

# C/CAG

## CITY/COUNTY ASSOCIATION OF GOVERNMENTS OF SAN MATEO COUNTY

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November 16, 2021

Mr. Michael Montgomery  
Executive Officer, San Francisco Bay Regional Water Quality Control Board  
1515 Clay St, Suite 1400  
Oakland, CA 94612  
(submitted via email to [RB2-MRP@waterboards.ca.gov](mailto:RB2-MRP@waterboards.ca.gov))

Dear Mr. Montgomery:

On behalf of C/CAG's member agencies (the County of San Mateo and the 20 incorporated cities and towns), and the San Mateo County Flood and Sea Level Rise Resiliency District, which is listed under the 2020 Report of Waste Discharge as a permittee seeking coverage under the reissued Municipal Regional Permit (MRP), provided herein are consolidated comments on the Tentative Order of the third five-year term of the MRP (referred to as MRP 3.0). These comments were compiled in coordination with C/CAG's Stormwater Committee and stormwater program staff from member agencies. Included with this letter are three attachments:

- **Attachment 1** provides larger picture context regarding existing and planned stormwater runoff management approaches, accomplishments, and commitments, and context on old industrial areas in San Mateo County.
- **Attachment 2** provides sub-provision specific comments and specific requested revisions, with higher priority sub-provisions highlighted.
- **Attachment 3** provides specific recommendations for language changes (in redline/strikeout) to selected parts of Provisions C.3 (and associated Fact Sheet and Glossary language), C.4, C.5, C.8, C.10, and C.15. The recommended language changes are consistent with the comments provided elsewhere in this letter and its other attachments but are provided separately to elucidate specific issues of concern for San Mateo County Permittees. To reiterate, these are requested provision-specific track-change modifications for select portions of the permit. For the comprehensive program comments across all provisions of the Tentative Order, refer to Attachment 2.

We are supportive of continuing to make progress on key water quality goals but need your staff's support in creating a framework that provides the ability for Permittees to be flexible and innovative in implementing solutions. San Mateo County Permittees have been leaders in adopting progressive stormwater policies, developing comprehensive, integrated plans, and implementing varying scales of green infrastructure (GI) projects and trash capture systems. We are concerned that the prescriptive approach of the proposed MRP 3.0 requirements will stifle innovation, slow progress, and pose challenges that will make it even more difficult to achieve our shared water quality improvement goals. We respectfully request a reissued MRP with flexible and adaptable mandates that would allow us to continue leading on innovative stormwater management both in an efficient and cost-effective manner. Your staff is challenged to craft regulatory requirements for 79 Permittees that provide room to move for the innovators and hold accountable those that are challenged to keep up with baseline efforts. We are committed to working with your staff to develop a regulatory framework that incentivizes progressive action, provides accountability for all, and gives flexibility to recognize the highly variable nature of

those 79 Permittees. MRP 3.0 needs to be visionary, building in regulatory flexibility that drives implementation yet works for all.

Throughout the development of MRP 3.0, your staff have indicated that permittee proposals on MRP 3.0 provisions were welcomed. However, Water Board staff have also stated permittee proposals to-date have primarily focused on maintaining status quo under current MRP 2.0 requirements and that status quo is not enough to achieve the necessary progress toward meeting key water quality goals tied to GI implementation and trash, mercury, and PCBs load reduction targets. Accordingly, many of the suggested modifications or proposed alternatives to provisions under MRP 3.0 have not been incorporated into Tentative Order. We believe Water Board staff have proposed unachievable objectives in the Tentative Order and removed flexibility that fosters innovation while meeting the overall objective of improving water quality. In response, we submit that the “status quo” of strong yet flexible drivers in MRP 2.0 has provided the right balance of flexibility and prescriptiveness to support permittees in developing cost-effective, efficient and creative strategies towards meeting the overall water quality endpoints detailed in the permit. In several cases this flexible framework has resulted in San Mateo County permittees going beyond the permit’s mandates. In fact, the vision underlying the San Mateo County approach to compliance under MRP 2.0 has expanded into a broader holistic view of stormwater management in the county – one that strives to integrate water quality goals with other community priorities (e.g., climate resiliency, flood control, water supply augmentation, and transportation improvements), and it is our hope that we can continue to foster this approach with MRP 3.0 and future permit terms. While we recognize the need to advance additional water quality goals and meet current regulatory timelines, we also urge the Water Board to give careful consideration of priority goals for the next permit term and to maintain the existing framework characterized by incentives to collaborate, promote multi-benefit project implementation, and allow permittees to meet compliance targets in the way that works best at the regional, countywide, or local level.

As you review Attachment 1 to this letter, which details the progressive efforts of C/CAG and San Mateo County permittees towards meeting and exceeding existing requirements in the MRP, it is important to recognize all of these efforts have been driven or supported by three key components:

1. Strong but flexible drivers in the MRP, such as the MRP 2.0 goal to reduce PCB loads to the Bay by specific amounts via GI by 2040 (and beyond) that allow each Permittee to determine the stormwater management approach that makes the most sense for their community.
2. An influx of outside financial or technical resources, including over \$30 million in partnership funding from Caltrans for regional stormwater capture and trash capture projects, nearly \$1 million in grant funding from Caltrans for the Sustainable Streets Master Plan, \$3 million from the State budget and \$500,000 from the U.S. Environmental Protection Agency to advance regional stormwater capture projects, pro-bono support from American Rivers, Corona Environmental, and WaterNow Alliance to explore innovative and market-based funding and financing strategies, and nearly \$100,000 in grant funding from the Bay Area Council to advance schoolyard greening in the San Carlos School District.
3. Progressive planning efforts for integrated, multi-benefit stormwater management such as the Stormwater Resource Plan, Sustainable Streets Master Plan, Green Infrastructure Plans, and current efforts related to collaboration on countywide-scale stormwater management.

Without a combination of these components (flexible drivers, funding, planning), it becomes much more challenging to continue advancing progressive stormwater management, and as a countywide program, we become limited in the ways we can support the San Mateo County Permittees to achieve compliance with the MRP and work creatively to innovate towards greater sustainable infrastructure and water resiliency outcomes. The Tentative Order takes away the first driver by establishing an extremely prescriptive set of requirements that apply equally to all Permittees. That prescriptiveness, especially in Provision C.3, disincentivizes innovation and effectively makes Green Infrastructure Plans, which Permittees expended significant efforts in developing, irrelevant by specifying exactly when and where GI must be implemented. While C/CAG and its member agencies can continue pursuing external sources of financial and technical resources, there are limits to how much can be achieved within a five-year permit and practical limitations such as requirements for matching funds or voter approval requirements for new or increased stormwater fees. Additionally, an overly prescriptive permit will reduce the countywide program's ability to continue advancing the types of projects that are competitive under many relevant grant programs, i.e., focus on multi-benefit, integrated planning and infrastructure projects with a strong emphasis on additional co-benefits, including climate adaptation and community resiliency.

Water Board staff recognized at the start of the MRP reissuance discussions that transforming an urban landscape developed over many decades to include more sustainable stormwater management infrastructure will similarly require multiple decades. MRP requirements should be drafted accordingly, establishing a strong long-term goal but providing flexibility for permittees on how to get there most cost-effectively, in a manner that contextually fits their jurisdictions, with an emphasis on meaningful planning that will advance implementation. Short-term prescriptive requirements in MRP 3.0 will effectively derail the long-term vision and approach.

The following sections summarize high priority issues associated with priority provisions in the Tentative Order, along with requested revisions to address the issues.

### **Summary of High Priority Provision-specific Issues and Requested Revisions**

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

- Regulated Projects (parcel-based) – The proposed requirements and reduced thresholds greatly increase the number of Regulated Projects that permittees would need to review, approve, track, and inspect. This creates a significant administrative burden on permittees without commensurate water quality benefits. Contrary to the statement in the Fact Sheet, development review and inspection fees do not cover the additional costs incurred. In particular, the proposed requirement that removes the exemption for “detached single-family home projects that are not part of a larger plan of development” and adds a new category of regulated project, “Large Detached Single-Family Home Projects” that create and/or replace 10,000 square feet or more of impervious surface, creates a significant administrative and resource burden for little to no water quality benefit. Many communities in San Mateo County, especially rural or hillside communities, already have drainage policies in place for residential properties that go significantly beyond MRP “LID” standards. Additionally, these prescriptive requirements take away the ability of permittees to implement innovative policies for private development that go beyond permit requirements and are implemented via private funding. Implementation of these types of policies could help to achieve GI implementation goals. For the reasons summarized above, and as reiterated in Attachment 2, we urge that the existing exemption for single-family home projects not be removed under

MRP 3.0, and that the new proposed category of regulated project, “Large Detached Single-Family Home Projects” not be added to the next permit.

