** – Permittees shall prepare a plan that includes an assessment of bacteria sources and describes additional control

measures or increased levels of existing control measures that will be implemented to attain bacteria water quality objectives. The plan shall include an implementation schedule and proposed milestones. Additional monitoring studies to identify sources, track, and/or quantify the risk of bacteria in the receiving water may be included in this effort.

- (3) **Reporting** – Submit the plan no later than 180 days prior to Permit expiration.

#### **C.14.d. City of Half Moon Bay and San Mateo County Bacteria Controls**

The City of Half Moon Bay (City) and San Mateo County (County) shall implement the actions in this subprovision to control bacteria. The City and County shall focus implementation of bacteria control measures in areas where benefits are most likely to accrue, i.e., where controls are likely to reduce bacteria mass in Pillar Point Harbor and Venice Beach. The goal of this subprovision is to implement the municipal stormwater runoff requirements of the Pillar Point Harbor and Venice Beach Bacteria TMDL and achieve the TMDL wasteload allocations. The City and County may comply with any requirement of this subprovision through a collaborative effort.

##### **i. Control Measures to Achieve Bacteria Wasteload Allocations**

- (1) **Task Description** – The City and County shall implement bacteria control measures and pollution prevention strategies within their respective jurisdictions to prevent or reduce discharges of bacteria from storm drain systems to meet the municipal stormwater runoff TMDL wasteload allocations listed in the Pillar Point Harbor and Venice Beach Bacteria TMDL.
- (2) **Implementation Level** – To comply with this element:
  - (a) The City and County each shall prepare an Initial Report acceptable to the Water Board Executive Officer that describes actions they are taking and will take to prevent or reduce discharges of bacteria to and from storm sewer systems. This report shall be submitted to the Water Board **by July 1, 2022**. The report shall include a schedule, timeline, or frequency of implementation activities for all actions, including, but not limited to, the actions described in Provision C.14.d.i.(2).(b), below.
  - (b) The City and County shall prohibit and prevent, to the maximum extent possible, discharges of bacteria into the storm sewer system within five years of the effective date of the TMDL as follows:
    - (i) Illicit sanitary sewer connections: The City and County shall train the staff responsible for enforcing industrial and commercial site

control and for detecting and eliminating illicit discharges to investigate potential connections of sanitary sewer lines to stormwater lines. The City and County shall ensure that staff conduct illicit sanitary sewer connection investigations and include such investigations in their routine inspections as well. The City and County shall use enforcement authorities to ensure transport to surface waters of the following potential bacteria sources is minimized:

- (ii) Illicit discharges to the MS4, by increasing illicit discharge investigations in the vicinity of Pillar Point Harbor and Venice Beach
  - a. Roof and exterior washoff of commercial and industrial structures and surfaces, where these sources are likely to contain bacteria, such as from rodent and bird wastes, that are likely to be discharged to receiving water
  - b. Outdoor garbage and recycle bins
  - c. Outdoor floor mat washoff
  - d. Portable toilet spills and leakage
- (iii) Human waste from homeless encampments, by implementing Provision C.14.a.iii in areas likely to discharge to the beaches;
- (iv) Pet waste
  - a. Develop and implement a visual inspection program to identify high pet waste accumulation areas and develop a cleanup plan for these areas, including specific actions before winter rains;
  - b. Install new or additional dog waste cleanup signs, waste bag dispensers, and trash bins in high dog waste accumulation areas;
  - c. Evaluate and improve the service frequency of dog waste bins, as needed; and
  - d. Enhance pet waste public outreach and education campaign that includes at least three of the following:
    - Prepare and broadcast public service announcements regarding pet waste management and associated impacts to the beaches and their catchments on social media, local television, and/or local newspapers;

- Distribute a mailer to residents and businesses describing proper pet waste management, and the adverse impact to the beaches and those recreating on them from improper pet waste management;
  - Add to or maintain web pages on the City and County websites with information on the TMDL and the water quality monitoring and BMP implementation activities, as well as information about proper pet waste management and the impact of improperly deposited waste on water quality and public health;
  - Broadcast a pre-rain pet waste cleanup email alert to residents, reminding them to cleanup accumulated pet waste in their yards that could otherwise get washed into the beaches; and
  - Participate in local events and festivals to distribute pet waste management materials (educational fliers, dog waste bags, etc.).
- e. The City and County shall include additional actions described in Provision C.14.a. in their Initial Reports and in their actions to prohibit and prevent discharges of bacteria into the storm sewer system to the extent and in the locations they deem helpful for achieving the TMDL wasteload allocation.
- (3) **Reporting** – No later than March 30 of each year, the City and County shall submit a comprehensive TMDL Implementation Status and Monitoring Report, reporting on the specific control measures (as listed in Provision C.14.d.i.(2)) that have been implemented in the TMDL Project Area during the foregoing July 1 through June 30 period. This report shall include:
- (a) The number, type, and locations and/or frequency of control measures;
  - (b) The description, scope, and start date of pollution prevention measures;
  - (c) Listing, timeline, and discussion of the actions scheduled for implementation during the upcoming year; and
  - (d) Clear statements of the responsibilities of each participating Permittee for implementation of pollution prevention or control measures.

**ii. Water Quality Monitoring**

- (1) **Task Description** – The City and County shall ensure the beaches are sampled weekly (i.e., that current bacteria sampling continues) and shall evaluate beach monitoring data. The purposes of the water quality monitoring are to determine whether the TMDL wasteload allocations are attained; further identify and characterize the source areas or land uses with the greatest bacteria contributions; and direct adaptive implementation of controls to reduce or eliminate bacteria discharges from different sources over time.
- (2) **Implementation Level** – At a minimum, the City and County shall continue monitoring the beaches as required under California Health and Safety Code section 115880 and evaluate the resulting data. The City and County may collaboratively or individually develop and conduct a source assessment study to better characterize sources and spatial and temporal extent of bacteria impairment at the beaches and to evaluate the contribution of bacteria from natural sources.
- (3) **Reporting** -- No later than March 30 of each year, the City and County shall submit a comprehensive TMDL Implementation Status and Monitoring Report describing the monitoring that has been conducted in the TMDL Project Area during the foregoing October 1 through September 30 period. The City and County are encouraged to collaborate so as to prepare a single report on all the data. This report shall include:
  - (a) Data evaluation that addresses the following questions:
    - (i) Are the TMDL targets and allocations met at the beaches?
    - (ii) Are controllable sources of fecal contamination (e.g., human, horses, and dogs) being contained and do control measures appear to be effective in reducing bacteria loads?
    - (iii) Which land uses and/or sources contribute most to bacteria impairments?
  - (b) The Report shall include the following:
    - (i) Information about the sampling locations, timing and frequency of sampling, analytical method(s), and a map of monitoring sites
    - (ii) An analysis of the data, which includes the following:
      - a. Basic descriptive statistics using indicator bacteria data
      - b. Identification and evaluation of available data that indicate the presence of controllable sources of fecal contamination (e.g., human, horses, and dogs)

- c. Identification and analysis of any trends in stormwater or receiving water quality
- d. Consideration of variability in the data sets.

(iii) A discussion of the data, which shall:

- a. Discuss monitoring data relative to prior conditions, beneficial uses and applicable water quality standards as described in the Pillar Point Harbor and Venice Beach Bacteria TMDL;
- b. Identify potential sources of water quality problems;
- c. Where appropriate, develop hypotheses to investigate regarding pollutant sources, trends, and BMP effectiveness;
- d. Evaluate the effectiveness of existing control measures; and
- e. Identify and describe the follow-up management actions needed to address water quality problems.

### iii. Planning for Phase Two Actions

- (1) **Task Description** – If wasteload allocations are not met within five years of the TMDL effective date, Permittees shall develop a Phase Two Report that describes the actions being implemented and additional actions that will be taken to reduce the discharge of bacteria to the beaches.
- (2) **Implementation Level** – In preparing the Phase Two Report, Permittees shall assess bacteria sources; describe control actions taken; and describe additional control measures or increased levels of existing control measures that will be implemented to attain bacteria water quality objectives. The report shall contain an implementation schedule and proposed milestones. Additional monitoring studies to identify sources, track, and/or quantify the risk of bacteria in the receiving water may be included in this effort.
- (3) **Reporting** – Submit the Phase Two Report within five years of the TMDL effective date.

## C.15. Exempted and Conditionally Exempted Discharges

The objective of this provision is to exempt unpolluted non-stormwater discharges from Discharge Prohibition A.1 and to conditionally exempt non-stormwater discharges that are potential sources of pollutants. In order for non-stormwater discharges to be conditionally exempted from Discharge Prohibition A.1, the Permittees must identify appropriate BMPs, monitor the non-stormwater discharges where necessary, and ensure implementation of effective control measures – as listed below – to eliminate adverse impacts to waters of the State consistent with the discharge prohibitions of the Order.

### C.15.a. Exempted Non-Stormwater Discharges (Exempted Discharges):

- i. **Discharge Type** – In carrying out Discharge Prohibition A.1, the following unpolluted discharges are exempted from prohibition of non-stormwater discharges:
  - (1) Flows from riparian habitats or wetlands;
  - (2) Diverted stream flows;
  - (3) Flows from natural springs;
  - (4) Rising ground waters;
  - (5) Uncontaminated and unpolluted groundwater infiltration;
  - (6) Single family homes' pumped groundwater, foundation drains, and water from crawl space pumps and footing drains;
  - (7) Pumped groundwater from drinking water aquifers (excludes well development); and
  - (8) NPDES permitted discharges (individual or general permits).
- ii. **Implementation Level** – The non-stormwater discharges listed in Provision C.15.a.i, above, are exempted unless they are identified by the Permittees or the Executive Officer as sources of pollutants to receiving waters. If any of the above categories of discharges, or sources of such discharges, are identified as sources of pollutants to receiving waters, such categories or sources shall be addressed as conditionally exempted discharges in accordance with Provision C.15.b, below.

### C.15.b. Conditionally Exempted Non-Stormwater Discharges:

The following non-stormwater discharges are also exempt from Discharge Prohibition A.1 if they are either identified by the Permittees or the Executive Officer as not being sources of pollutants to receiving waters, or if appropriate control measures to eliminate adverse impacts of such sources are developed

and implemented in accordance with the tasks and implementation levels of each category of Provision C.15.b.i-vi, below.

**i. Discharge Type – Pumped Groundwater, Foundation Drains, and Water from Crawl Space Pumps and Footing Drains**

**(1) Pumped Groundwater from Non-Drinking Water Aquifers**

Groundwater pumped from a monitoring well, used for groundwater basin management, which is owned and/or operated by a Permittee is allowed if the following requirements are met:

(a) **Implementation Level** – Twice a year (once during the wet season and once during the dry season), representative samples shall be taken from each aquifer that potentially will discharge or has discharged into a storm drain. Samples collected and analyzed for compliance in accordance with self-monitoring requirements of other NPDES permits or sample data collected for drinking water regulatory compliance may be submitted to comply with this requirement as long as they meet the following criteria:

(i) The water samples shall meet water quality standards ~~consistent with the existing, including~~ effluent limitations ~~or pollutant triggers~~ in the ~~Water Board's NPDES Groundwater~~ VOC and Fuel General Permit, NPDES Permit No. CAG912002.

(ii) The water samples shall be analyzed using approved U.S. EPA methods: (a) U.S. EPA Method 8015 Modified for total petroleum hydrocarbons; (b) U.S. EPA Method ~~8260B~~624.1 and ~~8270C~~625.1 or equivalent for volatile and semi-volatile organic compounds, respectively; and (c) approved U.S. EPA methods to meet the triggers for the metals listed in the ~~general permit~~ General Permit discussed in Provision C.15.b.i.(1)(a)(i), above.

(iii) The water samples shall be analyzed for pH and turbidity.

If a Permittee is unable to comply with the above criteria, the Permittee shall notify the Water Board upon becoming aware of the compliance issue.

(b) **Required BMPs and Monitoring** – When greater than 2,500 gallons per day of uncontaminated (meeting the criteria in Provision C.15.b.i.(1)(a)(i)) groundwater is discharged from these monitoring wells, the following shall be implemented:

(i) Test the receiving water, upstream and downstream of the discharge point, to determine ambient turbidity and pH prior to



discharging. Receiving water monitoring is not required if the discharge infiltrates into a dry creek immediately downstream.

- (ii) Test water samples for turbidity and pH on the first two consecutive days of dewatering.
- (iii) Maintain proper control of the discharge at the discharge point to prevent erosion, scouring of banks, nuisance, contamination, and excess sedimentation in the receiving waters.
- (iv) Maintain proper control of the flow rate and total flow during discharge so that it will not have a negative impact on the receiving waters.
- (v) Appropriate BMPs shall be implemented to remove total suspended solids and silt to allowable discharge levels. Appropriate BMPs may include filtration, settling, coagulant application with no residual coagulant discharge, minor odor or color removal with activated carbon, small scale peroxide addition, or other minor treatment.
- (vi) Turbidity of the discharged groundwater shall be maintained below 50 NTU for discharges to dry creeks, 110 percent of the ambient stream turbidity for a flowing stream with turbidities greater than 50 NTU, or 5 NTU above ambient turbidity for flowing streams with turbidities less than or equal to 50 NTU.
- (vii) The pH of the discharged groundwater shall be maintained within the range of 6.5 to 8.5 and shall not vary from normal ambient pH by more than 0.5 pH units.

(c) If the Permittee is unable to comply with the criteria in Provision C.15.b.i.(1)(b)(i)-(vii), discharge shall cease immediately and the Permittee shall employ treatment to meet the above criteria, use other means of disposal, or apply for coverage under the Water Board's NPDES VOC and Fuel General Permit, or Groundwater General Permits Permit, as appropriate.

(d) **Reporting** – The Permittees shall maintain records of these discharges, BMPs implemented, and any monitoring data collected.