- Regulated Projects (roads and other public works projects) – The proposed changes related to regulation of roadway projects and other public works projects in the public right-of-way (i.e., changes to maintenance exemptions, thresholds, and roadway reconstruction requirements) should be removed to allow jurisdictions to perform necessary road maintenance and the flexibility to integrate GI in roadway projects when and where it makes sense and is economically feasible. San Mateo County permittees are leaders on incorporating GI in roadway projects and will continue this leadership through subsequent permit reissuances. Pursuing prescriptive regulatory requirements is not the right approach for MRP 3.0 given the highly variable, constrained, and complex nature of roadway projects. Furthermore, regulating public right-of-way projects increases the cost and burden to permittees (where significant deficits in street maintenance and ADA improvement funds already exist), discourages bicycle and pedestrian access and safety projects, and causes delays to necessary repair or improvement projects.
- Green Infrastructure Implementation – C/CAG and its member agencies would like to work with Water Board staff to establish a long-term expectation for meaningful and feasible GI implementation over the coming decades. We appreciate that the Tentative Order includes an opportunity to meet with Water Board staff and others in a Technical Working Group to discuss long-term GI goals. However, any targets for acres greened via GI retrofits included in MRP 3.0 should be presented in the context of those long-term goals and should leverage planning work completed in the municipal GI Plans and other countywide stormwater infrastructure planning efforts as well as recognize completed GI projects.
- Flexibility for Regional GI Projects – The Tentative Order specifies a GI greened acres retrofit target for San Mateo County Permittees of approximately 46 acres at the countywide scale during the permit term, based on the three acres per 50,000 population framework. The Fact Sheet of the Tentative Order recognizes that on a countywide basis the Orange Memorial Park regional stormwater capture project will provide adequate credit to meet the GI retrofit requirements. This demonstrates the considerable potential of collaborative regional-scale multi-benefit stormwater capture projects, such as the efforts described in Attachment 1, to provide cost-effective stormwater management consistent with MRP requirements. We request that the approach in San Mateo County to advance regional-scale multi-benefit projects to cost-effectively achieve stormwater management goals be better supported by the MRP in terms of providing flexibility in the placement and treatment configurations of these projects. It is imperative that the Tentative Order provide flexibility for crediting C.3.j. numeric targets for “greened acreage” with respect to these projects and to allow for alternative treatment options, such as detention and filtration, where traditional means of infiltration, bioretention, harvest/use, and evapotranspiration are infeasible for all or part of the stormwater volumes captured. These projects present a critical opportunity and a core component of the overall approach in San Mateo County to advance water quality and additional “one water” benefits at a watershed or countywide scale. But without clear language in the permit that supports these projects in the variety of settings and configurations that are typical of these projects and likely given the unique watershed characteristics in San Mateo, they will lack sufficient permittee and stakeholder buy-in for additional planning and implementation.

In support of attaining that flexibility, Attachment 3 details specific recommendations for language changes (in redline/strikeout) to selected parts of Provision C.3 and associated Fact Sheet language. The changes address the following specific concerns:

- Provision C.3.e.i. Alternative Compliance – Changes are needed to allow a Regional Project to be used as offsite compliance (Option 1) and to allow the contribution of in-lieu fees to a Regional Project (Option 2). We also request that the definition of a Regional Project (as shown in Footnote 12) be expanded to allow a project with demonstrated multiple benefits and constraints such as lack of infiltration feasibility, lack of available demand for non-potable use, and significantly constrained space, to use media filtration as a treatment measure for some or all of the stormwater managed.
- Provision C.3.j.ii.(3) Design Criteria for Regional GI Projects – We request that with demonstrated cause (e.g., lack of infiltration feasibility, lack of available demand for non-potable use, significantly constrained space, or other substantial constraints), permittees be allowed to claim GI numeric implementation credit for the impervious surface retrofits via regional projects that achieve multiple benefits, such as pollutant load reduction, peak flow and flood reduction, water supply, and/or climate resiliency, and use media filtration as a treatment measure for some or all of the stormwater managed.

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

- Provision C.8 represents a significant departure from the monitoring programs developed and implemented under MRP 1.0 and 2.0. Regional Probabilistic Creek Status Monitoring and Stressor Source Identification projects have been replaced with new requirements for Low Impact Development (LID) effectiveness monitoring. Trash receiving water monitoring has been moved from Provision C.10 into C.8, with significant increases in the required level-of-effort and the proposed requirements are a shift from the monitoring goals outlined in MRP 2.0. The most concerning aspects of the proposed requirements in Provision C.8, in addition to a significant change in the approach developed and implemented over the past two permit cycles without substantive support for the change, are described below and include: 1) lack of established technical feasibility; 2) lack of reliable methodologies; 3) substantial increases in costs; 4) lack of adequate time for planning; and 5) lack of prioritization.
- Some of the monitoring requirements described in the Tentative Order are simply not feasible given the current status of some proposed monitoring methods, the variability of storms and accessible storm drain infrastructure, and specified sampling sites/frequencies and timeframes for sampling and reporting. Nor do we believe that all of the requirements will significantly improve the data and decision making for improving water quality. Specifically, the focus on storm event monitoring presents feasibility impediments that the Co-permittees cannot realistically surmount. All of the monitoring elements (LID Monitoring, Trash Monitoring, POC Monitoring, Pesticides and Toxicity Monitoring) require some level of monitoring during storm events. Trash monitoring alone could require sample collection at 48 sites (upstream and downstream of 24 outfalls) directly before and after four storm events each year if direct outfall netting is not feasible. This level-of-effort for SMCWPPP is estimated to require 128 labor hours immediately before each storm event and 128 labor hours immediately after each event. It is not feasible to provide the staffing resources necessary to conduct this episodic and impromptu storm monitoring that requires specially trained staff and contractors. There are simply not enough qualified staff in the Bay Area to conduct this level of monitoring for all MRP Permittees.

- In addition, even if there were qualified staff available to conduct this level of storm monitoring, it is unlikely that enough qualifying storms would occur to achieve the proposed requirements in the Tentative Order. Analysis of rainfall measured at the San Jose Airport (SJC) and San Francisco Airport (SFO) highlights the consequences of climate change-fueled drought on storm events. At SJC, there were only three qualifying storm events in WY 2020 and one qualifying event in WY 2021, far below the number of storm-drive monitoring events proposed in the Tentative Order. At SFO, there were four qualifying events in WY 2020 and three in WY 2021. Climate change will increase the severity and intensity of storms, which poses a real safety concern to monitoring crews. In addition, storms are now more difficult to forecast, which complicates planning for storm mobilization. Holidays, weekends, illness, and forecast errors limit the ability to mobilize for every single event, suggesting that there is not likely a path to permit compliance with respect to achieving the storm monitoring requirements proposed in the Tentative Order. For these reasons, we request that the number of storm events required for monitoring during MRP 3.0 be significantly reduced and that flexibility be provided to allow for goals to be achieved over the entire permit term instead of requiring arbitrary annual minimums. Specific requested modifications to Provision C.8 language are included in Attachments 2 and 3.
- Provision C.8.d. (LID Monitoring) requires analysis of samples for an extensive list of constituents, many of which are not appropriate for many potential monitoring designs. The list includes several contaminants of emerging concern (CECs) for which there are no analytical methods approved by USEPA and no standard sample collection protocols. In addition, some of the listed CECs have sample collection protocols that require extremely large sample volumes, highly specialized and expensive equipment, and field staff with the appropriate expertise. Monitoring for new CECs without fully developed methods and protocols is better suited to the Regional Monitoring Program of the San Francisco Estuary Institute, which C/CAG's member agencies pay into via the Countywide Program and which will receive additional funding support to advance special studies focused on CECs through the proposed Tentative Order. It is unlikely that the value of the chemical data gathered through LID Monitoring justifies the great expense of sample collection and analysis, particularly when many of the constituents can be modeled or approximated based on less expensive parameters. We therefore request that the analyte list be significantly modified (see Attachments 2 and 3) and that the LID Monitoring TAG provide input on the methods utilized by C/CAG to address the modified requirements.
- Implementation of Provision C.8 is already a large cost for San Mateo County Permittees, with annual costs for C/CAG already greater than \$600,000 per year and regionwide monitoring expenditures rivaling those of the San Francisco Estuary Regional Monitoring Program (RMP) (i.e., approximately \$4 million per year). The monitoring requirements described in the Tentative Order would increase overall C/CAG monitoring costs by at least 40% to 104% compared to MRP 2.0. The table below illustrates the estimated increase in monitoring costs from MRP 2.0 to MRP 3.0, not accounting for inflation. Trash monitoring costs alone would increase by a factor of four to thirteen, depending on what method is feasible and can be implemented safely. This proposed increase in monitoring costs would reduce resources available to implement important stormwater control measures that improve water quality. As such and especially given COVID's fiscal impacts on municipalities, we request that the level of effort described in Provision C.8 of the Tentative Order be significantly reduced to remain at a level similar to (or below) MRP 2.0.

C.8 Monitoring Element	Approximate Average Annual Cost	
	MRP 2.0 <sup>a</sup>	MRP 3.0
Creek Status Monitoring and Stressor Source Identification	\$253,000	NA
LID Monitoring	NA	\$263,000 <sup>b, h</sup>
Trash Monitoring	\$50,000	\$200,000 to \$633,000 <sup>c, h</sup>
Pollutants of Concern Monitoring	\$133,000	\$149,000 <sup>d</sup>
Pesticides & Toxicity	\$40,000	\$40,000
RMP Contributions	\$100,000	\$107,000 <sup>e</sup>
Reporting	\$42,000	\$109,000 <sup>f</sup>
All Other C.8 Support	\$52,000	\$75,000 <sup>g</sup>
<b>Total</b>	<b>\$670,000</b>	<b>\$933,000 to \$1,366,000<sup>h</sup></b>

- a. MRP 2.0 costs (not including Trash Monitoring) reported in SMCWPPP 2019 Integrated Monitoring Report.
- b. Provision C.8.d.i.(1)(g) of the TO assumes that LID Monitoring costs would be equal MRP 2.0 CSM + Stressor/Source Identification (SSID) project costs. Costs estimated assume that the level of effort outlined in the TO will be implemented and that there will be no increases or decreases in level of effort based the required Power Analysis.
- c. The requirement assumes that the number of samples outlined in the TO will be collected and that there will be no increases or decreases in level of effort based on the results of the required power analysis. Low end of range assumes netting at 2 outfalls during 3 storms per year with minimal permitting costs. High end assumes indirect monitoring upstream and downstream of 24 outfalls during 4 storms per year.
- d. Increase includes \$14,200/year contribution to RMP Emerging Contaminant Workgroup (i.e., assumed population-based proportion of \$100,000 required by the TO).
- e. Increase in RMP fee = 3% each year for 2023-2025 time period.
- f. Increase includes Comprehensive Bioassessment Analysis plus new LID and Trash Monitoring Reports.
- g. Increase includes SMCWPPP staff participation in two TAG meetings per year.
- h. Cost estimates assume that the number of sampling sites and events described in the TO would not be increased as a result of the required power analyses.

- Provision C.8 requires completion of several planning, reporting, and implementation tasks within the first nine months of the permit. These include:
  - Formation of two separate Technical Advisory Groups (TAGs) focusing on LID effectiveness and trash monitoring;
  - Development of new LID effectiveness and trash monitoring programs informed by their respective TAGs;
  - Implementation of the new trash monitoring program just three months after the permit effective date;
  - Development and implementation of new pollutants of concern (POC) monitoring approaches;
  - Preparation of a comprehensive regional bioassessment report (without the support of an existing regional fiscal authority); and
  - Extensive validation and reporting requirements for monitoring data collected during Water Year (WY) 2022 in compliance with MPR 2.0.

These tasks all occur within the same timeframe during which the FY 2021/22 Annual Report is being prepared. These tasks must also be completed by staff with specialized expertise in monitoring programs, which poses a serious staffing capacity and resource issue for C/CAG. We support thoughtful and coordinated planning for monitoring that is intended to extend beyond the permit term but are concerned that these mutual goals will be compromised by the accelerated timeline presented in the Tentative Order. We request that additional time (~7 months) be provided to adequately plan and provide the needed input from technical advisors.

- Finally, estimated costs to implement the various monitoring elements show that the Tentative Order prioritizes 1) trash monitoring, 2) LID effectiveness monitoring, and 3) POC monitoring. C/CAG requests reordering these priorities. In recognition of the large acreage (1,411 acres) that must be investigated for PCBs as required by Provision C.12.b.ii, which provides a direct implementation benefit opportunity through additional source identification and abatement as well as other potential site controls, POC monitoring should be the top priority, followed by LID effectiveness monitoring and trash monitoring. As such, the extensive trash monitoring requirements described in the Tentative Order should be reconsidered and significantly reduced. In addition to the significant cost and feasibility concerns summarized above, the prescribed trash monitoring methods have not been tested for their ability to address the Management Questions listed in the Tentative Order. These and other comments are detailed in Attachments 2 and 3.

#### **Provision C.10 – Trash Load Reduction**

- It is not practicable for Permittees to achieve the 90% and 100% reduction compliance benchmarks for trash one and three years after the effective date of the permit, respectively. Because the COVID-19 pandemic has significantly impacted Permittee operations, budgets, and staffing (and impacts will continue over the next few years), it is unrealistic for Permittees to maintain progress towards the benchmarks at the same pace as prior to the pandemic. The deadlines to achieve 90% and 100% trash reductions should be extended by two years to July 1, 2025 and July 1, 2027, respectively, to allow Permittees to further analyze remaining trash generating areas, budget for additional trash capture systems (potentially in conjunction with addressing old industrial areas and in collaboration with Caltrans' funding timelines), identifying trash sources on private property, determining where trash capture systems are infeasible, and assessing the pandemic-related increases in trash, such as littered masks and personal protective equipment. In addition, the 90% benchmark should be a non-enforceable target, similar to the 60% goal in MRP 2.0. Allowing flexibility on this compliance benchmark will support additional progressive policies and management actions to improve on the ground conditions, which will require additional time to establish.
- The modifications to MRP 2.0 trash reduction calculation methods for source controls should be removed, otherwise they would significantly diminish permittee leadership, negate the extensive environmental benefits of local source control ordinances developed to date and provide little impetus for permittees to move forward with expanded source control actions. Ordinances and other source control actions are ultimately the long-term solutions to reducing the levels of trash in stormwater and surface waters in San Mateo County. Importantly, they are also one of the most meaningful public engagement tools to help make watershed health and local water quality issues relevant to communities.

The source control credits allowed in MRP 2.0 should remain in MRP 3.0, and existing/new source control ordinances should be counted towards the ultimate trash reduction calculations.

- The modifications described in the Tentative Order would require permittees to address trash on private properties that are not directly connected to the permittee's storm drainage system (i.e., trash from these properties flows to inlets owned and operated by the property owners, not the permittee inlets). These "private drainage areas" represent roughly 40% of the trash that is not currently addressed by full capture systems in the county. Although San Mateo County permittees understand that trash generated in substantial levels on these properties also needs to be addressed, solutions are not as straightforward for these properties as addressing trash in the public right-of-way. As described in Attachment 2, flexibility and additional time is needed in MRP 3.0 to allow trash from these properties to be addressed over time (i.e., in future permit terms) through programmatic approaches that don't unduly require property owners to install and maintain full capture devices during these times of economic hardship due to the COVID-19 pandemic.
- As indicated here and in Attachments 2 and 3, the following language from Provision C.10.c. is new to MRP 3.0, not directly related to discharges from the municipal storm drain system, and should be removed: "~~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.ii.~~"

#### Provision C.12 – PCBs Controls

- The Tentative Order requires San Mateo County permittees to address 445 acres of old industrial areas (or areas with moderate to high PCBs concentrations) during the permit term (with 70% treatment efficiency) or achieve a PCBs load reduction from these areas of 81 grams/year. It may not be feasible to meet these performance metrics within the permit term.
- The reissued permit should recognize that the only cost-effective and practical approaches to reducing PCBs discharges from old industrial land uses are identifying and abating source areas, large full trash capture devices (when removing trash is the driver), and redeveloping parcels over time. Redevelopment can be leveraged to also address frontages and adjacent rights-of-way through progressive green stormwater management policies increasingly adopted by individual San Mateo County Permittees (see Attachment 1). Please note that street-scale GI retrofits are normally integrated with transportation improvements and funding is generally not available nor a priority for GI retrofit projects in old industrial areas.
- PCBs fate and transport in Bay Area old industrial land uses is a dynamic system. In general, sediment with PCBs originates from parcels, moving through the public right-of-way (ROW), including the municipal storm drain system, and are eventually discharged to San Francisco Bay. Intercepting sediments with PCBs in the public ROW via green infrastructure retrofits or other ROW-based controls is essentially a "band-aid" i.e., a short-term fix that represents a costly and inefficient approach in the long-term. For example, controlling PCBs in the public ROW would need to continue in perpetuity if the parcel-based sources are not cleaned up or redeveloped. In addition, some properties have onsite inlets that are

plumbed directly to the municipal storm drain system via underground piping. Intercepting sediments with PCBs on the surface in the public ROW (e.g., treating overland flows with green infrastructure) is not effective for such properties.

- The performance metrics in the Tentative Order should be adjusted downwards to achievable, practicable levels. We request that the actions required over the MRP 3.0 permit term focus on addressing a realistic portion of the about 300 acres of old industrial land use areas currently identified via monitoring (and not redeveloped or treated by green infrastructure) to have moderate levels of PCBs. MRP 3.0 should require that a plan be developed early in the permit term to describe the process and actions that permittees can implement or cause to be implemented to address PCBs on these properties over the permit term.
- The PCBs related requirements should be phased-in over additional years and permit terms to allow enough time for permittees to:
  - Develop a long-term plan for old industrial areas that identifies (as feasible) the specific geographic areas projected to redevelop, considers realistic time horizons for redevelopment, the added potential benefit of progressive policies to address roadway frontages as part of redevelopment, efforts to control trash discharges, and enhanced efforts to further characterize drainages and identify source properties.
  - Gather additional monitoring data in old industrial areas to better delineate hot, moderate, and cold areas relative to PCBs concentrations and mass loadings.
  - Focus resources on working with property owners to attempt to identify all PCBs source properties in high and moderate areas and “turn off the tap” by referring or cleaning up these sources. The current PCBs source property identification programs have focused on areas with relatively high levels of PCBs. We are proposing to explore extending these efforts to areas with more moderate PCBs concentrations in sediments.
  - Pilot test new techniques such as PCBs detection dogs to help screen suspect locations and potentially enhance the success of source property identification efforts, as part of integrated PCBs source identification efforts that would include working with city inspectors to attempt to gain access to private properties as needed and other techniques in the PCBs toolbox.
  - Characterize PCBs concentrations in additional composite stormwater runoff samples collected from the bottom of selected urban catchments of interest, based on the potential to contain sources of PCBs. Objectives include to help prioritize catchments and inform efforts to identify additional source areas and properties. Interpretation of these data would be informed by Advanced Data Analysis (ADA) techniques under development by Bay Area stormwater programs and SFEI.
  - All of the above sediment and stormwater runoff sampling would be integrated with our POC monitoring program (which at minimum is implemented consistent with requirements under MRP Provision C.8).
  - Continue adaptively implementing the above tasks with oversight from the Old Industrial Land Use PCBs Workgroup recently convened by C/CAG. The Workgroup has representatives from the nine municipalities with the greatest extent of old industrial land use area in San Mateo County

and will explore how these jurisdictions can work with C/CAG to continue addressing PCBs in old industrial land uses over the MRP 3.0 permit term.