(2) **Pumped<sup>56</sup> Groundwater, Foundation Drains, and Water from Crawl Space Pumps and Footing Drains**

- (a) Proposed new discharges of uncontaminated groundwater at flows of 10,000 gallons/day or more and all new discharges of potentially contaminated groundwater shall be reported to the Water Board so that they can be subject to NPDES permitting requirements. Proposed new discharges of uncontaminated groundwater at flows of less than 10,000 gallons/day shall be encouraged to discharge to a landscaped area or bioretention unit that is large enough to accommodate the volume.
- (b) If the groundwater cannot be discharged to a landscaped area or bioretention unit and the discharge is greater than 2,500 gallons per day, it can only be considered for discharge once the following sampling is done to verify that the discharge is uncontaminated:
- (i) The discharge shall meet water quality standards ~~consistent with the existing, including~~ effluent limitations ~~or pollutant triggers~~ in the ~~Water Board's NPDES Groundwater~~ VOC and Fuel General Permit, NPDES Permit No. CAG912002.
- (ii) The Permittees shall require that water samples from these discharge types be analyzed using the following approved U.S. EPA methods:
- U.S. EPA Method 8015 Modified for total petroleum hydrocarbons, and U.S. EPA Method 624.1 and 625.1 for volatile and semi-volatile organic compounds, respectively.
  - The sufficiently sensitive (as identified in Attachment G of NPDES Permit No. CAG912002) approved U.S. EPA Methods (40 C.F.R Part 136) for the constituents listed below that meet the corresponding Reporting Limits:

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<sup>56</sup> Pumped groundwater not exempted in Provision C.15.a, or conditionally exempted in Provision C.15.b.i.(1).

| Constituent                         | Reporting Limit      |
|-------------------------------------|----------------------|
| Antimony                            | 6 µg/l               |
| Arsenic                             | 10 µg/l              |
| Beryllium                           | 4 µg/l               |
| Cadmium                             | 0.90 µg/l            |
| Chromium III                        | 50 µg/l              |
| Chromium VI                         | 8.1 µg/l             |
| Copper                              | 3.4 µg/l             |
| Lead                                | 2.6 µg/l             |
| Manganese                           | 50 µg/l              |
| Mercury                             | 4 ng/l               |
| Nickel                              | 10 µg/l              |
| Selenium                            | 4.1 µg/l             |
| Silver                              | 1.1 µg/l             |
| Thallium                            | 1.7 µg/l             |
| Zinc                                | 47 µg/l              |
| Cyanide                             | 2.9 µg/l             |
| Chlorine, total residual            | 0.05 <del>µg/l</del> |
| <u>Total Petroleum Hydrocarbons</u> | <u>50 µg/l</u>       |

- (c) **Monitoring and Required BMPs** – When the discharge has been verified as uncontaminated per sampling completed in Provision C.15.b.i.(2)(b), above, the Permittees shall require the following:
- (i) Test the receiving water, upstream and downstream of the discharge point, to determine ambient turbidity and pH prior to discharging. Receiving water monitoring is not required if the discharge infiltrates into a dry creek immediately downstream or if accessing the sampling points poses safety to personnel.
  - (ii) Test water samples for turbidity and pH on the first two consecutive days of dewatering.
  - (iii) Maintain proper control of the discharge at the discharge point to prevent erosion, scouring of bank, nuisance, contamination, and excess sedimentation in the receiving waters.
  - (iv) Maintain proper control of the flow rate and total flow during discharge so that it will not have a negative impact on the receiving waters.

(v) Appropriate BMPs to render pumped groundwater free of pollutants and therefore exempted from prohibition may include the following: filtration, settling, coagulant application with no residual coagulant discharge, minor odor or color removal with activated carbon, small scale peroxide addition, or other minor treatment.

(vi) Turbidity of discharged groundwater shall be maintained below 50 NTU for discharges to dry creeks, 110 percent of the ambient stream turbidity for a flowing stream with turbidities greater than 50 NTU, or 5 NTU above ambient turbidity for a flowing stream with turbidities less than or equal to 50 NTU.

(vii) The pH of discharged water shall be maintained within the range of 6.5 to 8.5 and shall not vary from normal ambient pH by more than 0.5 pH units.

(d) If a Permittee determines that a discharger or a project proponent is unable to comply with the criteria in Provision C.15.b.i.(2)(c)(i)-(vii), the Permittee shall require the discharge to cease immediately and require that the discharger employ treatment to meet the above criteria, use other means of disposal, or apply for coverage under the Water Board's NPDES [VOC and Fuel General Permit \(NPDES Permit No. CAG912002\)](#), or Groundwater General Permit [\(NPDES Permit No. CAG912004\)](#), as appropriate.

(e) **Reporting** – The Permittees shall maintain records of these discharges, BMPs implemented, and any monitoring data collected.

## ii. Discharge Type – Air Conditioning Condensate

**Required BMPs** – Condensate from air conditioning units shall be reused or directed to landscaped areas or the ground. Discharge to a storm drain system may be allowed if discharge to landscaped areas or the ground is not feasible.

## iii. Discharge Type – Emergency Discharges of Firefighting Water and Foam

(1) Emergency Discharges – Discharges resulting from emergency firefighting activities.

(2) Regional Coordination

(a) Permittees shall collectively convene a regionwide Firefighting Discharges Working Group (Working Group) together with Water Board staff – and other stakeholders identified in Provision C.15.b.iii.(2)(vi), below – to identify and evaluate opportunities to reduce the impacts of emergency discharges to the MS4 associated with firefighting activity. The Permittees shall collectively (e.g., through the Working Group):

- (i) ~~Convene~~ Prior to the submittal of the Firefighting Discharges Report, convene the Working Group at least twice per year. Thereafter, convene the Working Group at least annually.
- (ii) Assess the adequacy of existing BMPs and standard operating procedures (SOPs) ~~for containment and cleanup to address the potential adverse water quality impacts~~ of firefighting water and foam discharged during emergencies; (e.g., containment and cleanup).<sup>57</sup> including coordination within and between municipal departments, districts and jurisdictions, coordination between firefighting personnel and containment and cleanup crews, coordination with contracted staff, and coordination with ~~contracted staff, relevant agencies (e.g., CalFire),~~ as appropriate.

If the existing BMPs and SOPs need updates or are otherwise inadequate, suggest changes to those BMPs and SOPs so that they are updated and adequate. If new BMPs and SOPs are needed, recommend model BMPs and SOPs.

- (iii) Assess the adequacy of existing resources (e.g., MS4 maps and maps that identify environmentally sensitive areas) used to determine if and how firefighting water and foam discharged during emergencies will impact receiving waters,<sup>58</sup> in order to facilitate address pollutant discharges (e.g., by facilitating containment and cleanup).
- (iv) Investigate which firefighting foams are the least environmentally harmful; (i.e., have the least adverse water quality and beneficial use effects, including those related to biodegradation, biomagnification, bioaccumulation, and acute and chronic toxicity), both for Class A foams and Class B foams. Then, develop SOPs to use the least environmentally harmful firefighting foams (and dispose of the more environmentally harmful foams) and to reduce the use of firefighting foams, without jeopardizing the protection of life or property, during emergencies.
- (v) Prepare outreach materials on containment and cleanup BMPs and SOPs for contractors that are hired by private parties to participate in the containment and cleanup of discharges of firefighting water and foam associated with firefighting activities within their jurisdictions. Additionally, prepare outreach materials –

<sup>57</sup> The Working Group does not necessarily have to review every single Permittee's BMPs and SOPs. It may review a representative subset.

<sup>58</sup> The Working Group does not necessarily have to review every single Permittee's resources. It may review a representative subset.

regarding good housekeeping practices and preventive measures – for sites that are prone to firefighting emergencies. Distribute those outreach materials to all such contractors and sites by September 30, ~~2024~~2025.

Subsequently, if it is identified that the outreach materials need to be revised or updated, they shall be revised or updated, and then redistributed.

- (vi) ~~Coordinate and share~~Pursue coordination, information ~~with, sharing, feedback~~ and ~~invite to participate in the~~ Working Group, participation, from relevant agencies and organizations, such as the California Department of Forestry and Fire Protection (Cal Fire), the California Department of Toxic Substances Control (DTSC), the U.S. Forest Service (USFS), the State and Regional Water Boards, permittees of other NPDES municipal stormwater permits, other state and federal agencies, and external workgroups (such as Petro-Chemical Mutual Aid), regarding interagency coordination and communication, BMPs, SOPs, and the least environmentally harmful firefighting foams.

- (vii) Discuss reporting on emergency discharges of firefighting water and foam. The purpose of this reporting is first to provide transparency about the usage and water quality impacts of firefighting water and foam, and second to track reductions in those impacts over time, which is an anticipated outcome of the implementation of Provision C.15.b.iii.

This shall include discussion of the timing of such reporting, and how that reporting will be submitted to the Water Board. This shall additionally include discussion of how reporting is triggered (e.g., if a certain level of discharge enters the MS4 system, if any level of discharge enters a receiving water, and if any level of PFAS foam is used pursuant the exemptions in SB 1044), as well as the content of the reporting (e.g., the date and time of the discharge, Material Safety Data Sheet (MSDS) and any supplemental information for that foam, the quantity of water and foam concentrate used, the quantity and rate of water and foam concentrate discharged to the MS4 and/or receiving water, the point of discharge to the MS4 and/or receiving water, and controls implemented to contain and/or mitigate discharges and impacts).

- (b) Reporting – The Permittees shall collectively submit a Preliminary Firefighting Discharges Report by September 30, ~~2024,~~ and a Final Report by September 30, ~~2026,~~ that describe ~~2025,~~ that

describes progress on the implementation of Provision C.15.b.iii.(2)(a)(i)-(vi), and recommendations regarding the implementation of the items listed in Provision C.15.b.iii.(2)(a)(i)-(iv)-(2)(a)(i)-(vii). The Firefighting Discharges Report shall be updated as needed on an ongoing basis, to incorporate recommendations by the Working Group.

(3) Ongoing Implementation Practices

- (a) When the Preliminary Firefighting Discharges Report is submitted, the Permittees shall begin implementation of the recommendations included therein. ~~When the Final Report is submitted, the Permittees shall begin implementation of the recommendations therein, instead of the recommendations included in the Preliminary Report, to the extent those recommendations are different.~~
- (b) Permittees shall ensure proper BMPs and SOPs are included in contracts for non-municipal (contracted) staff hired by Permittees to assist with containment and cleanup, and to assist with prevention and mitigation of adverse impacts, of discharges associated with firefighting emergencies.
- (c) For large industrial sites within Permittees' jurisdictions – such as IGP sites, gas plants, gas concentration facilities, and chemical plants – Permittees shall evaluate the adequacy of those sites' BMPs and SOPs for the prevention, containment and cleanup of emergency firefighting discharges into storm drains and receiving waters within Permittees' jurisdictions, and cause those BMPs and SOPs to be improved as appropriate.
- (d) By June 30, ~~2026~~2027, Permittees shall require all municipal staff and contracted staff hired by Permittees that participate in the containment and cleanup of (and as appropriate, that assist with any other activities associated with mitigating the adverse environmental impacts of) discharges of firefighting water and foam ~~associated with from~~ firefighting ~~activities~~emergencies within their jurisdictions to attend at least one training on containment and cleanup BMPs and SOPs: (and other BMPs and SOPs, as appropriate). Trainings may be region-wide, program wide, or Permittee-specific. ~~Trainings may be made~~Permittees are encouraged to make these trainings available to contractors hired by private parties.
- (e) Reporting
- (i) In their Annual Reports, Permittees shall report on the implementation of Provision~~Provisions~~ C.15.b.iii.(3).(a)-(c).

- (ii) In the ~~2026~~2027 Annual Reports, Permittees shall report on trainings conducted pursuant to Provision C.15.b.iii.(3)(d), including the date(s) of training(s), topics covered, and the percentage of applicable municipal and contracted staff involved in containment and cleanup activities in attendance.

(4) Required BMPs

- (a) The Permittees shall implement and/or require firefighting personnel acting within their jurisdictions to implement BMPs and SOPs for emergency discharges – in order to reduce potential and actual water quality impacts – to the extent that the implementation of such BMPs does not interfere with immediate emergency response operations or impact public health and safety. ~~BMPs may include, but are not limited to, the following:~~<sup>59</sup>
  - ~~(i) Plugging of the storm drain collection system for temporary storage;~~
  - ~~(ii) Dechlorination prior to discharge to the MS4 and receiving waters;~~
  - ~~(iii) Proper disposal of water and foam according to jurisdictional requirements;~~
  - ~~(iv) Use of the least environmentally harmful firefighting foams;~~
  - ~~(v) Avoiding the use of firefighting foam when it is not necessary;~~
  - ~~(vi) Use of the proper firefighting foam depending on the type of fire;~~
  - ~~(vii) When firefighting foam is used, limiting the amount used;~~
- (b) ~~Discouraging the use of firefighting foam where it may discharge to receiving waters, and particularly receiving waters that have sensitive habitat, such as habitat for special status species, including certain salmonids.~~
- (c) During emergency firefighting situations, priority of efforts shall be directed toward life, property, and the environment (in descending order). Permittee staff, contractors, or firefighting personnel shall control the pollution threat from their activities during emergency firefighting situations to the extent that time and resources allow.

<sup>59</sup> Examples of BMPs to be considered are listed in the Fact Sheet. Where firefighting personnel may not be under the direct control of a Permittee, implement BMPs and SOPs, such as coordination and communication, identified in the Firefighting Discharges Report.