### **Provision C.17 – Discharges Associated with Unsheltered Homeless Populations**

- This new provision is focused on addressing potential impacts to water quality from the activities of unsheltered homeless individuals. However, it creates duplicative tracking and reporting requirements and an administrative burden on permittees. The provision as written should be significantly reduced in scope and the tracking and reporting requirements should be modified to avoid useless administrative paperwork that has no water quality benefit.
- Remove the requirement for permittees to submit a map that identifies the location of unsheltered individuals. This requirement is an unneeded, and in many cases inappropriate, administrative task that does not support the implementation of Best Management Practices (BMPs).
- Remove the requirement for the development of a BMP practices report and instead require that permittees communicate about successful BMPs and share related information by conducting a workshop at the countywide or regional scale.
- An exemption for all of provision C.17 should be allowed if a permittee has no known homeless encampments or unsheltered populations, i.e., the requirements for each jurisdiction should be commensurate to the problem.

### **Provision C.15.b.iii – Firefighting Discharges**

The requirements for emergency discharges of firefighting activities have increased substantially in the Tentative Order compared to MRP 2.0 and, for the reasons set forth below, need to be revised. As dramatically set forth at the workshops by the City of Oakland’s Fire Chief, permittees and firefighting personnel already control the pollution threat from these activities to the extent that time, safety, and resources allow, given that protection and preservation of life and property from the impact of fires are their primary objectives. However, there are now significant new requirements that are simply untenable.

As an example, proposed new requirements include minimum BMPs that would have municipal stormwater staff directing Fire Departments on the types of firefighting foams to use, types of fires on which to use foam, amount of foam to use, and locations not to use foams. These new requirements are not warranted nor practicable to implement. New legislation, SB1044, approved by the California legislature and signed into law by the Governor in September 2020, addresses the concern of PFAS chemicals in firefighting equipment and foam statewide, which is a more appropriate scale. This legislation prohibits manufacturing, selling, or discharging class B firefighting foam containing PFAS.

There are also many new requirements that that inappropriately require municipal stormwater staff to take on emergency firefighting responsibility and determinations. The type, amount, location and use of firefighting foams should be determined by Fire Departments based on their knowledge and the emergency situation. Stormwater municipal staff should not take on a role of determining fire response preparedness of industrial facilities. In addition, it is unclear what authority permittees have over Fire Departments that serve within a

permittee's program area (e.g., special districts). There are also significant new reporting and training requirements.

Municipal fire department representatives have expressed many times to Water Board staff that the specific requirements now included in the Tentative Order are not needed, safe, or appropriate. The significantly expanded requirements constrain the abilities of Fire Departments to protect community health and properties during these types of emergency situations. Fire Department representatives, permittee staff, and Countywide Program staff believe that the appropriate way to address potential water quality concerns associated with firefighting is for Water Board staff to participate in a stakeholder group that would outline and identify feasible and safe options for fire departments and/or permittees to address water quality concerns related to firefighting discharges. The recommended consensus-based options could then be incorporated into the permit when it is next renewed or amended. Through this process, fire department, municipal stormwater, and Water Board staff could work together and in parallel track efforts by industry groups and via state and national forums (e.g., SB 1044) to effectively protect water quality, while also addressing public safety and multiple regulatory drivers. Additionally, as several municipalities are served by special districts that are outside of their control, a collaborative, consensus-based approach that includes the various fire districts and departments is needed.

#### **Provision C.20 – Cost Reporting**

New requirements for cost reporting, as described in the Tentative Order, will require the redirection of limited public resources towards addressing these paperwork requirements that do not directly benefit or improve water quality. We appreciate that the language regarding cost tracking and reporting categories was made a little more flexible. However, we continue to have concerns regarding specifics of the provision and the purpose of the vast amount of data collection being required, as well as the very short timeframe allowed for development of the framework and implementation of the required cost reporting. We request that the due date for submittal of the framework be changed to July 1, 2023 (i.e., a 6-month extension) to provide more time for collaboration with Permittees, Water Board staff, and the State's STORMS project on cost reporting, and that the tracking and reporting under new/approved framework begin in FY 2024/25, not FY 2023/24. Other recommended revisions to Provision C.20 are included in Attachment 2.

#### **Provision C.21 – Asset Management**

Provision C.21 contains a new requirement for permittees to develop Asset Management Plans to ensure the satisfactory condition of hard assets constructed to comply with Provisions C.2, C.3, C.10, C.11-C.14, and C.17-19. This is a significant, burdensome, and resource-consuming new effort that must, as currently proposed, be completed by and then begin implementation at the end of Year 3 of the permit. We appreciate that the language in the Administrative Draft was amended to exclude privately-owned assets, clarify that asset performance may be assessed based on asset condition, and add flexibility in assessment methods. However, key remaining concerns about Provision C.21 include:

- the definition of "hard assets", which goes beyond stormwater treatment controls to include pet waste bag dispensing stations, trash receptacles, mercury-containing products collection systems, and other items that are not appropriate to include in an asset management system;
- the resources needed to meet these requirements; and

- the short timeframe for compliance.

We request that the scope of this provision be limited to tracking maintenance and inspection of publicly owned stormwater treatment and hydromodification management systems, including non-LID and GI/LID treatment systems and trash full capture systems, using existing tracking systems required under other provisions. In addition, we request that the due date for completion of the Asset Management Plans and start date for implementation of the Plans be extended by one year (i.e., to June 30, 2026) to allow more time for development.

We appreciate the opportunity to offer what we believe are constructive comments on the Tentative Order. Given the challenges of digesting the totality of the Tentative Order and coordinating comments from 22 Permittees in a 60-day window, C/CAG and its member agencies are open to continued discussions with Water Board staff over the coming weeks of meaningful approaches to achieving water quality improvement prior to adoption of the permit.

Sincerely,



Reid Bogert  
Senior Stormwater Program Specialist, San Mateo Countywide Water Pollution Prevention Program

Attachments:

1. Summary of Existing and Planned Stormwater Runoff Management Efforts in San Mateo County
2. Specific provision-by-provision comments and requested revisions
3. Specific recommendations for language changes (in redline/strikeout) to selected parts of Provisions C.3 (and associated Fact Sheet and Glossary language), C.4, C.5, C.8, C.10, and C.15

cc:

C/CAG Stormwater Committee / Member Agency Representatives:

Robert Ovadia, Vice Chair, Public Works Director, Town of Atherton  
Randy Breault, Chair, Public Works Director/City Engineer, City of Brisbane  
Peter Brown, Public Works Director, City of Belmont  
Syed Murtuza, Public Works Director, City of Burlingame  
Brad Donohue, Director of Public Works and Planning, Town of Colma  
Richard Chiu, Public Works Director, City of Daly City  
Kamal Fallaha, City Engineer, City of East Palo Alto  
Ray Towne, Interim Public Works Director, City of Foster City (not an appointed member of the Stormwater Committee)  
Maziar Bozorginia, City Engineer, City of Half Moon Bay  
Paul Willis, Public Works Director, Town of Hillsborough  
Nikki Nagaya, Public Works Director, City of Menlo Park  
Andrew Yang, Senior Engineer, City of Millbrae  
Lisa Petersen, Public Works Director/City Engineer, City of Pacifica  
Howard Young, Public Works Director, Town of Portola Valley

Saber Sarwary, Supervising Civil Engineer, City of Redwood City  
Hae Won Ritchie, Interim Public Works Director, City of San Bruno  
Steven Machida, Public Works Director, City of San Carlos  
Azalea Mitch, Public Works Director, City of San Mateo  
Eunejune Kim, Public Works Director, City of South San Francisco  
Sean Rose, Public Works Director, Town of Woodside  
Ann Stillman, Interim Public Works Director, County of San Mateo

San Mateo County Flood and Sea Level Rise Resiliency District:

Len Materman, Chief Executive Officer, San Mateo County Flood and Sea Level Rise Resiliency District (OneShoreline)

## ATTACHMENT 1

# Summary of Existing and Planned Stormwater Runoff Management Efforts in San Mateo County

## NEW/REDEVELOPMENT AND GREEN INFRASTRUCTURE

In response to the State's legislative mandate for Stormwater Resource Plans in order to compete for voter-approved bond funds, C/CAG worked with its member agencies to develop the [San Mateo County Stormwater Resource Plan](#) in 2017. That plan utilized various metrics to prioritize opportunities for stormwater capture at varying scales. Since that time, San Mateo County permittees have been working to advance implementation of stormwater management measures at three primary scales:

- 1) the parcel scale, where only the rain falling on a site is managed (primarily new and redevelopment projects, but also including the countywide Rain Barrel and Rain Garden Rebate program in partnership with the Bay Area Water Supply Conservation Agency);
- 2) the street scale, where stormwater from public roadways and sidewalks and adjacent parcel run-on to the streets is managed via green street features; and
- 3) the regional scale, where runoff from watershed or drainage areas is managed in large, centralized facilities.

## Reasonable Assurance Analysis (RAA) for Green Infrastructure

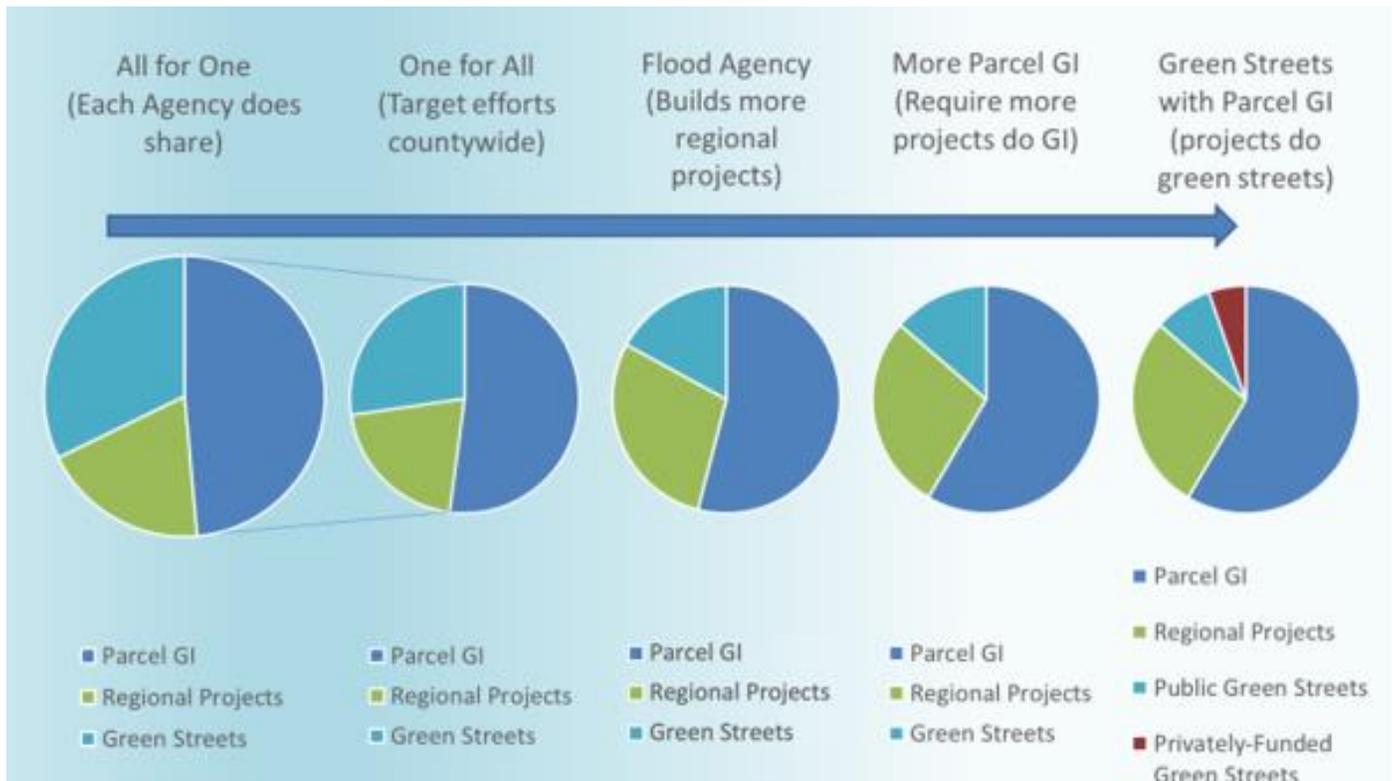
As required under Provisions C.11 and C.12, C/CAG developed a countywide pollutant transport/hydrology model coupled with Green Infrastructure (GI) scenario modeling to provide permittees with quantitative details on how much GI would be needed spatially to meet the MRP goal for pollutant load reduction via GI by 2040. The RAA helped permittees recognize:

- 1) The rate of GI implementation via new and redevelopment is generally outside the control of municipalities, but the extent of projects subject to stormwater requirements is governed by both MRP and local requirements;
- 2) Meeting GI and stormwater treatment targets on a countywide basis instead of proportionally within each jurisdiction can result in overall cost savings by implementing projects where it makes the most sense;
- 3) Regional-scale projects, while costly, can be very cost-effective in terms of the overall volume managed vs. equivalent levels of small-scale distributed systems, especially with regard to operations and maintenance. These larger scale projects can also provide other significant benefits such as flood risk reduction and water supply augmentation, and are often competitive multi-benefit/multi-jurisdictional projects for state and federal grant programs; and
- 4) Green street implementation is likely to be the most impactful on local permittee resources, both for capital expenses and long-term operations and maintenance given that it is most likely to be funded by the limited local allocations of transportation dollars and result in many distributed bioretention facilities requiring ongoing maintenance. This contrasts with parcel-scale projects funded primarily by private developers or regional-scale projects likely to be funded by significant state or federal grants due to the integrated, multi-benefit nature.

As a result, C/CAG and its member agencies began looking at options to meet water quality and treatment requirements while reducing the financial burden of green streets on local agencies when evaluating approaches for meeting long-term water quality goals. As detailed in Figure 1 (moving from left to right, focus is on reducing the publicly funded green streets piece of the pie), key strategies include:

- 1) Working collaboratively at a countywide and/or watershed scale instead of jurisdiction by jurisdiction;
- 2) Working with the new Flood and Sea Level Rise Resiliency District (OneShoreline) to advance regional-scale stormwater capture projects to the greatest extent possible and where multi-benefit objectives can be optimized to help with flooding, climate resiliency, and water quality;
- 3) Increasing the number of new and redevelopment projects subject to stormwater treatment requirements to get more parcel-scale GI by targeting key development sectors not addressed by MRP triggers;
- 4) Increasing implementation of green street projects in conjunction with new and redevelopment to get more street-scale projects built and maintained via private funding; and
- 5) For public green street investments, integrating GI with planned transportation improvements when and where it makes sense to create multi-benefit projects. The following sections detail our efforts to make progress on all these strategies.

Figure 1. Strategies for Cost-Effective Stormwater Management



## Regional-scale Stormwater Management and Countywide Collaboration

### Regional Stormwater Runoff Capture Projects Currently in Planning or Construction

**South San Francisco (Orange Memorial Park):** This project, currently under construction, will provide water quality improvements to help meet the MRP requirements related to GI retrofit, mercury, PCBs, and trash. The project includes an instream diversion and pre-treatment structure (trash screen and sediment removal chamber) in the upper end of the Colma Creek flood control channel within Orange Memorial Park. Pretreated water gravity drains to an underground stormwater reservoir where it is stored until either infiltrating or being further treated for non-potable reuse. When storage capacity is exceeded, treated overflow is discharged back into the channel. Originally conceptualized in the Stormwater Resource Plan, the Project will capture and treat approximately sixteen (16) percent of the annual drainage from approximately 6,500 acres of land in the City of South San Francisco, Town of Colma, the City of Daly City, and a portion of unincorporated San Mateo County. The project is funded through a \$15.5M cooperative implementation agreement with Caltrans to help satisfy its pollutant load reduction requirements. The Fact Sheet of the Tentative Order recognizes that on a countywide basis this project will provide adequate credit to meet MRP 3.0 C.3.j. numeric green acres retrofit requirements. This demonstrates the considerable potential of collaborative regional-scale multi-benefit stormwater capture projects to provide cost-effective stormwater management consistent with MRP requirements.

**Atherton Project (Menlo College):** The Atherton project, as conceptualized in the Stormwater Resource Plan, was initially sited at a public elementary school, and was moved to be sited at Holbrook-Palmer Park (the Town's only park) when an agreement could not be reached with the School District. However, as the Town faced strong public opposition to siting the project at the one public park in Atherton, the Town looked for other opportunities to implement the regional project in the Atherton Channel Watershed. The Town was able to partner with Menlo School and Menlo College to site the project upstream under the joint athletic fields at Menlo College. Unfortunately, after completing the preliminary design and environmental review documents, Menlo School and Menlo College were forced to focus their operational priorities to respond to the COVID-19 pandemic and could therefore no longer commit to the project. The project had received \$13.5M in cooperative implementation grant funding from Caltrans for design and construction.