(5) Reporting

~~(a) Whenever 5 gallons or more of firefighting foam concentrate—or the reportable quantity listed in 40 CFR Part 355 or 40 CFR Part 302.4, if that quantity is smaller—discharges to the MS4 as a result of emergency firefighting activity, that discharge shall be reported in the subsequent Annual Report.~~

~~Whenever any amount of firefighting foam concentrate discharges to a receiving water as a result of emergency firefighting activity, that discharge shall be reported in the subsequent Annual Report.~~

~~This reporting must include the date and time of the discharge, Material Safety Data Sheet (MSDS) and any supplemental information for that foam, the quantity of water and foam concentrate used, the quantity and rate of water and foam concentrate discharged to the MS4 and/or receiving water, and the point of discharge to the MS4 and/or receiving water. Permittees shall additionally notify the proper agencies and departments, including the State Warning Center (within 24 hours) and the California Department of Fish and Wildlife.<sup>60</sup>~~

~~(b) If an exemption allowed by Senate Bill 1044 is invoked, such that any amount of PFAS-containing foam is used within a Permittee's jurisdiction, regardless of whether the PFAS-containing foam discharges to the MS4 or to a receiving water, the Permittee shall report that use in the subsequent Annual Report. At a minimum, such reporting must include: the date and time of the discharge, MSDS and any supplemental information for that PFAS-containing foam, the quantity of water and PFAS-containing foam concentrate used, the quantity and rate of water and PFAS-containing foam concentrate discharged to the MS4 and/or receiving water, and the point of discharge to the MS4 and/or receiving water.~~

~~(a) Upon submittal of the Firefighting Discharges Report, Permittees shall implement the reporting recommendations and guidance therein.~~

~~(c)(b) Otherwise, reporting requirements will be determined by Water Board staff on a case-by-case basis, such as for fire incidents at chemical plants.~~

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<sup>60</sup>~~For discharges to marine waters, reporting is required immediately, but not less than 15 minutes after discovery of the discharges. For discharges to non-marine waters, reporting is required immediately upon knowledge of the discharges.~~

**iv. Discharge Type – Individual Residential Car Washing**

(1) Required BMPs

- (a) The Permittees shall discourage through outreach efforts individual residential car washing within their jurisdictional areas that discharge directly into their storm drain systems.
- (b) The Permittees shall encourage individuals to direct car wash waters to landscaped areas, use as little detergent as necessary, or wash cars at commercial car wash facilities.

**v. Discharge Type – Swimming Pool, Hot Tub, Spa, and Fountain Water Discharges**

(1) Required BMPs

- (a) The Permittees shall prohibit discharge of water that contains chlorine residual, copper algacide, filter backwash or other pollutants to storm drains or to waterbodies. Such polluted discharges from pools, hot tubs, spas, and fountains shall be directed to the sanitary sewer (with the local sanitary sewer agency's approval) or to landscaped areas that can accommodate the volume.
- (b) Discharges from swimming pools, hot tubs, spas and fountains shall be allowed into storm drain collection systems only if there are no other feasible disposal alternatives (e.g., disposal to sanitary sewer or landscaped areas) and if the discharge is properly dechlorinated to non-detectable levels of chlorine consistent with water quality standards.
- (c) The Permittees shall require that new or rebuilt swimming pools, hot tubs, spas and fountains within their jurisdictions have a connection<sup>61</sup> to the sanitary sewer to facilitate draining events. The Permittees shall coordinate with local sanitary sewer agencies to determine the standards and requirements necessary for the installation of a sanitary sewer discharge location to allow draining events for pools, hot tubs, spas, and fountains to occur with the proper permits from the local sanitary sewer agency.
- (d) The Permittees shall improve their public outreach and educational efforts and ensure implementation of the required BMPs and compliance in commercial, municipal, and residential facilities.

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<sup>61</sup> This connection could be a drain in the pool to the sanitary sewer or a sanitary sewer clean out located close enough to the pool so that a hose can readily direct the pool discharge into the sanitary sewer clean out.

(e) The Permittees shall implement the Illicit Discharge Enforcement Response Plan from Provision C.5.b for polluted (contains chlorine, copper algaeicide, filter backwash, or other pollutants) swimming pool, hot tub, spa, or fountain waters that get discharged into the storm drain.

(2) **Reporting** – The Permittees shall keep records of the authorized major discharges of dechlorinated pool, hot tubs, spa, and fountain water to the storm drain, including BMPs employed; such records shall be available for inspection by the Water Board.

**vi. Discharge Type – Irrigation Water, Landscape Irrigation, and Lawn or Garden Watering**

(1) **Required BMPs** – The Permittees shall promote measures that minimize runoff and pollutant loading from excess irrigation via the following:

(a) Promoting and/or working with potable water purveyors to promote conservation programs that minimize discharges from lawn watering and landscape irrigation practices;

(b) Promoting outreach messages regarding the use of less toxic options for pest control and landscape management;

(c) Promoting and/or working with potable water purveyors to promote the use of drought tolerant, native vegetation to minimize landscape irrigation demands;

(d) Promoting and/or working with potable water purveyors to promote outreach messages that encourage appropriate applications of water needed for irrigation and other watering practices; and

(e) Implementing the Illicit Discharge Enforcement Response Plan from Provision C.5.b, as necessary, for ongoing, large-volume landscape irrigation runoff to their storm drain systems.

(2) **Reporting** – The Permittees shall provide implementation summaries in each Annual Report.

## C.16. Discharges to Areas of Special Biological Significance

This Provision applies to stormwater discharges from the County of San Mateo into the James V. Fitzgerald Marine Reserve Area of Special Biological Significance (ASBS). As set forth in the Fact Sheet, the State Water Board granted an exception to the ASBS discharge prohibition (ASBS Exception) in the Ocean Plan to applicants, including the County of San Mateo, for their existing stormwater discharges into ASBSs, provided they receive authorization to discharge by an NPDES permit; the discharges comply with all applicable terms, prohibitions, and special conditions of Attachment B - Special Protections (Special Protections) attached to and part of the ASBS Exception; and the discharges are essential for flood control or slope stability, designed to prevent soil erosion, occur only during wet weather, and are composed of only stormwater runoff. (see State Water Board Resolution No. 2012-0012, as amended by Resolution No. 2012-0031.) This Provision serves as the NPDES authorization for the County of San Mateo to discharge stormwater into the ASBS, provided the discharge meets the requirements below.

### C.16.a. Discharges to the James V. Fitzgerald Marine Reserve ASBS

- i. If the County of San Mateo meets all of the conditions set forth in Provision C.16.a.i. and C.16.a.ii., its stormwater discharges into the James V. Fitzgerald Marine Reserve ASBS from MS4 outfalls that were constructed or were under construction prior to January 1, 2005, are permitted. Permitted discharges must comply with the following:
  - (1) Be essential for flood control or slope stability, including roof, landscape, road, and parking lot drainage;
  - (2) Be managed or controlled to prevent soil erosion;
  - (3) Occur only during wet weather; and
  - (4) Be composed only of stormwater runoff, except as provided in the Special Protections of the ASBS Exception.
- ii. The County of San Mateo shall comply with all applicable terms, prohibitions, and special conditions of the Special Protections of the ASBS Exception, including monitoring requirements, as they apply to stormwater. The Special Protections are hereby incorporated by reference into this Order and attached hereto as Attachment F. Notwithstanding anything to the contrary in this Order, the County of San Mateo shall not alter the natural ocean quality of the ASBS; shall not discharge trash into the ASBS; and shall not discharge non-stormwater into the ASBS except as provided in the Special Protections. As required by the Special Protections, the County of San Mateo shall address the preceding requirements (other than trash) in an ASBS Compliance Plan to

be approved by the Regional Water Board Executive Officer and comply with the compliance schedule set forth in the Special Protections.

**iii. Reporting**

- (1) In addition to the monitoring requirements of the Special Protections, the County of San Mateo shall submit a copy of its ASBS Compliance Plan for approval by the Regional Water Board Executive Officer.
- (2) If the results of any monitoring required under the Special Protections indicate that stormwater runoff is causing or contributing to an alteration of natural ocean water quality in the ASBS, the County of San Mateo shall submit a report to the State Water Board and Regional Water Board within 30 days of receiving the results according to the guidelines provided in the Special Protections.
  - (a) Within 30 days of the approval of the report by Regional Water Board Executive Officer, the County of San Mateo shall revise its ASBS Compliance Plan according to the guidelines provided in the Special Protections.

## C.17. Discharges Associated with Unsheltered Homeless Populations

The purpose of this Provision is to identify and ensure the implementation of appropriate control measures, by all Permittees, to address non-stormwater discharges into MS4s associated with unsheltered homeless populations, including discharges from areas where unsheltered people congregate (e.g., formal and informal encampments including, but not limited to, informal tent or small cabin encampments, areas where people living in vehicles park, and safe parking areas). This Provision refers to such discharges collectively as discharges associated with homelessness.

### C.17.a. Permittee Requirements

#### i. Task Description

- (1) Permittees shall use results from biennial point-in-time census surveys and related information, such as municipal reports, databases, complaint logs, and other efforts, to gain a better understanding of unsheltered homeless population numbers within the Permittee's jurisdiction, the locations of unsheltered homeless residents, discharges and water quality-related impacts associated with homelessness, and associated sanitation-related needs.
- (2) To encourage ongoing regional, countywide, and municipal coordination efforts, Permittees shall collectively develop a best management practice report that identifies effective practices to address non-storm water discharges associated with homelessness into MS4s that impact water quality and specific milestones for reducing such discharges within a given timeframe. The report shall:
  - (a) Describe practices that may be implemented by Permittees, including those currently being implemented, to address discharges associated with homelessness that are impacting water quality;
  - (b) Identify regional and/or countywide efforts and implementation actions to address discharges associated with homelessness (including how those efforts and actions have been affected by unsheltered homeless population growth). Include recommendations for engaging in these efforts and incorporating discharge-reduction strategies that also help meet the unsheltered population's clean water needs; and
  - (c) Identify actions taken during the COVID-19 pandemic to reduce the spread of the virus in homeless populations, such as temporarily housing homeless people in hotels, that may have reduced discharges associated with homelessness. Permittees shall consider the practicability of such actions for longer-term implementation.

This task's broader goals are to recognize non-stormwater pollutant sources associated with unsheltered homeless populations, reasons for discharges, and means by which they occur, and develop useful information that can be used toward prioritizing individual Permittee and collaborative best management practices for reducing or managing such discharges, while ensuring the protection of public health. Examples of collaborative implementation programs could include collaborative efforts between ~~municipalities~~ Permittees, Caltrans, sanitary sewer agencies, ~~flood control districts~~, railroads, non-governmental organizations (NGOs), social service agencies and organizations, and other agencies.

**ii. Implementation Level**

- (1) Each Permittee shall ~~createsubmit~~ a map identifying, within its jurisdiction, the approximate location(s) of unsheltered homeless populations, including homeless encampments and other areas where other unsheltered homeless people congregate live. The map shall identify ~~the~~ those location(s) ~~of those unsheltered homeless populations~~ in relation to storm drain inlets and existing streams, rivers, flood control channels, and other surface water bodies within the Permittee's jurisdiction. The map shall be ~~submitted to the Water Board in 2023 and~~ updated once during the Permit term, in 2025. Where Permittees are working collaboratively to address discharges associated with homelessness, they may collaborate to submit a joint map that covers their respective jurisdictions.
- (2) Permittees shall report on the programmatic efforts ~~that are~~ being implemented within their jurisdiction, or at the countywide or regional level, to address MS4 discharges associated with homelessness. Examples of these efforts may include, but are not limited to: funding initiatives; adoption of ordinances to implement service programs; coordination with social services departments and NGOs; efforts to establish relationships with homeless populations; and alternative actions to reduce discharges to surface waters associated with homelessness, such as efforts towards providing housing, jobs, and related services for residents experiencing homelessness.
- (3) Each Permittee shall identify and implement appropriate best management practices to address MS4 discharges associated with homelessness that impact water quality ~~and, as appropriate,~~ including those impacts that can lead to public health impacts ~~from such discharges to surface waters. Each Permittee. In addition, Permittees~~ shall also evaluate and assess the effectiveness of those practices, specifically by reporting on the BMP control measures being implemented, the

approximate portion of the Permittee's unsheltered homeless population and locations being served by those control measures, and the portion and locations of the Permittee's unsheltered homeless population not reached, or not fully reached, by ~~those~~ the implemented control measures. Examples of actions that may be implemented include, but are not limited to, access to emergency shelters; the provision of social services ~~, clean drinking water,~~ and sanitation services; voucher programs for proper disposal of RV sanitary sewage; establishment of designated RV "safe parking" areas or formalized encampments with appropriate services; provision of mobile pump-out services; establishing and updating sidewalk/street/plaza cleaning standards for the cleanup and appropriate disposal of human waste; and establishing trash and waste cleanup or pickup programs within the Permittee's jurisdiction, or at the countywide or regional level.

- (4) Permittees shall use the information generated through the biennial point-in-time census surveys and related information, and the regional coordination tasks (as described above) to review and update their implementation practices.

### iii. Reporting

- (1) With the 2023 Annual Report, Permittees shall collectively submit, acceptable to the Executive Officer, a best management practice report as described in Provision C.17.a.i.(2).
- (2) With the 2023 and 2025 Annual Reports, Permittees shall submit a map as described in Provision C.17.a.ii.(1).

With the 2023 and 2025 Annual Reports, each Permittee shall report on the ~~implementation of best~~ management practices being implemented and ~~other control measures (as described above)~~ include the effectiveness evaluation reporting required in Provision C.17.a.ii.(3)) and additional actions or changes to address discharges associated with unsheltered homelessness. existing actions that the Permittee will implement to improve existing practices.



### **C.18. Control of Sediment Discharges from Coastal San Mateo County Sediment ControlsRoads**

San Mateo County shall implement the following control program for sediment. San Mateo County shall perform and report on the control measures according to this Provision, which implements requirements of the Pescadero-Butano Sediment TMDL and actions being taken on San Gregorio Creek to reduce sediment delivery from road-related erosion on San Mateo County-maintained roads to stream channels. For the purpose of this Provision, road ~~sediment sources include~~ related erosion includes, but ~~are~~ is not limited to, erosion of the road surface, road shoulder, road drainage structures such as ditches and culverts, and erosional features such as gullies, landslides, or sloughing that are road-related. Road-related means either i) the road is the primary cause of an observed erosion feature that, without the road, would not have formed or ii) the road is significantly increasing erosion rates from an erosion feature that existed prior to road construction.<sup>62</sup> This Provision does not apply to erosion sites that are not road-related, such as erosion from a private property that discharges onto a County-maintained road during a rain event. This Provision applies to San Mateo County-maintained roads in the Pescadero and Butano Creek watersheds (Pescadero-Butano Creek watershed), and in the San Gregorio Creek watershed in San Mateo County. This Provision is in addition to and does not supersede Provision C.2.e for Rural Road and Public Works Construction and Maintenance.