**Belmont Project (Twin Pines Park):** The Belmont project was originally conceptualized in the Stormwater Resource Plan as a small-scale regional facility capturing runoff from a small neighborhood. Since then, the Cities of Belmont and San Carlos and the County of San Mateo, through its Flood Resilience Program (now incorporated into OneShoreline), jointly developed a Watershed Management Plan for Belmont Creek. In this plan, the Twin Pines Park project was increased in scale to be comparable to the other regional projects (~20 acre-feet of storage capacity), with an underground storage/infiltration gallery conceptualized beneath the Twin Pines Park parking lot. C/CAG, in conjunction with the California Natural Resources Agency, allocated \$913K of a \$2.94M State budget allocation to advance regional stormwater projects in San Mateo County to the Belmont project for preliminary design and environmental review. Currently, the project is being combined with a separate \$1M grant from the Department of Water Resources to restore Belmont Creek within Twin Pines Park. The project lead, which is now the City of Belmont, has issued a Request for Proposals for design and construction services to advance both the stormwater capture project and creek restoration.

**San Bruno Project (I-280/380 Interchange):** Subsequent to the project concepts developed for the Stormwater Resource Plan, C/CAG worked with its member agencies to develop additional regional project concepts to help reduce the potential green streets burden on cities indicated as needed by the RAA modeling to meet water quality goals. San Bruno had identified the need for retention within the Crestmoor Canyon watershed to address storm drain system capacity deficiencies. Ultimately, C/CAG and the City collaborated to conceptualize an

approximately 20-acre-foot regional underground stormwater capture facility on Caltrans property within the large vacant land area within the I-280/380 interchange. Preliminary discussions with Caltrans indicated that the site was a possible location in terms of lack of any conflicting future uses for the property. Similar to the Belmont project, C/CAG worked with the Natural Resources Agency to provide \$913K to San Bruno for preliminary design and environmental review for the project. San Bruno participated in a joint Request for Proposals process with C/CAG, Redwood City, and the County of San Mateo and is currently working with its design consultant and Caltrans to advance preliminary design work through Caltrans' Project Initiation Documents and Preliminary Analysis phase as part of their significant project review and oversight process. In addition, the County of San Mateo received a US EPA Water Quality Improvement Fund grant under which \$200K is provided to the San Bruno project for preliminary design, for a total of \$1.13M between the two funding sources.

**Redwood City Project (Red Morton Park):** Like the San Bruno project, C/CAG worked with Redwood City staff to identify a regional project opportunity to help the City reduce its potential green streets burden identified through the RAA modeling. A two-phase project was conceptualized for Red Morton Park, with underground storage systems proposed beneath two playing fields, with a combined storage capacity of ~43 acre-feet. As with the San Bruno and Belmont projects, C/CAG worked with the Natural Resources Agency to provide \$913K to conduct preliminary design and environmental review. Redwood City also participated in the joint Request for Proposals process and has completed the draft preliminary design report. Like San Bruno, the County of San Mateo is providing an additional \$200K from its US EPA grant for preliminary design, for a total of \$1.13M between the two funding sources.

## Regional Project Planning and Collaborative Framework

As mentioned above, C/CAG worked with its state legislative delegation to secure a \$3M (\$2.94M after deducting the State's administrative costs) to advance regional stormwater capture opportunities. The bulk of those funds were allocated to initial design and environmental review of the Belmont, San Bruno, and Redwood City regional projects, described above. C/CAG directed the remaining funds (\$200K) from the state budget allocation to a collaborative effort to further advance regional-scale stormwater management opportunities. Over the past several months, C/CAG has worked with its member agencies and stakeholders to identify multi-benefit drivers and objectives for regional-scale stormwater management. C/CAG is currently finalizing a business case to quantify the benefits of regional-scale collaboration and by early 2022 will have a collaborative framework for San Mateo County permittees to work together and share in costs and benefits of these large-scale regional projects, in conjunction with OneShoreline and other partners. While the drivers and objectives are intended to address "what" regional-scale stormwater management can achieve with respect to project-based and water quality outcomes, the business case and collaborative framework will address "why" from a cost-benefit standpoint working at a regional scale makes sense and "how" that collaboration can be achieved through credit trading and other innovations in funding and financing. The collaborative framework will build on the alternative compliance framework San Pablo is developing with Contra Costa County partners under another EPA WQIF grant.

In conjunction with this effort, C/CAG and the County of San Mateo (\$100K from EPA WQIF) are partnering to prioritize the next iteration (beyond the Stormwater Resource Plan) of regional stormwater capture opportunity sites that help address the identified drivers and objectives and develop five new project concepts. This process will help further quantify what can be achieved through regional-scale projects and set the stage for the next phase of developing these projects.

Collectively, these efforts are consistent with the strategies illustrated in Figure 1 of working collaboratively at a countywide scale, rather than jurisdiction-by-jurisdiction, and maximizing regional-scale multi-benefit stormwater capture opportunities. These projects should be fully supported by the MRP requirements for disconnecting

impervious areas and achieving maximum benefits from a water quality, flood control, climate resilience, and additional community benefit perspective in the most cost-effective manner. It is imperative that the Tentative Order provide flexibility for crediting C.3.j. numeric targets for “greened acreage” with respect to these projects and to allow for alternative treatment options, such as detention and media filtration, where traditional means of infiltration, harvest/reuse and evapotranspiration are proven limited.

## Parcel-Scale Stormwater Management

### Expanded New/Redevelopment Requirements

An increasing number of San Mateo County permittees are subjecting currently non-regulated new and redevelopment projects to stormwater management requirements. This effort to go beyond what is currently required in MRP 2.0 is intended to help meet the long-term goals of stormwater quality improvements and greening of infrastructure while lessening the financial burden to the municipalities. For example, Redwood City requires substantial commercial remodels and any new commercial or residential building to incorporate stormwater treatment measures sized in accordance with Provision C.3. Atherton, with the adoption of its Green Infrastructure Plan, requires full-site single family residential development project that create or replace 10,000 square feet of impervious area to incorporate C.3-sized stormwater treatment measures. The County of San Mateo has enacted stormwater management requirements for small projects and additional runoff management requirements for C.3-regulated projects to prevent impacts on the community storm drain infrastructure. These are just a few examples of San Mateo County permittees imposing new and redevelopment requirements that go beyond MRP 2.0 mandates.

### Rainwater Harvesting Rebates/Incentives

C/CAG has been partnering with the Bay Area Water Supply and Conservation Agency (BAWSCA) to implement a joint rebate/incentive program for rainwater harvesting since late 2014. Since the inception of the program, C/CAG has provided a countywide rebate of \$50/barrel matched by many of the water purveyors in the county. Starting in FY 2020/21, C/CAG expanded its incentives to provide rebates for larger storage systems, offering \$100 for systems between 100-199 gallons and \$150 for over 200 gallons, all of which continue to be combined with \$50/system rebates from participating water purveyors. In addition, C/CAG added a new stacked \$300 rain garden incentive on top of rebates from participating water purveyors for BAWSCA’s “Lawn Be Gone!” turf replacement program. In FY 2020/21 the rain barrel rebate program resulted in the installation of 105 barrels, including several large capacity systems, with over 18,000 gallons of capacity throughout San Mateo County. Through a bulk order campaign and partnership with Rain Water Solutions which ran for only several weeks in early FY 2021/22, residents have pre-ordered over 330 barrels, showing the potential for continued growth of this program in future years.

### Credit Trading Marketplace Analysis

C/CAG is receiving pro-bono support from American Rivers and Corona Environmental to explore the feasibility of implementing a stormwater credit trading marketplace in San Mateo County that would potentially allow public or private entities to buy and sell credits for stormwater management. This analysis will support discussions on a potential countywide system to better enable alternative compliance for Provision C.3-mandated stormwater treatment or future volume-based climate resilience needs and will support local agency efforts to expand the scope of parcel-based stormwater requirements and provide options for development projects that may face challenges in meeting obligations on-site. The results of this work will be integrated with work described above to develop a business case and collaborative framework for regional-scale stormwater management in San Mateo County.

## California Resilience Challenge Grant – Resilient San Carlos Schoolyards

In 2020, C/CAG received one of 12 California Resilience Challenge grants in the state to develop resilient schoolyard concept plans for multiple sites in the San Carlos School District to show how GI can be integrated to build climate resilience while also improving water quality, increasing shading and greening on campuses, enhancing outdoor learning environments, and making curriculum connections with teachers and students. This builds on existing school-related efforts C/CAG has been implementing, including partnership with the County Office of Education on its environmental literacy program and providing funding for integrated Safe Routes to School / Green Infrastructure projects further described below in the Street-Scale Stormwater Management section. Working with schools not only supports San Mateo County permittees in complying with MRP outreach requirements, but also creates an important opportunity for partnering with schools to expand parcel-scale implementation of GI in the county.

## Green Infrastructure Design Guide

Starting from its award-winning San Mateo County Sustainable Green Streets and Parking Lots Design Guidebook, C/CAG created a new comprehensive [Green Infrastructure Design Guide](#) detailing how GI can be effectively incorporated into both parcel- and street-scale projects, including a library of typical design details.