#### **C.18.a. Road Erosion Inventory**

- i. **Task Description** – San Mateo County shall prepare a road erosion inventory to identify and prioritize actions to reduce road-related erosion from hydrologically connected County roads. Hydrologic connectivity refers to the length or proportion of a road that drains runoff directly to streams or other water bodies. A hydrologically connected road is any road or road segment that has a continuous surface flow path to a natural stream channel during a storm runoff event.<sup>63</sup> A suitable design runoff event for most purposes is a 1-year 6-hour storm, with antecedent moisture conditions corresponding to the wettest month of the year. Connectivity usually occurs through road ditches, road surfaces, gullies, or other drainage structures or disturbed surfaces.

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<sup>62</sup> For example, a landslide that existed prior to road construction would not be a road-related erosion feature, but a significant increase in erosion from the landslide caused by a poorly located road cross-drain would be a road-related erosion feature. Only the increased erosion caused by the cross-drain would need to be addressed under this provision.

<sup>63</sup> Weaver, W.E., Weppner, E.M. and Hagans, D.K. 2015. *Handbook for Forest, Ranch and Rural Roads: A Guide for Planning, Designing, Constructing, Reconstructing, Upgrading, Maintaining and Closing Wildland Roads (Rev. 1<sup>st</sup> ed.)*, prepared by Pacific Watershed Associates for Mendocino County Resource Conservation District, Ukiah, California, pp. 8 – 10, 50 – 51, and 332.

ii. **Implementation Level** – To comply with this subprovision, San Mateo County shall:

- (1) Inventory all San Mateo County roads and include the following information: i) road location; ii) road segments that are hydrologically connected, iii) type of road (e.g., all-weather, seasonal, or abandoned); and iv) type of road surface (e.g., paved, gravel, or native soil).

For hydrologically connected road segments only, the Permittee shall comply with (2), (3), and (4) as follows:

- (2) All road-related erosion sites with the potential to discharge at least 5 cubic yards of sediment to streams or other water bodies shall be documented. At a minimum, the location, type, and approximate dimensions of the erosion feature, an estimate of the sediment volume that could erode, its potential for delivery to a waterbody (e.g., high, moderate, or low), a site photo, a brief description of the proposed treatment for erosion repair, and permits required for the repair shall be documented.
- (3) The location, shape (e.g., circular, elliptical, arch, box), size, and condition of all culverts along the roadway shall be documented. The following shall also be assessed:
  - (a) whether the culvert opening is clear and free of debris or sediment,
  - (b) the potential for the culvert to plug with debris carried from upstream during future runoff events; and
  - (c) the potential for flow diversion onto the roadway if the culvert is overtopped during a future runoff event.

Culvert plugging and flow diversion potential shall at a minimum be documented as 'none,' 'low,' 'moderate,' or 'high,' consistent with appropriate standards.<sup>64,65,66</sup>

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<sup>64</sup> Weaver, W.E., Weppner, E.M. and Hagans, D.K. 2015. *Handbook for Forest, Ranch and Rural Roads: A Guide for Planning, Designing, Constructing, Reconstructing, Upgrading, Maintaining and Closing Wildland Roads (Rev. 1<sup>st</sup> ed.)*, prepared by Pacific Watershed Associates for Mendocino County Resource Conservation District, Ukiah, California, pp. 99 – 106 and 136 – 150.

<sup>65</sup> Cafferata, P., Lindsay, D., Spittler, T., Wopat, M., Bundros, G., Flanagan, S., Coe, D. and Short, W. 2017. *Designing Watercourse Crossings for Passage of 100-year Flood Flows, Wood and Sediment (Updated 2017)*, California Forestry Report No. 1 (revised), State of California Department of Forestry and Fire Protection, Sacramento, California, pp. 23 - 43.

<sup>66</sup> Furniss, M.J., Flanagan, S. and McFadin, B. 2000. *Hydrologically-connected roads: an indicator of the influence of roads on chronic sedimentation, surface water hydrology, and exposure to toxic chemicals*, Stream Notes, July 2000. Stream Systems Technology Center, U.S. Forest Service, Rock Mountain Research Station, Fort Collins, Colorado.

- (4) For culverts with a moderate to high plugging potential, the Permittee shall develop a brief description of the proposed improvement(s), priority for treatment, and required permits.

**iii. Reporting** – The road erosion inventory for the Pescadero-Butano Creek watershed shall be submitted to the Water Board in the 2023 Annual Report. The road erosion inventory for the San Gregorio Creek watershed shall be submitted to the Water Board in the 2025 Annual Report. The road erosion inventory shall be submitted in ArcGIS and Google Earth KML format with an accompanying report that provides all the information listed in the subprovision above, in addition to:

- (1) A summary table for both the Pescadero-Butano Creek and San Gregorio Creek watersheds that lists the total drainage area, the total length of all San Mateo County roads, the total length of all hydrologically connected San Mateo County roads; and the percentage of unpaved San Mateo County roads that are hydrologically connected.
- (2) Summary tables documenting the results of the road erosion inventory by watershed, where watershed means either the Pescadero-Butano Creek watershed or the San Gregorio Creek watershed.

New erosion sites identified during routine patrols shall be added to the road erosion inventory. San Mateo County shall provide a status update of these new erosion sites each year as part of its Annual Report.

#### **C.18.b. Prioritized List and Schedule of Actions**

**i. Task Description** – Based on the results of the road erosion inventory (C.18.a), San Mateo County shall develop a prioritized list and schedule of actions to reduce road-related erosion and sediment delivery to stream channels. The goal of these efforts is to attain the following performance standards for San Mateo County roads identified in the Pescadero-Butano Sediment TMDL implementation plan:

- (1) **For Roads:** Design, construct, and maintain roads to reduce road-related sediment delivery to channels to  $\leq 500$  cubic yards per mile per 20-year period; or i) limit the length of unpaved roads that are hydrologically connected to 25 percent of total road length; ii) ensure culvert inlets have low plugging potential; and, iii) install appropriate best management practices, such as critical dips,<sup>67</sup> at culverted crossings that have a diversion potential; and

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<sup>67</sup> A critical dip is a low berm and/or a dip in the road surface constructed across the roadway, used to divert flow off the road that would otherwise flow down the road surface.

- (2) **For Gullies and/or shallow landslides:** Promote natural recovery and minimize human-caused increases in sediment delivery from unstable areas. Manage existing roads and other infrastructure to prevent additional erosion of legacy sediment delivery sites and/or delivery from potentially unstable areas.

**ii. Implementation Level** – To comply with this provision element, San Mateo County shall:

- (1) Develop a prioritized list of control measures and pollution prevention strategies for all road-related erosion sites and for all culvert crossings with greater than a 'low' plugging or diversion potential identified in Provision C.18.a. The list shall include a brief description of the control measure(s) to be taken and a projected completion date for each control measure. For paved roads, erosion and sediment control actions could primarily focus on road crossings to meet the performance standards.
- (2) Develop a schedule to implement the prioritized list of control measures such that twenty percent (20%)<sup>68</sup> of the control measures for the Pescadero-Butano Creek watershed are scheduled for completion by June 30, 2027. Implementation of control measures for San Gregorio Creek is not required during this ~~permit~~Permit term.
- (3) If the length of hydrologically connected unpaved roads identified in C.18.a exceeds 25 percent of the total San Mateo County unpaved road length in a watershed,<sup>69</sup> then the prioritized list and schedule shall include an implementation plan and schedule of actions to reduce the percentage of hydrologically connected unpaved roads to 25 percent or less. Examples of treatments to reduce overall hydrologic connectivity of roads are provided by Weaver et al. (2015, Chapter 4).

**iii. Reporting** – The prioritized list and schedule for the Pescadero-Butano watershed shall be completed and submitted to the Water Board in the 2023 Annual Report. The prioritized list and schedule for the San Gregorio Creek watershed shall be completed and submitted to the Water Board in the 2025 Annual Report. San Mateo County shall update the prioritized list and schedule annually thereafter and submit it each year with its Annual Report. The submittal shall include a list of completed, in-progress, and scheduled control measure and pollution prevention strategies and shall include at a minimum the following information for each control measure:

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<sup>68</sup> 20 percent means ~~either~~ 20 percent of the total estimated cubic yards of potential sediment erosion identified in the road erosion inventory required by Provision C.18.a ~~or 20 percent of the total number of identified erosion sites.~~

<sup>69</sup> 25 percent is measured from road segments located within the watershed. It excludes road segments located outside the watershed.

- (1) The project name
- (2) The project location and a brief project description
- (3) Authorizations required to implement the project, including status
- (4) The actual or estimated project start and end dates

**C.18.c. Implement Control Measures to Attain Performance Standards**

- i. **Task Description** – San Mateo County shall implement control measures and pollution prevention strategies to reduce road-related sediment delivery from County roads to stream channels in the Pescadero-Butano Creek and San Gregorio Creek Watersheds. At least twenty percent (20%) of the control measures identified in Provision C.18.b.ii shall be implemented and completed in the Pescadero-Butano Creek watershed by 2027.
- ii. **Implementation Level** – To comply with this subprovision, San Mateo County shall:
  - (1) Continue to follow all the requirements of Provision C.2.e for Rural Road and Public Works Construction and Maintenance.
  - (2) Based on the priority list and schedule of actions developed in C.18.b, implement the control measures and pollution prevention strategies for road related erosion sites, culvert crossings with greater than a ‘low’ plugging or diversion potential, and San Mateo County road systems where hydrologic connectivity exceeds 25 percent of the unpaved road network in a watershed.
  - (3) New County-maintained roads constructed on hillslopes exceeding 5 percent shall be constructed as storm-proofed roads, as defined by Weaver et al. (2015, Chapter 6), and shall meet the following specifications where applicable:
    - (a) Stream crossings have a drainage structure designed for the 100-year flood flow including woody debris and sediment (Cafferata, et al., (2017)).
    - (b) Stream crossings do not have the potential for flow diversion onto the roadway if the culvert is overtopped during a future runoff event.
    - (c) Culvert inlets have a low plug potential (trash barriers or deflectors are installed where needed).
    - (d) Culverts are installed at the base of the fill and in line with the natural channel.
    - (e) Emergency overflow culverts that emerge higher in the fill have full round, anchored downspouts that extend to the natural channel.

- (f) Deep fills (deeper than a backhoe can reach from the roadbed) with undersized culverts or culverts with high plugging potential are fitted with an emergency overflow culvert.
- (g) Bridges have stable, non-eroding abutments and do not significantly restrict 100-year flood flow.
- (h) Stream crossing fills are stable.
- (i) Approaching road surfaces and ditches are hydrologically disconnected from streams and stream crossing culverts to the maximum extent feasible using road shaping and road drainage structures.
- (j) Class I (fish-bearing) stream crossings meet California Department of Fish and Wildlife and National Marine Fisheries Service fish passage criteria.
- (k) Road surfaces and ditches are hydrologically disconnected from streams and stream crossing culverts: to the maximum extent feasible. Road surface runoff is dispersed, rather than collected and concentrated.
- (l) Ditches are drained by functional ditch relief culverts and/or rolling dips.
- (m) Outflow from ditch relief culverts does not discharge to streams.
- (n) Ditches and road surfaces drainage does not discharge (through culverts and/or rolling dips) onto active or potential landslides and/or into gullies.
- (o) Fine sediment contributions from roads, cutbanks, and ditches are minimized by utilizing seasonal closures and installing a variety of surface drainage techniques including road surface shaping (outsloping, insloping, or crowning), rolling dips, ditch relief culverts, water bars, and other measures to disperse road surface runoff and reduce or eliminate sediment delivery to the stream.

New County-maintained roads that are under construction within one year of the start of this Permit term shall be exempt from this requirement (C.18.c.ii.(3)).

- iii. **Reporting** – A report documenting project status shall be submitted with the Annual Report each year starting the first year of project implementation. The report shall include a list of projects from the priority list and schedule of actions in Provision C.18.b that have been completed or are in-progress, including:

- (1) An estimate of the potential sediment delivery to stream channels prevented by the implemented control measure or pollution prevention strategy.
- (2) The percent of control measures in the prioritized list completed to date so that progress in achieving the implementation of 20 percent of the control measures for the Pescadero-Butano Creek watershed by June 30, 2027, is documented.
- (3) A summary of projects scheduled for completion since the last Annual Report submittal that were delayed or not completed and an explanation of why they were delayed or not completed.

**C.18.d. Monitoring**

- i. **Task Description** – San Mateo County shall conduct implementation, effectiveness, and forensic monitoring to assess the performance of implemented control measures.
- ii. **Implementation Level** – To comply with this provision element, San Mateo County shall:
  - (1) Conduct implementation monitoring to assess whether the implemented control measure from C.18.c was fully and properly carried out as specified. Monitoring shall be performed once and conducted via a visual observation of the completed project.
  - (2) Conduct effectiveness monitoring to assess whether each of the implemented control measure(s) from C.18.c is adequately protective of water quality. Effectiveness monitoring shall be performed once and conducted via a visual inspection of the construction or repair site and the adjacent area. It shall be performed after the control measure has gone through one year or one winter season in order to evaluate the effectiveness of the control measure during winter rain events.
  - (3) Conduct forensic monitoring in cases where an implemented control measure has failed. Forensic monitoring shall be conducted via a visual inspection of the failed control measure. Site photos shall be taken to adequately document the failure and a brief description of the mechanism and/or circumstances of failure shall be documented.
  - (4) Conduct routine monitoring of San Mateo County roads per the guidelines set forth in the County of San Mateo Routine Maintenance Program Manual (San Mateo County 2020, as may be amended).
- iii. **Reporting** – San Mateo County shall document the results of the implementation, effectiveness, and forensic monitoring in a monitoring report submitted with the Annual Report each year starting in the first year of project

implementation. If preferred, implementation monitoring information may be included with the implementation reporting required pursuant to Provision C.18.c.iii. The report shall include the following:

- (1) Results of implementation and effectiveness monitoring, including:
  - (a) The monitoring point location and description of the project, or a reference to the specific project in the completed projects report.
  - (b) A brief description of the visual observations made during the monitoring inspection.
  - (c) The date the monitoring inspection was conducted.
- (2) Results of any forensic monitoring conducted in the past year, including:
  - (a) The monitoring point location and description of the project, or a reference to the specific project in the completed projects report.
  - (b) Site photos documenting the failed control measure
  - (c) A brief description of the mechanism and/or circumstances of failure
  - (d) Proposed corrective measures to be taken and timeline for completion
  - (e) The date the monitoring inspection was conducted
- (3) Results of annual monitoring conducted in the past year, including:
  - (a) A summary of all unpaved roads inspected at the end of the rainy season.
  - (b) A brief description of general road conditions and any specific problems noted, particularly with regard to sediment delivery to stream channels. These observations will be used to make annual updates to the Road Erosion Inventory as required by Provision C.18.a. Any new road-related erosion sites identified during this effort shall be documented in the report and added to the Road Erosion Inventory required by Provision C.18.a.
  - (c) The date(s) the monitoring inspections were conducted.



### **C.19. Cities of Antioch, Brentwood, and Oakley, Unincorporated Contra Costa County, and the Contra Costa County Flood Control and Water Conservation District Requirements**

The cities of Antioch, Brentwood, and Oakley, unincorporated Contra Costa County, and the Contra Costa County Flood Control and Water Conservation District (collectively, East County Permittees), located in the Central Valley Regional Water Quality Control Board's (Central Valley Water Board's) geographic jurisdiction, are included in the definition of "Permittees" as used throughout and shall comply with all requirements of this Order No. R2-~~20XX~~2022-00XX except as provided for in this Provision. This Provision also incorporates requirements from Central Valley Water Board's TMDLs and control programs applicable to the East County Permittees.

#### **C.19.a. Mercury Controls**

The East County Permittees are exempt from Provision C.11, Mercury Controls.

#### **C.19.b. Polychlorinated Biphenyls (PCBs) Controls**

The East County Permittees are exempt from Provision C.12, PCBs Controls.

#### **C.19.c. Diazinon and Chlorpyrifos Controls**

- i. **Task Description** – The East County Permittees shall continue compliance with the Central Valley Water Board's Sacramento-San Joaquin Delta Diazinon and Chlorpyrifos TMDL and continue to meet wasteload allocations for diazinon and chlorpyrifos.
- ii. **Implementation Level** – The East County Permittees shall implement Provision C.9.

#### **C.19.d. Methylmercury Control Measure Plan and Monitoring**

The methylmercury wasteload allocations for the East County Permittees in the Sacramento-San Joaquin Delta Methylmercury TMDL (Resolution No. R5-2010-0043) by Delta subarea are as follows:

- Central Delta subarea: 0.75 grams/year
- Marsh Creek subarea: 0.30 grams/year
- West Delta subarea: 3.2 grams/year

Methylmercury wasteload allocations shall be met as soon as possible, but no later than the final compliance date of January 1, 2030. As part of the Delta Mercury Control Program Review, the Central Valley Water Board may adopt revised wasteload allocations and a new final compliance date.

- i. **Task Description** – Pursuant to the Central Valley Water Board’s Water Quality Control Plan for the Sacramento San Joaquin Basins’ Delta Mercury Control Program and associated Methylmercury TMDL, the East County Permittees were required to develop, conduct, and report on a methylmercury control study for urban runoff. The submitted control study<sup>70</sup> proposed conducting a Reasonable Assurance Analysis (RAA) to determine the achievable methylmercury load reduction. The control study also stated that monitoring will be conducted to answer the management questions outlined in Provision C.19.d.ii(2)a-e. Therefore, the East County Permittees shall submit a control measure plan and conduct a corresponding RAA as well as implement methylmercury monitoring as described below. With the Central Valley Water Board’s Executive Officer’s approval, the East County Permittees may participate in the Delta Regional Monitoring Program (Delta RMP) or other collective monitoring efforts in lieu of some or all of the individual monitoring requirements required by this Provision. Participation in the Delta RMP or other collective monitoring efforts shall consist of providing funds and/or in-kind services to the Delta RMP or other collective monitoring effort at least equivalent to the discontinued monitoring efforts in order for the Central Valley Water Board Executive Order to approve the alternative monitoring.
- ii. **Implementation Level** – The East County Permittees shall:
- (1) Prepare and submit by ~~August~~November 1, 2022, a Control Measure Plan and schedule to achieve the TMDL wasteload allocations. The Plan shall include a corresponding RAA for total mercury and methylmercury demonstrating that sufficient control measures will be implemented during this Permit term to attain the methylmercury Delta Mercury Control Plan wasteload allocations by January 1, 2030, or any revised final compliance date adopted by the Central Valley Water Board as part of the Delta Mercury Control Program Review. The Control Measure Plan, including RAA, shall comply with the following:
    - (a) The Plan shall identify all technically and economically feasible mercury and methylmercury MS4 control measures to be implemented (including green stormwater infrastructure (GSI) projects).
    - (b) The Plan shall include a schedule according to which these technically and economically feasible control measures will be fully implemented.
    - (c) The Plan shall provide an evaluation and quantification of mercury and methylmercury load reductions of such measures as well as an

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<sup>70</sup> Contra Costa Clean Water Program Methylmercury Control Study Final Report (Rev. 1), September 2020.

evaluation of costs, control measure efficiency, and significant environmental impacts resulting from their implementation.

- (d) The RAA for total mercury must be evaluated using the California Toxics Rule for mercury (0.05 µg/L).
  - (e) The RAA for methylmercury must be evaluated using the methylmercury load allocations specific to each Delta subarea within Contra Costa County subject to the DMCP (i.e., the Central Delta, Marsh Creek, and West Delta subareas).
  - (f) The RAA shall demonstrate quantitatively that the plan will result in mercury and methylmercury load reductions sufficient to attain the methylmercury wasteload allocations by January 1, 2030, (or any revised final compliance date adopted by the Central Valley Water Board as part of the Delta Mercury Control Program Review) and address the following questions:
    - (i) What are the annual mercury and methylmercury loads from the MS4 discharge to the Central Delta, Marsh Creek, and West Delta subareas?
    - (ii) Do the mercury and methylmercury loads to each subarea meet the assigned methylmercury wasteload allocations?
    - (iii) What is the achievable mercury and methylmercury load reduction in discharges from the MS4 by implementation of reasonable, foreseeable control measures?
    - (iv) What controllable MS4 water quality factors affect methylmercury production and transport in the MS4 discharge and in the receiving waters draining to the Delta?
    - (v) Are there MS4 design features that increase or decrease mercury methylation.
    - (vi) Are there reasonable and foreseeable management actions to reduce methylmercury concentrations within the MS4 boundary?
  - (g) Permittees shall ensure that the calculation methods, models, model inputs, and modeling assumptions used to fulfill Provision C.19.ii.(1)(a)-(f) have been validated through a peer review process. The East County Permittees may use the approach developed by the Contra Costa Clean Water Program or an equivalent approach developed by another program during the previous permit term.
- (2) Conduct annual monitoring in waterways within the East County Permittees' MS4 boundary to answer the questions in Provision

C.19.d.ii(2)(a)-(e). Monitoring shall include, but is not limited to, Marsh Creek, downstream of Marsh Creek Reservoir, and Central and West Delta Subarea tributaries within the MS4 boundary. Permittees shall collect fifty (50) samples throughout the Permit term, with at least eight (8) samples annually, for aqueous methylmercury analysis. Samples shall be collected in each subarea to be representative of the discharge during wet and dry year conditions and analyzed using U.S. EPA- or SWAMP-approved methods.

- (a) What are the annual methylmercury loads from the MS4 discharge to the Central Delta, Marsh Creek, and West Delta subareas?
  - (b) Do the methylmercury loads to each subarea meet the assigned methylmercury wasteload allocations?
  - (c) Are there any MS4 design features that increase mercury methylation in the discharge?
  - (d) What MS4 water quality controls have been implemented or are planned to be implemented to reduce methylmercury production and transport in the MS4 discharge?
  - (e) By January 1, 2024, address whether eutrophication and low dissolved oxygen concentrations increase methylmercury in ponded areas of Marsh Creek during low flow periods (depending on the year, low flow periods can range between mid-March and mid-November), and, if so:
    - (i) Under what hydrologic or seasonal circumstances do increased methylmercury concentrations reach the Delta?
    - (ii) Are there reasonable and foreseeable management actions to ameliorate increased methylmercury concentrations?
- (3) Prepare an Annual Mercury Monitoring Plan and submit it to the Central Valley Water Board for Executive Officer approval. The monitoring plan shall describe the annual monitoring design and specify the proposed sampling locations for methylmercury sampling required under Provision C.19.d.ii.(2).

### iii. Reporting

- (1) Annual Mercury Monitoring Plan – by ~~July~~October 1, 2022, and ~~by April 30~~ annually thereafter. with the Urban Creeks Monitoring Report due March 31.
- (2) Annual Report – The East County Permittees shall provide the following:

- (a) Monitoring and assessment results answering the questions required under Provision C.19.d.ii.(2), and
- (b) Upon completion by the deadline in Provision C.19.d.ii.(1), submit the Control Measure Plan, including RAA.

A copy of each Annual Report shall also be submitted to the Central Valley Water Board.

- (3) Pollutants of Concern Monitoring Report – The East County Permittees shall report monitoring and assessment activities relevant to the Delta Methylmercury TMDL from the past water year and planned for the next water year as a separate section within the Pollutants of Concern Monitoring Report required under Provision C.8.h.iv. A copy of each Pollutants of Concern Monitoring Report shall also be submitted to the Central Valley Water Board.
- (4) Integrated Monitoring Report – The East County Permittees shall report the monitoring and assessment results as a separate section within the Integrated Monitoring Report as required under Provision C.8.h.v. A copy of each Integrated Monitoring Report shall also be submitted to the Central Valley Water Board.
- (5) The East County Permittees shall report progress on the Delta Methylmercury TMDL and recommendations for the next permit re-issuance as a separate section within the Report of Waste Discharge (ROWD) required by Provision C.25. A copy of the ROWD shall also be submitted to the Central Valley Water Board.

#### **C.19.e. Delta Mercury Control Program Minimum BMPs**

- i. **Task Description** – The East County Permittees shall implement inorganic mercury reduction BMPs as well as provide ongoing education and outreach to address mercury pollution prevention and risk reduction.
- ii. **Implementation Level** – At a minimum, the East County Permittees shall implement the following inorganic mercury reduction BMPs, consistent with the Delta Methylmercury TMDL.
  - (1) **Mercury Collection and Recycling** - To minimize mercury in storm water the East County Permittees shall continue implementing:
    - (a) Collection and recycling of mercury containing devices and equipment at the consumer level (e.g., thermometers, thermostats, switches, bulbs); and
    - (b) Collection, recycling and/or diversion of mercury-containing waste products (e.g., gauges, batteries, fluorescent and other lamps,

switches, relays and sensors) from the waste stream from industrial and commercial entities (e.g., auto dismantlers), and municipal facilities.

- (2) **Enhanced Municipal Management Practices to Reduce Sediment Discharges** - The East County Permittees shall continue to implement BMPs to minimize sediment discharges during municipal operations and municipal maintenance activities. Municipal operations and municipal maintenance activities include but are not limited to the following: storm drain drop inlet and pipeline cleaning, landscaping, road construction, road repair, and pump station cleaning.
- (3) **Public Education and Risk Reduction** - The East County Permittees shall continue to conduct ongoing education to the public on mercury pollution prevention and mercury risk reduction. The East County Permittees shall continue to:
  - (a) Provide mercury pollution prevention messages to residents, commercial businesses, and industrial facilities with mercury-containing products or emissions. This may be implemented as part of Provision C.7; and
  - (b) Provide notices to communities on the health risk associated with eating mercury contaminated fish. These notices shall also include the Office of Environmental Health Hazard Assessment's fish consumption advisories.
- (4) **Methylmercury Controls** – the East County Permittees shall implement control measures that reduce mercury methylation potential and retrofit existing BMPs that show an increase of mercury methylation.
  - (a) New development projects shall use BMPs that either prevent an increase of methylmercury or have been shown to decrease methylmercury.
  - (b) For existing BMPs that increase methylmercury within subareas that are meeting the assigned wasteload allocation, retrofitting of these BMPs may occur as part of any capital improvement, redevelopment, operation, or maintenance plan as resources are available.
  - (c) For existing BMPs that increase methylmercury within subareas that are not meeting the assigned wasteload allocation, retrofitting of these BMPs shall occur as soon as feasibly possible, but no later than the final compliance date of January 1, 2030 (or any revised final compliance date adopted by the Central Valley Water Board as part of the Delta Mercury Control Program Review).

**iii. Reporting** – In each Annual Report, the East County Permittees shall:

- (1) Describe Mercury Collection and Recycling efforts.
- (2) List the municipal operations and municipal maintenance activity BMPs that are implemented to minimize sediment discharges.
- (3) Discuss the mercury pollution prevention messages provided and
- (4) Summarize tasks implemented to provide notices on the health risk associated with eating mercury contaminated fish.
- (5) Report on implementation of methylmercury controls required in C.19.2.ii.(4).

**C.19.f. Pyrethroid Control Program**

**i. Task Description** – The East County Permittees shall comply with the Central Valley Water Board’s conditional prohibition of the discharges of pyrethroid pesticides and associated monitoring and reporting requirements established in the Amendment to the Water Quality Control Plan for the Sacramento and San Joaquin River Basins for the control of Pyrethroid Pesticide Discharges (Resolution No. R5-2017-0057).