## Street-Scale Stormwater Management

### Green Streets via New/Redevelopment

Multiple permittees in San Mateo County are now requiring implementation of street-scale GI as part of new/redevelopment projects, effectively increasing the acreage of impervious area treated through private funds, in many cases also including long-term operations and maintenance. Increasingly, San Mateo County permittees, including Redwood City, Atherton, South San Francisco, San Mateo, and Menlo Park, are requiring frontage improvements that include GI to treat runoff from public rights-of-way. It is important to note that these policies will help address PCBs in adjacent public right-of-way (ROW) areas during redevelopment in old industrial areas and will help cities achieve the numeric targets for greened acres in the Tentative Order. Providing flexibility in the MRP to implement these types of policies will help San Mateo County permittees to implement GI more effectively and efficiently, as opposed to overly prescriptive requirements for new regulated project types, including certain roadway maintenance activities and bike and pedestrian projects.

## Countywide Sustainable Streets Master Plan

In 2021, C/CAG adopted the San Mateo Countywide Sustainable Streets Master Plan, which was funded with a nearly \$1M Caltrans Climate Adaptation Planning grant. The Master Plan prioritizes opportunities to integrate GI with planned transportation projects to help adapt the roadway network to a changing climate while simultaneously improving water quality. The Master Plan prioritizes identified transportation needs (e.g., pulled from active transportation and Complete Streets plans, Safe Routes to School walk audits, Specific Plans) for GI integration using numerous technical suitability and co-benefit criteria. As part of the Master Plan, C/CAG modeled future climate impacts on precipitation patterns, advancing the county's understanding of how storm intensity and frequency may change under future climate conditions. The Master Plan includes 12 project concepts illustrative of different Sustainable Street typologies geographically distributed throughout the county. Included in the appendices is a new Intersection Assessment Tool that allows municipalities to rapidly determine the feasibility of incorporating stormwater curb extensions at an intersection, as well as a complete library of typical design details for Sustainable Street projects. High-resolution drainage delineations were developed for

the entire county, further advancing San Mateo permittees' digital mapping of storm drain catchments down to the catch basin scale. The Master Plan also includes model Sustainable Street policy language for permittees to consider adopting, including model Sustainable Streets language for policy documents, a model Sustainable Streets resolution and policy to go beyond typical Complete Streets policies, a model resolution for GI development standards for new buildings, and model conditions of approval for development projects to require Sustainable Streets implementation as part of private development.

From the MRP perspective, the Master Plan prioritizes integration of GI with planned transportation investments to achieve multiple benefits and make the most of limited agency resources, consistent with the strategies illustrated in Figure 1. For the 11 project concepts included in the plan, the total drainage management area treated by the projects is just over 18 acres at a total cost of over \$27M (please note that these are integrated complete/green street projects, so costs include features not specific to stormwater treatment).

### Safe Routes to School / Green Infrastructure Pilot Projects

C/CAG awarded just over \$2M to 10 pilot projects throughout the County that integrate Safe Routes to School and GI. These projects were funded with equal shares of Safe Routes to School and stormwater program funds, with funds from C/CAG covering up to 85% of construction costs. Eight of the ten projects have been constructed to-date and C/CAG staff has been compiling information from each of the projects detailing total costs, relative shares of Safe Routes to School and stormwater costs, and impervious area treated (Table 1).

Table 1 shows that the average cost per acre treated is approximately \$300K when using just the estimated GI project costs (which are often difficult to clearly separate given the integrated nature of components such as paving and concrete gutter work) or \$590K when using total project costs. The costs also vary, with the projects treating the largest areas being most cost-effective, which highlights the importance of incorporating GI into projects where it will have the most benefit in terms of area treated. While these costs remain preliminary as C/CAG and member agency staffs are finalizing results of the pilot program, they are illustrative of likely costs to treat an acre of impervious area within the public ROW.

Table 1. San Mateo County Projects Integrating Safe Routes to School and Green Infrastructure

Project Location	Description/Project Elements	Drainage Area Treated (acres)	Green Infrastructure Project Costs	Safe Routes to School Project Costs	Non-participating/ other costs	Total Project Cost	Cost/Acre Treated (GI Costs Only)	Total Project Cost/Acre Treated
Menlo Park	Two linear planters (both sides of street) w/underdrain, new crossing w/flashing beacons, new sidewalks/paths	1.46	\$291,541	\$240,800	\$44,213	\$576,554	\$199,685.62	\$394,900.00
Pacifica	Two curb extensions (both sides of the street) w/o underdrain, new crossing with island passage and flashing beacon	1.25	\$147,392	\$150,246		\$297,638	\$117,913.60	\$238,110.40
County	One "L" shaped planter behind curb w/o underdrain, one mid-block crossing (no stormwater), one crossing with new valley gutter and sidewalk	0.23	\$146,064	\$153,817	\$8,617	\$308,498	\$629,586.21	\$1,329,732.76
Millbrae	Five curb extension/bulbouts w/underdrain, three crossing improvements	1.95	\$349,663	\$157,190	\$396	\$507,249	\$179,314.36	\$260,127.69
Brisbane	Six curb extension/bulbouts w/underdrain, and an island crossing, eight crossing improvements	0.78	\$343,843	\$510,830		\$854,673	\$439,135.38	\$1,091,536.40
Colma	Two mid-block crossings with three curb extensions/bulbouts, w/underdrains and flashing beacons	1.47	\$185,770	\$121,922		\$307,692	\$126,374.15	\$209,314.29
Half Moon Bay	Three bulbouts with five bioretention areas w/o underdrains, new crossings, and additional midblock crossing w/o bioretention	0.48	\$303,554	\$202,369		\$505,923	\$632,403.75	\$1,054,005.83
Daly City	Two bulbouts with three bioretention areas w/underdrains, new crossings and ramps	1.40	\$118,523	\$61,057		\$179,580	\$84,659.29	\$128,271.43
						<b>Average:</b>	<b>\$301,134.04</b>	<b>\$588,249.85</b>

## Non-Regulated Green Infrastructure Projects

C/CAG and its member agencies have been proactively building non-regulated GI projects since C/CAG provided its first pilot project funding to four projects in 2007. During the current permit term, municipalities have continued implementing voluntary GI projects consistent with the MRP requirement for “no missed opportunities,” primarily street-scale projects integrated with transportation improvements. C/CAG maintains a [GI Story Map](#) detailing public GI projects (note: not all are non-regulated). C/CAG also supports its member agencies in tracking GI implementation for purposes of quantifying mercury and PCBs load reductions. The preliminary tally of treated area for non-regulated GI projects (including the Safe Routes to School / GI pilot projects from above) implemented over the current permit term is approximately 30 acres. For context, the Tentative Order specifies approximately 46 acres of voluntary green acres at the countywide scale based on the three acres per 50,000 population framework. These figures further support the approach in San Mateo County to advance regional-scale multi-benefit projects to achieve stormwater management goals more cost-effectively, and the need for ongoing flexibility in terms of the placement and treatment configurations of these projects. As detailed below, these projects can also support trash reductions through pre-treatment debris separators that are typical of the designs.

## Trash

In addition to the progressive and substantial efforts made on GI planning and implementation over the current permit term, San Mateo permittees have also made substantial progress on reducing the impacts of trash in stormwater. In response to the trash load reduction mandates established by the Water Board in 2009 (via MRP 1.0) and updated in 2015 (via MRP 2.0), San Mateo County permittees have made significant investments in trash capture infrastructure, source control ordinance adoption, implementation, and enforcement, and other types of trash control measures. These investments have significantly decreased the levels of trash in stormwater and in

local surface waters within San Mateo County. All San Mateo permittees complied with the 80% trash load reduction goal, the most recent interim trash load reduction milestone. Additional information on recent actions and steady progress made by San Mateo permittees to address trash is provided below. The adverse impacts that the proposed requirements in Provision C.10 of the Tentative Order would have on this progress to-date and over the next permit term are also summarized.

## Infrastructure Investments (Trash Full Capture)

Over the past decade, San Mateo County permittees have invested significant resources towards siting, installing/constructing, and maintaining trash full capture systems. As illustrated in Figure 2, permittees have successfully installed and continue to maintain nearly 3,000 full capture systems that address over 12,700 acres of land in San Mateo County.

Full capture system capital costs expended to-date to site and install/construct these devices exceeds \$30M. These capital costs are in addition to the investments described earlier associated with GI. A small portion of the capital costs for trash full capture systems have been offset through Cooperative Implementation Agreements (CIAs) between San Mateo permittees and Caltrans. These include CIAs that partially funded large high-flow capacity or regional systems in the Cities of East Palo Alto, South San Francisco, and San Mateo. Other permittees in San Mateo County have also engaged Caltrans more recently to further explore potential locations for trash capture systems that may have benefits to both parties. C/CAG is also supporting its member agencies through additional analysis building on its 2019 assessment of remaining high-leverage opportunities to partner with Caltrans on large full trash capture projects that will also treat moderate/high/very high trash generation areas in municipalities. The current analysis is motivated by \$38M in funding identified by Caltrans to coordinate on these projects in San Mateo County and will consider areas in municipalities that are currently controlled with small inlet-based full trash capture systems, which have in some cases raised concerns with respect to installation and maintenance. It is important to note that CIAs do not fund ongoing operation and maintenance of these devices, even though Caltrans continues to receive the trash reduction benefits associated with these systems. Municipalities spend an estimated \$3.5M annually maintaining full capture systems in San Mateo County. This is in addition to the costs of conducting their baseline operation and maintenance programs to ensure that the stormwater systems throughout the County are functioning adequately.