**ii. Implementation Level** – The East County Permittees shall:

- (1) Continue to implement a pesticide control program as required by Provision C.9, which is consistent with Central Valley Water Board requirements for a pyrethroid management plan.
- (2) Continue pesticides and toxicity monitoring as specified in Provision C.8.g. In addition to the pollutants and organisms listed in Table 8-5, the East County Permittees shall also analyze total and particulate organic carbon, as required by the Central Valley Water Board’s Basin Plan Amendment (R5-2017-0057).
- (3) Submit a baseline monitoring report by September 19, 2022, that:
  - (a) Summarizes the pyrethroid and toxicity monitoring results from 2012 through 2019;
  - (b) Assesses the compliance of the discharge with the conditional prohibition triggers in the Basin Plan established by Resolution No. R5-2017-0057;
  - (c) Summarizes toxicity of water and sediment samples to the test organism *Hyalella azteca*; and
  - (d) Summarizes any other pyrethroid monitoring data collected by the East County Permittees during the above period.

**iii. Reporting** – The East County Permittees shall:

- (1) With the 2024 and subsequent Annual Reports, provide a progress report to document the management practices that have been implemented, evaluate pyrethroid concentrations with respect to the pyrethroid triggers, and identify effective control actions to be taken in the future. A copy shall be provided to the Central Valley Water Board.
- (2) Urban Creeks Monitoring Report (UCMR) – The East County Permittees shall report monitoring, assessment results, relevant to the Pyrethroids Control Program as a separate Pyrethroid Trend Monitoring section within the 2024 UCMR required under Provision C.8.h.iii. A copy of the 2024 UCMR shall also be submitted to the Central Valley Water Board. The Pyrethroid Trend Monitoring section of the 2024 UCMR, shall include an analysis of data collected in East County Permittees receiving waters for pesticides and toxicity from 2019 through 2024 to assess the following:
  - (a) Whether discharges from MS4s are exceeding the acute and chronic pyrethroid triggers set forth in the Amendment to the Water Quality Control Plan for the Sacramento and San Joaquin River Basins for the Control of Pyrethroid Pesticide Discharges (Resolution No. R5-2017-0057);
  - (b) Whether pyrethroid pesticides are causing or contributing to exceedances of the narrative water quality objective for toxicity in surface waters or bed sediments.
  - (c) The effectiveness of management practices that are implemented to reduce pyrethroid levels in discharges;
  - (d) Whether alternatives to pyrethroid pesticides are being discharged at concentrations with the potential to cause or contribute to exceedances of applicable water quality objectives.



## C.20. Cost Reporting

**C.20.a. Task Description** – Each Permittee shall annually prepare and submit a fiscal analysis of the capital and operation and maintenance costs incurred to comply with this Order’s requirements listed in Provision C.20.b.(iii).

### C.20.b. Implementation Level

- i. The Permittees shall develop a cost reporting framework and methodology to perform the fiscal analysis. Permittees are encouraged to collaboratively develop the framework and methodology for purposes of efficiency, cost-savings, and regionwide consistency and comparability. The framework shall consider identification of costs incurred solely to comply with this Order’s requirements as listed in Provision C.20.b.(iii) as compared to costs shared with other programs or regulatory requirements, provide meaningful data to assess costs of different program areas, and allow for comparisons and to identify trends over time.
- ii. The analysis shall include a description of the source of funds that are proposed to meet the necessary expenditures, including legal restrictions on the use of such funds, and identify any funding resources shared on a regional or countywide basis. The analysis shall include the costs incurred to comply with this Permit, and an estimate of costs for the upcoming Permit year.
- iii. The analysis shall include the following program areas, specifically as required under this Order:
  - (1) Program management
  - (2) Municipal operations
  - (3) New development and redevelopment
  - (4) Industrial and commercial site controls
  - (5) Illicit discharge detection and elimination
  - (6) Construction site controls
  - (7) Public information and outreach
  - (8) Water quality monitoring
  - (9) Pesticides toxicity control
  - (10) Trash load reduction
  - (11) Mercury controls
  - (12) PCBs controls

- (13)Copper controls
- (14)Bacteria controls
- (15)Discharges associated with unsheltered homeless populations
- (16)Asset management plan development and implementation

iv. The costs reported for each program area shall address the following categories:

- (1) Total cost
- (2) Capital expenditures
- (3) Land costs
- (4) Personnel costs
- (5) Consultant costs
- (6) Overhead costs
- (7) Construction costs
- (8) Operation and maintenance costs
- (9) Other costs

#### C.20.c. Reporting

- i. The Permittees shall submit the cost reporting framework and methodology, acceptable to the Regional Water Board Executive Officer, by ~~December 31, 2022~~June 30, 2023.
- ii. The Permittees shall submit their fiscal analyses annually according to the accepted cost reporting framework and methodology starting with the ~~2024~~2025 Annual Report.

## C.21. Asset Management

**C.21.a. Task Description** – Each Permittee shall develop and implement an Asset Management Plan in order to ensure the satisfactory condition of all hard assets<sup>71</sup> constructed during this and ~~previous permit~~Previous Permit terms pursuant to Provisions C.2 Municipal Operations, C.3 New Development and Redevelopment, C.10 Trash Load Reduction, C.11 Mercury Controls, C.12 PCBs Controls, C.13 Copper Controls, C.14 Bacteria Controls for Impaired Water Bodies, C.17 Discharges Associated with Unsheltered Homeless Populations, C.18 San Mateo County Sediment Controls, and C.19 Cities of Antioch, Brentwood, and Oakley, Unincorporated Contra Costa County, and the Contra Costa County Flood Control and Water Conservation District Requirements.

**C.21.b. Implementation Level – Each Permittee shall:**

- i. Develop an Asset Management Plan by June 30, 2025, which, at a minimum, shall include the following:
  - (1) A description of the asset categories to be included.
  - (2) An inventory (or link to such an inventory) of Permittees' existing hard assets built pursuant to the ~~provisions~~Provisions cited in Provision C.21.a, including at a minimum all LID/GSI systems and trash capture devices.
  - (3) An Operation, Maintenance, Rehabilitation, and Replacement Plan (Asset Management O&M Plan), to evaluate data obtained through asset assessment in order to inform a strategy for prioritizing and scheduling maintenance, rehabilitation, and replacement of inventoried assets, including:
    - (a) A process for prioritizing and scheduling operation and maintenance activities.
    - (b) A process(es) for evaluating the current condition, and identifying the need for and carrying out, as appropriate, the rehabilitation and replacement of inventoried assets. The process(es) shall account for:
      - (i) The minimum condition necessary to achieve minimum performance level(s) for each type of hard asset, including an assessment of stormwater volume and pollutant load reduction, necessary to comply with applicable Permit Provisions and TMDLs.

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<sup>71</sup> Hard assets are structural controls that serve a water quality function, for example: bioretention cells, pervious pavement systems, full trash capture devices, trash receptacles, and pet waste stations.

- (ii) Current performance level and effectiveness, as indicated by condition. Permittees may implement a risk-based condition assessment, or comparable assessment method, to cost-effectively and -efficiently assess condition. Permittees shall base the effectiveness evaluation on, at a minimum, factors such as design, capacity, and condition and function relative to the asset's design, intended operating conditions, and intended function.
    - (iii) Consequence of failure and likelihood of failure.
  - (c) An evaluation or forecast of costs necessary for the implementation of (a)-(b) above, at least through the end of the current permit term. On an ongoing basis, the Permittees shall compare these projections with available funding sources to determine the best manner in which to fund the operation, maintenance, rehabilitation, and replacement of inventoried assets. This evaluation or forecasting may supplement Permittees' compliance with Provision C.20 Cost Reporting.
- (4) Recommendations for a reporting strategy, which may have a nexus with the tracking systems referenced in Permittees' Green Infrastructure Plans, to include:
  - (a) Municipality-specific reporting;
  - (b) Assessment of the programmatic benefit from countywide or regional roll-up of collected information.
- ii. Begin implementation of the Asset Management Plan no later than July 1, 2025.
- iii. Reassess and update their Asset Management Plan on an as-needed basis, to address changing conditions and resources.
- iv. Provide the latest version of the Asset Management Plan to Water Board staff during inspections and audits, or otherwise upon request.
- v. Complete a Climate Change Adaptation Report to identify potential climate change-related threats to assets and appropriate adaptation strategies. The report shall assess existing, new, and increasing threats from climate change to the condition of Permittees' inventoried hard assets over the next 50 years, and identify approaches that Permittees may implement to address those threats, such as the modification of design standards and countywide technical guidance documents. The Climate Change Adaptation Report may be developed on an all-Permittee (regional) scale or countywide scale.

### C.21.c. Reporting

- i. The Permittees shall submit their Asset Management Plans with the 2025 Annual Reports.
- ii. The Permittees shall report on the implementation of their Asset Management Plans annually, starting with the 2026 Annual Reports, as follows:
  - (1) Provide (or link to) an inventory of all assets accounted for in the Asset Management Plan.
    - (a) Different categories of assets (e.g., trash controls, LID/GSI controls, bacteria controls) may be maintained in separate inventories.
  - (2) At a minimum, for each asset in the inventory, provide the following: category or type of water quality control; relevant design information; tributary drainage area; location; condition based on periodic inspections either by municipal or contracted staff; and operation and maintenance need (for example, while most assets may require normal operation & maintenance, Permittees may identify a subset of assets in need of rehabilitation or replacement).

This information does not have to be submitted in tabular format in the Annual Report; it may be provided externally, at the linked location identified in Provision C.21.c.ii.(1) above.
- iii. The Permittees shall submit the Climate Change Adaptation Report described in Provision C.21.b.v with their 20272026 Annual Reports. The Permittees may submit the Climate Change Adaptation Report(s) on an all-Permittee (regional) scale or countywide scale.

## C.22. Annual Reports

- C.22.a.** The Permittees shall submit Annual Reports electronically, including a verified electronic signature (e.g., Adobe e-signature, DocuSign, or equivalent), in all cases by September 30 of each year, in the manner specified by the Water Board. Each Annual Report shall report on the previous fiscal year beginning July 1 and ending June 30. The annual reporting requirements are set forth in Provisions C.1 – C.21. ~~An electronic copy, including a verified electronic signature (e.g., Adobe e-signature or DocuSign) or accompanied by a wet signature page submitted in hard copy, of each Annual Report shall be submitted by October 15 of each year.~~ The Permittees shall retain documentation as necessary to support their Annual Report. The Permittees shall make this supporting information available upon request within a timely manner, generally no more than ten business days unless otherwise agreed to by the Executive Officer.
- C.22.b.** The Permittees shall collaboratively develop a common annual reporting format for acceptance by the Executive Officer by March 1, 2023. The resulting Annual Report Form, once approved, shall be used by all Permittees. The Annual Report Form may be changed by March 1 of each year for the following Annual Report, to more accurately reflect the reporting requirements of Provisions C.1 – C.21, with the agreement of the Permittees and by the approval of the Executive Officer.
- C.22.c.** The Permittees shall certify in each Annual Report that they are in compliance with all requirements of the Order. If a Permittee is unable to certify compliance with a requirement, it must submit, in the cover letter of the Annual Report, the reason for its failure to comply, a description and schedule of tasks necessary to achieve compliance, and an estimated date for achieving full compliance.

### **C.23. Modifications to this Order**

The Water Board may modify or reopen this Order, or alternatively, revoke or reissue it, before the expiration date in any of the following circumstances or as authorized by law:

- C.23.a.** To address significant changed conditions identified in the technical or Annual Reports required by the Water Board, or through other means or communication, that were unknown at the time of the issuance of this Order;
- C.23.b.** To incorporate applicable requirements of statewide water quality control plans adopted by the State Water Board or amendments to the Basin Plans for the San Francisco Bay and the Sacramento and San Joaquin River Basins approved by the State Water Board;
- C.23.c.** To comply with any applicable requirements, guidelines, or regulations issued or approved under section 402(p) or other applicable provision of the CWA, if the requirement, guideline, or regulation so issued or approved contains different conditions or additional requirements not provided for in this Order;
- C.23.d.** To provide an alternative compliance program for exchanges of impervious surface treatment credits in Provision C.3.e.i; or
- C.23.e.** To incorporate applicable requirements from the Central Valley Regional Water Board's Phase 1 Delta Mercury Control Program Review under the Basin Plan for the Sacramento and San Joaquin River Basin.

### **C.24. Standard Provisions**

Each Permittee shall comply with all parts of the Standard Provisions contained in Attachment G of this Order.

### **C.25. Expiration Date**

This Order expires on June 30, 2027, five years from the effective date of this Order. The Permittees must file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, not later than 180 days in advance of such date as application for reissuance of waste discharge requirements.

### **C.26. Rescission of Old Order**

Order No. R2-2015-0049, as amended by Order No. R2-2019-0004, is hereby rescinded, except for enforcement purposes, on the effective date of this Order, which shall be July 1, 2022, provided that the Regional Administrator of U.S. EPA, Region IX, does not object.

### C.27. Effective Date

The Effective Date of this Order and Permit shall be July 1, 2022, provided that the Regional Administrator of U.S. EPA, Region IX, does not object.

I, ~~Michael Montgomery, Thomas Mumley,~~  
Interim Executive Officer, do hereby  
certify that the foregoing is a full, true, and  
correct copy of an Order adopted by the  
California Regional Water Quality Control  
Board, San Francisco Bay Region, on  
May 11, 2022<date>.

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~~Michael Montgomery~~  
Thomas Mumley  
Interim Executive Officer



## ACRONYMS & ABBREVIATIONS

|   |  |
|---|--|
| <b>ACCWP</b>  | Alameda Countywide Clean Water Program   |
| <b>BAHM</b>   | Bay Area Hydrology Model   |
| <b>Basin Plan</b>   | Water Quality Control Plan for the San Francisco Bay Basin   |
| <b>BASMAA</b>   | Bay Area Stormwater Management Agencies Association  |
| <b>BMPs</b>   | Best Management Practices  |
| <b>Caltrans</b>   | California Department of Transportation  |
| <b>CASQA</b>  | California Stormwater Quality Association  |
| <b>CCC</b>  | California Coastal Commission  |
| <b>CCCWP</b>  | Contra Costa Clean Water Program   |
| <b>CDFW</b>   | California Department of Fish and Wildlife   |
| <b>CEDEN</b>  | California Environmental Data Exchange Network   |
| <b>Central Valley Water Board</b>                             | California Regional Water Quality Control Board, Central Valley Region   |
| <b>CEQA</b>   | California Environmental Quality Act   |
| <b>CFR</b>  | Code of Federal Regulations  |
| <b>CSBP</b>   | California Stream Bioassessment Procedures   |
| <b>CSCI</b>   | California Stream Condition Index  |
| <b>CWA</b>  | Federal Clean Water Act  |
| <b>CWC or Water Code</b>                                      | California Water Code  |
| <b>DCIA</b>   | Directly Connected Impervious Area   |
| <b>DDCP</b>   | Direct Discharge Control Plan  |
| <b>DPR</b>  | California Department of Pesticide Regulation  |
| <b>East County Permittees or East Contra Costa Permittees</b> | The cities of Antioch, Brentwood, and Oakley, and portions of Unincorporated Contra Costa County and the Contra Costa County Flood Control and Water Conservation District that are in the Central Valley Water Board's region |

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| <b>ERP</b>           | Enforcement Response Plan   |
| <b>FR</b>            | Federal Register  |
| <b><u>FSURMP</u></b> | <u>Fairfield-Suisun Urban Runoff Management Program</u>                     |
| <b>GI or GSI</b>     | Green Stormwater Infrastructure   |
| <b>GIS</b>           | Geographic information System   |
| <b>HBANC</b>         | Homebuilders Association of Northern California                             |
| <b>HM</b>            | Hydromodification Management  |
| <b>HMP</b>           | Hydromodification Management Plan   |
| <b>IC/ID</b>         | Illicit Connections and Illicit Discharges                                  |
| <b>ISWEBE</b>        | Inland Surface Waters, Enclosed Bays, and Estuaries Plan                    |
| <b>IPM</b>           | Integrated Pest Management  |
| <b>LID</b>           | Low Impact Development  |
| <b>MEP</b>           | Maximum Extent Practicable  |
| <b>MRP</b>           | Municipal Stormwater Regional Permit (see Glossary for MRP 1, MRP 2, MRP 3) |
| <b>MSDS</b>          | Material Safety Data Sheet  |
| <b>MS4</b>           | Municipal Separate Storm Sewer System                                       |
| <b>MTC</b>           | Metropolitan Transportation Commission                                      |
| <b>NAFSMA</b>        | National Association of Flood & Stormwater Management Agencies              |
| <b>NGO</b>           | Non-governmental Organization   |
| <b>NOI</b>           | Notice of Intent  |
| <b>NPDES</b>         | National Pollutant Discharge Elimination System                             |
| <b>NRDC</b>          | Natural Resources Defense Council   |
| <b>Ocean Plan</b>    | California Water Quality Control Plan for Ocean Waters of California        |
| <b>OFEE</b>          | Oil Filled Electrical Equipment   |
| <b>O&amp;M</b>       | Operation and Maintenance   |

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| <b>PAHs</b>                 | Polynuclear Aromatic Hydrocarbons                            |
| <b>PBDE</b>                 | Polybrominated Diphenyl Ether                                |
| <b>PCA</b>                  | Pest Control Advisor   |
| <b>PCBs</b>                 | Polychlorinated Biphenyls                                    |
| <b>PHAB</b>                 | Physical Habitat (e.g., of streams)                          |
| <b>POTW</b>                 | Publicly Owned Treatment Works                               |
| <b>QAPP</b>                 | Quality Assurance Project Plan                               |
| <b>RAA</b>                  | Reasonable Assurance Analysis                                |
| <b>RCRA</b>                 | Federal Resource Conservation and Recovery Act               |
| <b>RMC</b>                  | Regional Monitoring Coalition                                |
| <b>RMP</b>                  | Regional Monitoring Program                                  |
| <b>ROW</b>                  | Right of Way   |
| <b>ROWD</b>                 | Report of Waste Discharge                                    |
| <b>RTA</b>                  | Rapid Trash Assessment                                       |
| <b>SARA</b>                 | Federal Superfund Amendments and Reauthorization Act         |
| <b>SCURTA</b>               | Santa Clara Urban Rapid Trash Assessment                     |
| <b>SCVURPPP</b>             | Santa Clara Valley Urban Runoff Pollution Prevention Program |
| <b>SIC</b>                  | Standard Industrial Classification                           |
| <b><u>SMCWPPPSMWPPP</u></b> | San Mateo Countywide Water Pollution Prevention Program      |
| <b><u>SSA</u></b>           | <u>Solano Stormwater Alliance</u>                            |
| <b>SSID</b>                 | Stressor Source Identification                               |
| <b>SOP</b>                  | Standard Operating Procedure                                 |
| <b>SWAMP</b>                | Surface Water Ambient Monitoring Program                     |
| <b>SWPPP</b>                | Stormwater Pollution Prevention Plan                         |
| <b>State Water Board</b>    | State Water Resources Control Board                          |

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| <b>TIE</b>         | Toxicity Identification Evaluation                     |
| <b>TMDLs</b>       | Total Maximum Daily Loads                              |
| <b>TSCA</b>        | Federal Toxic Substances Control Act                   |
| <b>TST</b>         | Test of Significant Toxicity                           |
| <b>TU</b>          | Toxicity Units   |
| <b>UCMR</b>        | Urban Creeks Monitoring Report                         |
| <b>U.S. EPA</b>    | United States Environmental Protection Agency          |
| <b>Water Board</b> | San Francisco Bay Regional Water Quality Control Board |
| <b>WLAs</b>        | Wasteload Allocations                                  |
| <b>WQBEL</b>       | Water Quality Based Effluent Limitation                |
| <b>WQS</b>         | Water Quality Standards                                |

## GLOSSARY

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| <b>Actual Discharge</b>                                | Observed or documented flow of unauthorized, illicit, or pollutant-containing stormwater discharges to the MS4.   |
| <b>Arterial Roads</b>                                  | Freeways, multilane highways, and other important roadways that supplement the Interstate System. Arterial roads connect, as directly as practicable, principal urbanized areas, cities, and industrial centers.  |
| <b>Beneficial Uses</b>                                 | The uses of water of the State protected against degradation, such as domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation and preservation of fish and wildlife, and other aquatic resources or preserves.   |
| <b><u>Base Course</u></b>                              | <u>A layer of constructed material (typically aggregate base – a construction aggregate typically composed of crushed rock or of recycled asphalt or concrete, capable of passing through a sieve with a certain pore diameter) located above the subbase course and/or subgrade course, and below the surface layer (which consists of a wearing course, and sometimes an extra binder course), applied to serve one or more functions, such as supporting the surface layer and distributing load.</u>  |
| <b>Collector Roads</b>                                 | Major and minor roads that connect local roads with arterial roads. Collector roads provide less mobility than arterial roads at lower speeds and for shorter distances.  |
| <b>Commercial Development</b>                          | Development or redevelopment to be used for commercial purposes, such as office buildings, retail or wholesale facilities, restaurants, shopping centers, hotels, and warehouses.   |
| <b>Construction Site</b>                               | Any project, including projects requiring coverage under the Construction General Permit, that involves soil-disturbing activities including, but not limited to, grubbing, clearing, grading, paving, disturbances to ground such as stockpiling, leveling, fill, and excavation. Construction sites include all sites with disturbed or graded land area not protected by vegetation, or pavement, that are subject to a building or grading permit. Construction sites are considered active until site surfaces are permanently stabilized to control erosion and other polluted stormwater discharges effectively. |
| <b>Conditionally Exempted Non-Stormwater Discharge</b> | Non-stormwater discharges that are prohibited by A.1. of this Permit, unless such discharges are authorized by a separate NPDES permit or are not in violation of WQS because appropriate BMPs have been implemented to reduce pollutants to the maximum extent practicable, consistent with Provision C.15.  |

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| <p><b>Bituminous Surface Treatment</b></p>        | <p>A thin protective wearing surface, which can provide, among other services, a waterproof layer to protect underlying pavement and a filler for existing cracks or raveled surfaces. This includes, but is not limited to:</p> <ul style="list-style-type: none"> <li>• Chip seal – a single layer of asphalt emulsion binder that is covered by embedded aggregate;</li> <li>• Slurry seal – a thick, cold mix paving treatment that contains aggregates, asphalt emulsion, binder and fines, water, and additives; and</li> <li>• Seal coat – an emulsion containing liquid asphalt and/or coal tar, mineral fillers and other anti-oxidation additives and admixtures.</li> <li>• Cape seal – a chip seal covered with a slurry or micro-surface, applied to existing pavements. Micro-surfacing is a polymer-modified cold-mix paving system that begins as a mixture of dense-graded aggregate, asphalt emulsion, water and mineral fillers.</li> </ul> |
| <p><b>Discharger</b></p>                          | <p>Any responsible party or site owner or operator within the Permittees' jurisdiction whose site discharges stormwater runoff<sub>7</sub> or a non-stormwater discharge<sub>8</sub>.</p>  |
| <p><b>Detached Single-family Home Project</b></p> | <p>The building of one single new house or the addition and/or replacement of impervious surface associated with one single existing house, which is not part of a larger plan of development.</p>   |
| <p><b>Development</b></p>                         | <p>Construction, rehabilitation, redevelopment, or reconstruction of any public or private residential project (whether single-family, multi-unit, or planned unit development); or industrial, commercial, retail or other nonresidential project, including public agency projects.</p>  |
| <p><b>Estate Residential Development</b></p>      | <p>Development zoned for a minimum 1 acre lot size<sub>9</sub>.</p>  |
| <p><b>Emerging Pollutants</b></p>                 | <p>Pollutants in water that either:</p> <ol style="list-style-type: none"> <li>(1) May not have been thoroughly studied to date but are suspected by the scientific community to be a source of impairment of beneficial uses and/or present a health risk; or</li> <li>(2) Are not yet part of a monitoring program.</li> </ol>   |
| <p><b>Erosion</b></p>                             | <p>The diminishing or wearing away of land due to wind, or water. Often the eroded debris (silt or sediment) becomes a pollutant via stormwater runoff. Erosion occurs naturally, but can be intensified by land disturbing and grading activities such as farming, development, road building, and timber harvesting.</p>   |
| <p><b>Floor Area Ratio</b></p>                    | <p>The ratio of the total floor area on all floors of all buildings at a project site (except structures or floors dedicated to parking) to the total project site area.</p>   |

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| <p><b>Full Trash Capture Device</b></p>          | <p>Full trash capture systems are defined as “any device or series of devices that traps all particles retained by a 5mm mesh screen and has a design treatment capacity of not less than the peak flow rate resulting from a one-year, one-hour, storm in the tributary drainage catchment area.” Trash collection booms and sea curtains do not meet this definition, but are effective for removal of floating trash if properly maintained. Because these devices do not meet the Full Trash Capture Device definition, only ¼ of the catchment area treated by these measures is credited toward meeting the trash management area requirement of C.10.a.</p> |
| <p><b>General Permits</b></p>                    | <p>Waste Discharge Requirements or NPDES Permits containing requirements that are applicable to a class or category of dischargers. The State has general stormwater permits for construction sites that disturb soil of 1 acre or more; industrial facilities; `Phase II smaller municipalities (including nontraditional Small MS4s, which are governmental facilities, such as military bases, public campuses, and prison and hospital complexes); and small linear underground/overhead projects disturbing at least 1 acre, but less than 5 acres (including trenching and staging areas).</p>   |
| <p><b>Grading</b></p>                            | <p>The cutting and/or filling of the land surface to a slope or elevation.</p>   |
| <p><b>Green Infrastructure</b></p>               | <p>Infrastructure that uses vegetation, soils, and natural processes to manage water and create healthier urban environments. At the scale of a city or county, green infrastructure refers to the patchwork of natural areas that provides habitat, flood protection, cleaner air, and cleaner water. At the scale of a neighborhood or site, green infrastructure refers to stormwater management systems that mimic nature by soaking up and storing water.</p>   |
| <p><b>Gross Density</b></p>                      | <p>The total number of residential units divided by the acreage of the entire site area, including land occupied by public right-of-ways, recreational, civic, commercial and other non-residential uses.</p>  |
| <p><b>Hydrologic source control measures</b></p> | <p>Site design techniques that minimize and/or slow the rate of stormwater runoff from the site.</p>   |
| <p><b>Hydromodification</b></p>                  | <p>The modification of a stream’s hydrograph, caused in general by increases in flows and durations that result when land is developed (e.g., made more impervious). The effects of hydromodification include, but are not limited to, increased bed and bank erosion, loss of habitat, increased sediment transport and deposition, and increased flooding.</p>   |
| <p><b>Illicit Discharge</b></p>                  | <p>Any discharge to a municipal separate storm sewer (storm drain) system (MS4) that is prohibited under local, State, or federal statutes, ordinances, codes, or regulations. The term <i>illicit discharge</i> includes all non-stormwater discharges not composed entirely of stormwater and discharges that are identified under Section A. (Discharge Prohibitions) of this Permit. The term illicit discharge does not include discharges that are regulated by an NPDES permit (other than the NPDES permit for discharges from the MS4) or authorized by the Executive Officer.</p>  |

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| <p><b>Impervious Surface</b></p>                              | <p>A surface covering or pavement of a developed parcel of land that prevents the land’s natural ability to absorb and infiltrate rainfall/stormwater. Impervious surfaces include, but are not limited to, roof tops; walkways; patios; driveways; parking lots; storage areas; impervious concrete and asphalt; and any other continuous watertight pavement or covering. Landscaped soil and pervious pavement, including pavers with pervious openings and seams, underlain with pervious soil or pervious storage material, such as a gravel layer sufficient to hold at least the C.3.d volume of rainfall runoff are not impervious surfaces. Open, uncovered retention/detention facilities shall not be considered as impervious surfaces for purposes of determining whether a project is a Regulated Project under Provisions C.3.b. and C.3.g. Open, uncovered retention/detention facilities shall be considered impervious surfaces for purposes of runoff modeling and meeting the Hydromodification Standard.</p> |
| <p><b>Industrial Development</b></p>                          | <p>Development or redevelopment of property to be used for industrial purposes, such as factories; manufacturing buildings; and research and development parks.</p>   |
| <p><b>Infill Site</b></p>                                     | <p>A site in an urbanized area where the immediately adjacent parcels are developed with one or more qualified urban uses or at least 75% of the perimeter of the site adjoins parcels that are developed with qualified urban uses and the remaining 25% of the site adjoins parcels that have previously been developed for qualified urban uses and no parcel within the site has been created within the past 10 years.</p>   |
| <p><b>Infiltration Device</b></p>                             | <p>Any structure that is deeper than wide and designed to infiltrate stormwater into the subsurface, and, as designed, bypass the natural groundwater protection afforded by surface soil. These devices include dry wells, injection wells, and infiltration trenches (includes french drains).</p>  |
| <p><b>Integrated Pest Management<sup>72</sup></b></p>         | <p>An ecosystem-based strategy that focuses on long-term prevention of pests or their damage through a combination of techniques such as biological control, habitat manipulation, modification of cultural practices, and use of resistant varieties. Pesticides are used only after monitoring indicates they are needed according to established guidelines (and when it has been concluded that the use of non-chemical controls is insufficient), and treatments are made with the goal of removing only the target organism. Pest control materials are selected and applied in a manner that minimizes risks to human health, beneficial and nontarget organisms, and the environment (DPR, 2018).</p>   |
| <p><b>Integrated Pest Management, Biological Controls</b></p> | <p>Biological controls are the beneficial action of predators, parasites, pathogens, and competitors to control pests and pest damage. These controls rely on predation, parasitism, herbivory, or other natural mechanisms, but typically require active human intervention, such as releasing ladybugs.</p>   |

<sup>72</sup> Roadmap for Integrated Pest Management, CDPR 2018, [https://www.cdpr.ca.gov/docs/pestmgt/ipm\\_roadmap.pdf](https://www.cdpr.ca.gov/docs/pestmgt/ipm_roadmap.pdf)



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| <p><b>Integrated Pest Management, Least Hazardous Chemical Controls</b></p> | <p>Chemical controls involve targeted application of traditional chemical pesticides, as well as alternative products, such as oils and soaps.</p>  |
| <p><b>Integrated Pest Management, Cultural Controls</b></p>                 | <p>Cultural controls reduce pest establishment, reproduction, dispersal, and survival. Examples include scheduling planting, irrigation, and fertilization; soil solarization; and planting native vegetation and xeriscape to reduce water, pesticide, and fertilizer needs. Changing irrigation practices can reduce pest problems, since too much water can increase root disease and weeds.</p>   |
| <p><b>Integrated Pest Management, Mechanical and Physical Controls</b></p>  | <p>Mechanical and physical controls kill pests directly, exclude pests, or make the environment unsuitable for pests. Physical controls may involve manual removal of pests or mowing. Barriers (screens, mesh, caulk and other sealants) are physical controls that keep pests out of buildings and structures, and may be used to enclose sensitive plants. Mulch is a physical control that inhibits weed growth. Rodent traps are mechanical controls.</p>  |
| <p><b>Integrated Pest Management, Pest Action Threshold</b></p>             | <p>The point at which pest populations or environmental conditions indicate that one or more pest control actions must be taken. Sighting a single pest does not always mean control is needed. The level at which pests will either become an economic or health threat is critical to guide appropriate, least toxic pest control decisions.</p>  |
| <p><b>Joint Stormwater Treatment Facility</b></p>                           | <p>A stormwater treatment facility built to treat the combined runoff from two or more Regulated Projects located adjacent to each other.</p>   |
| <p><b>Local Roads</b></p>   | <p>Roads that provide limited mobility and are the primary access to residential areas, businesses, farms, and other local areas. Local roads offer the lowest level of mobility and usually contain no bus routes. Service to through traffic movement usually is deliberately discouraged in local roads.</p>   |
| <p><b>Maximum Extent Practicable (MEP)</b></p>                              | <p>A standard for implementation of stormwater management actions to reduce pollutants in stormwater. CWA 402(p)(3)(B)(iii) requires that municipal stormwater permits “shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the state determines appropriate for the control of such pollutants.” Also see State Water Board Order WQ 2000-11.</p> |
| <p><b>Mixed-use Development or Redevelopment</b></p>                        | <p>Development or redevelopment of property to be used for two or more different uses, all intended to be harmonious and complementary. An example is a high-rise building with retail shops on the first 2 floors, office space on floors 3 through 10, apartments on the next 10 floors, and a restaurant on the top floor.</p>   |
| <p><b>MRP 1</b></p>   | <p>Order No. R2-2009-0074, as amended by Order No. R2-2011-0083.</p>  |

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| <b>MRP 2 or Previous Permit</b>  | Order No. R2-2015-0049, as amended by Order No. R2-2019-0004.   |
| <b>MRP 3, Permit, or Order</b>   | Order No. R2-2022-XXXX.   |
| <b>Municipal Separate Storm Sewer System (MS4)</b>                                   | <p>A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains), as defined in 40 CFR 122.26(b)(8):</p> <p>(1) Owned or operated by a state, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to state law...including special districts under state law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization or a designated and approved management agency under section 208 of the CWA) that discharges into waters of the United States;</p> <p>(2) Designed or used for collecting or conveying stormwater;</p> <p>(3) Which is not a combined sewer; and</p> <p>(4) Which is not part of a Publicly Owned Treatment Works (POTW), as defined in 40 CFR 122.2.</p> |
| <b>Municipal Corporation Yards, Vehicle Maintenance/Material Storage Facilities/</b> | <p>Any Permittee-owned or -operated facility, or portion thereof, that:</p> <p>(1) Conducts industrial activity, operates or stores equipment, and materials;</p> <p>(2) Performs fleet vehicle service/maintenance including repair, maintenance, washing, or fueling; and/or</p> <p>(3) Performs maintenance and/or repair of machinery/equipment;</p>  |
| <b>National Pollutant Discharge Elimination System (NPDES)</b>                       | A national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under CWA sections 307, 402, 318, and 405.  |
| <b>Notice of Intent (NOI)</b>  | The application form by which dischargers seek coverage under General Permits, unless the General Permit requires otherwise.  |
| <b>Parking Lot</b>   | Land area or facility for the parking or storage of motor vehicles used for business, commerce, industry, or personal use.  |
| <b>Permittee/Permittees</b>  | Municipal agency/agencies that are named in and subject to the requirements of this Permit.   |
| <b>Permit Effective Date</b>   | The date at least 45 days after Permit adoption, or other date as specified, provided the Regional Administrator of U.S. EPA Region 9 has no objection, whichever is later.   |
| <b>Pervious Pavement</b>   | <p><u>Pavement that A pavement system consisting of permeable interlocking concrete pavement (PICP), pervious or permeable concrete pavers, pervious grid pavements, pervious concrete, porous asphalt, turf block, grasscrete, and bricks and stones, set on a gravel base with gravel joints, which</u> stores and infiltrates rainfall at a rate equal to immediately surrounding unpaved, landscaped areas, or that stores and infiltrates the rainfall runoff volume described in Provision C.3.d.</p>   |

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| <b>Point Source</b>                      | 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 operations, landfill leachate collection systems, vessel, or other floating craft, from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff.  |
| <b>Pollutants of Concern</b>             | Pollutants that impair waterbodies listed under CWA section 303(d), pollutants associated with the land use type of a development, including pollutants commonly associated with urban runoff. Pollutants commonly associated with stormwater runoff include, but are not limited to, total suspended solids; sediment; pathogens (e.g., bacteria, viruses, protozoa); heavy metals (e.g., copper, lead, zinc, and cadmium); petroleum products and PAHs; synthetic organics (e.g., pesticides, herbicides, and PCBs); nutrients (e.g., nitrogen and phosphorus fertilizers); oxygen-demanding substances (e.g., decaying vegetation and animal waste); and trash. |
| <b>Potable Water</b>                     | Water that is safe for domestic use, drinking, and cooking.  |
| <b>Potential Discharge</b>               | Conditions with the potential to result in unauthorized, illicit, or pollutant-containing stormwater discharges to the MS4. These include, but are not limited to, housekeeping issues, inadequate waste or materials management, evidence of actual discharges that are not ongoing, lack of emergency response plans, lack of BMPs, inadequate BMPs, and inappropriate BMPs.   |
| <b>Pre-Project Runoff Conditions</b>     | Stormwater runoff conditions that exist onsite immediately before development activities occur. This definition is not intended to be interpreted as that period before any human-induced land activities occurred. This definition pertains to redevelopment as well as initial development.  |
| <b>Public Development</b>                | Any construction, rehabilitation, redevelopment or reconstruction of any public agency project, including but not limited to, libraries, office buildings, roads, and highways.  |
| <b>Redevelopment</b>                     | Land-disturbing activity that results in the creation, addition, or replacement of exterior impervious surface area on a site on which some past development has occurred.   |
| <b>Regional Monitoring Program (RMP)</b> | A monitoring program aimed at determining San Francisco Bay Region receiving water conditions. The program was established in 1993 through an agreement among the Water Board, wastewater discharger agencies, dredgers, Municipal Stormwater Permittees and the San Francisco Estuary Institute to provide regular sampling of Bay sediments, water, and organisms for pollutants. The program is funded by the dischargers and managed by the San Francisco Estuary Institute.   |
| <b>Regional Project</b>                  | A regional or municipal stormwater treatment facility that discharges into the same watershed that the Regulated Project does.   |
| <b>Regulated Projects</b>                | Development projects as defined in Provision C.3.b.ii.   |

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| <b>Residential Housing Subdivision</b>                  | Any property development of multiple single-family homes or of dwelling units intended for multiple families/households (e.g., apartments, condominiums, and town homes).   |
| <b>Retrofitting</b>                                     | Installing improved pollution control devices at existing facilities to attain water quality objectives.  |
| <b>Sediments</b>  | Soil, sand, and minerals washed from land into water, usually after rain.   |
| <b>Solid Waste</b>                                      | All putrescible and nonputrescible solid, semisolid, and liquid wastes as defined by California Government Code Section 68055.1 (h).  |
| <b>Source Control BMPs</b>                              | Land use or site planning practices, or structural or nonstructural measures, that aim to prevent runoff pollution by reducing the potential for contact with rainfall runoff at the source of pollution. Source control BMPs minimize the contact between pollutants and urban runoff.   |
| <b>Standard Industrial Classification (SIC)</b>         | A federal system for classifying establishments by the type of activity in which they are engaged using a four-digit code.  |
| <b>Stormwater Pumping Station</b>                       | Mechanical device (or pump) that is installed in MS4s or pipelines to discharge stormwater runoff and prevent flooding.   |
| <b>Stormwater Treatment System</b>                      | Any engineered system designed to remove pollutants from stormwater runoff by settling, filtration, biological degradation, plant uptake, media absorption/adsorption or other physical, biological, or chemical process. This includes landscape-based systems such as grassy swales and bioretention units as well as proprietary systems.  |
| <b>Surface Water Ambient Monitoring Program (SWAMP)</b> | The State Water Board's program to monitor surface water quality; coordinate consistent scientific methods; and design strategies for improving water quality monitoring, assessment, and reporting.  |
| <b>Total Maximum Daily Loads (TMDLs)</b>                | The maximum amount of a pollutant that can be discharged into a waterbody from all sources (point and nonpoint) and still maintain WQS. Under CWA section 303(d), TMDLs must be developed for all waterbodies that do not meet WQS even after application of technology-based controls, more stringent effluent limitations required by a state or local authority, and other pollution control requirements such as BMPs.  |
| <b>Toxicity Identification Evaluation (TIE)</b>         | TIE is a series of laboratory procedures used to identify the chemical(s) responsible for toxicity to aquatic life. These procedures are designed to decrease, increase, or transform the bioavailable fractions of contaminants to assess their contributions to sample toxicity. TIEs are conducted separately on water column and sediment samples.  |
| <b>Trash and Litter</b>                                 | Trash consists of litter and particles of litter. California Government Code Section 68055.1 (g) defines litter as all improperly discarded waste material, including, but not limited to, convenience food, beverage, and other product packages or containers constructed of steel, aluminum, glass, paper, plastic, and other natural and synthetic materials, thrown or deposited on the lands and waters of the State, but not including the properly discarded waste of the primary processing of agriculture, mining, logging, sawmilling, or manufacturing. |

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| <b>Treatment</b>                               | Any method, technique, or process designed to remove pollutants and/or solids from polluted stormwater runoff, wastewater, or effluent.  |
| <b>Waste Load Allocations (WLAs)</b>           | A portion of a receiving water's TMDL that is allocated to one of its existing or future point sources of pollution.   |
| <b>Water Quality Control Plan (Basin Plan)</b> | The Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) is the Board's master water quality control planning document. It designates beneficial uses and water quality objectives for waters of the State within the Region, including surface waters and groundwater. It also includes programs of implementation to achieve water quality objectives and discharge prohibitions. The Basin Plan was duly adopted and approved by the State Water Board, U.S. EPA, and the Office of Administrative Law where required. |
| <b>Water Quality Objectives</b>                | The limits or levels of water quality elements or biological characteristics established to reasonably protect the beneficial uses of water or to prevent pollution problems within a specific area. Water quality objectives may be numeric or narrative.   |
| <b>Water Quality Standards</b>                 | State-adopted and U.S. EPA-approved water quality standards for waterbodies. The standards prescribe the use of the waterbody and establish the WQS that must be met to protect designated uses. Water quality standards also include the federal and State anti-degradation policy.   |
| <b>Water Year</b>                              | The Water Year spans twelve months and begins on October 1 of each year. It is designated by the calendar year in which it ends. For example, the 2023 Water Year starts on October 1, 2022, and ends on September 30, 2023.   |
| <b><u>Wedge Grinding</u></b>                   | <u>The process of milling the asphalt areas directly adjacent to concrete curbs, gutter pans and metal structures (e.g., manhole covers) to a specified width and depth. To tie into the elevations of the existing concrete and metal structures, asphalt is removed along the perimeter to allow proper depth of asphalt on the edge and to preserve the appropriate drainage patterns on the asphalt surface.</u>   |
| <b>Wet Season</b>                              | October 1 of a given year through April 30 of the following year.  |