San Mateo County permittee efforts to date to site, install/construct, and maintain trash full capture systems throughout the County has resulted in addressing approximately 52% of the trash that is required to be addressed by provision C.10 of the MRP. The remaining trash is being addressed through combination of source control actions described below.

## Source Control Efforts

### Ordinances Banning Litter-prone Items

San Mateo County permittees are leaders in the development and implementation of source control ordinances that ban the sale or distribution of certain types of litter-prone items that end up in stormwater and our waterways. Of the 21 permittees in San Mateo County (not including OneShoreline), 18 have adopted bans on the distribution of single-use plastic grocery bags and 17 have adopted bans on Expanded Polystyrene (EPS) foam food service ware, two of the most frequently observed items in stormwater and local waterways. These permittees have spent significant resources adopting and implementing these ordinances and have demonstrated the success of these actions through a combination of inspections/enforcement actions and environmental monitoring. Since the bans went into place, the number and extent of these items observed in environment has

decreased substantially. Single-use plastic grocery bags and EPS foam food service ware are rarely observed during On-land Visual Trash Assessments (OVTAs) or during creek cleanup events, which demonstrates the benefits of “true” source controls, which reduce the generation of these problematic items before they have a chance to enter the environment.

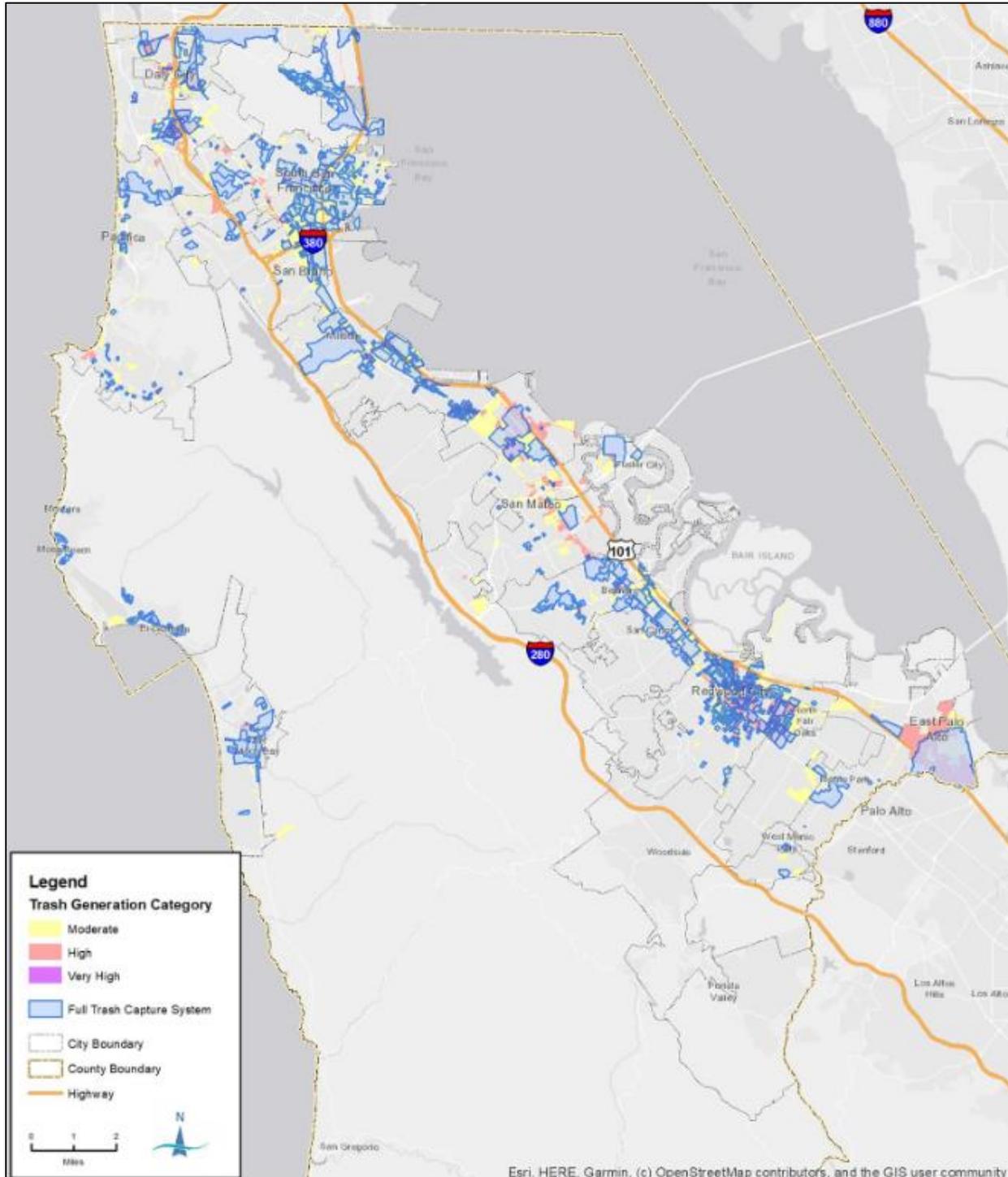


Figure 3. Full Trash Capture Systems in San Mateo County

Building upon the ordinances adopted to-date, the County of San Mateo and other permittees have recently expanded their ordinances to address other types of disposable plastic food service ware. To-date, 14 permittees in San Mateo County have adopted expanded disposable plastic food service ware ordinances that address additional types of litter-prone items (e.g., straws, cups, takeout food ware, etc.). Additional permittees are considering adoption in the near future. Collectively, these actions will substantially reduce trash levels observed in stormwater over time.

The proposed changes to the trash reduction calculation methods for source controls described in the Tentative Order would significantly diminish permittee leadership, the extensive environmental benefits of ordinances developed to date, and provide little impetus for permittees to move forward with expanded source control actions. Suggested modifications to address this issue are provided in Attachment 2.

## Other Source Control Actions and OVTAs

Over the past decade San Mateo County permittees have also significantly reduced trash in their stormwater conveyances through many other types of source controls, including (but not limited to) the following:

- Street Sweeping – many permittees have evaluated their street sweeping programs and modified accordingly based on their understanding of trash generation.
- Enhanced On-Land Cleanups – Cleanup frequencies in commercial areas have been expanded in many jurisdictions, in collaboration with business districts.
- Illegal Dumping Prevention – The use of cameras, barriers, and other deterrents has expanded significantly in areas with dumping is prevalent.
- Coordination with Waste Haulers – San Mateo County permittees and their waste haulers established the “Litter Work Group” for San Mateo County and conducted a number of roundtables to share experiences and brainstorm solutions to address many different types of trash challenges and identify opportunities to work together on source control implementation.
- Development of Litter Reduction Guidelines for Multi-family Dwellings – C/CAG developed the *Litter Reduction Toolkit for Multi-Family Dwellings* to provide guidance and identify litter management practices (LMPs) and other tools to prevent and reduce litter at existing and newly constructed multifamily dwelling (MFD) properties within San Mateo County. In collaboration with the waste haulers, permittees have used the toolkit when evaluating new/redevelopment designs, which can be accessed [here](#).

To demonstrate the levels of trash reduction that has occurred as a result of the actions listed above, permittees conduct OVTAs consistent with the MRP. Assessments are conducted sites representing a minimum of 10% of street miles in trash generating areas that are not addressed by full capture systems. Each site is roughly 1,000 feet in length and assessments are conducted at each site roughly three times per year. In total, over 4,000 OVTAs have been conducted to date in San Mateo County, which equates to assessing roughly 750 miles of streets and sidewalks over the past 5+ years. Permittees have spent over \$1M in assessments to-date to demonstrate trash reductions to the Water Board.

## Addressing the Remaining Trash Generating Areas

In total, San Mateo County permittees have made substantial investments in addressing trash in stormwater and have demonstrated attainment of trash reduction goals required by the MRP. Areas with high levels of trash generation have been the focus of actions to date, with moderate areas also being addressed to the extent possible. Remaining areas to be addressed in San Mateo County are mostly areas with moderate trash

generation. Of the trash generating areas not addressed by full capture systems, roughly 70% generate moderate levels of trash. Source control actions described above or other types of partial treatment controls (e.g., curb inlet screens) will likely be the control measures selected by permittees to address trash in these areas to work towards final trash reduction goals. To further support maintaining source control credits in MRP 3.0, C/CAG contributed financially to the recently completed “*Trash True Source Controls*” report, by Eisenberg, Olivieri & Associates (EOA) on behalf of Bay Area municipalities, which summarizes Bay Area-wide existing and planned source control actions as well as the quantifiable water quality benefits of source controls towards achieving trash load reduction goals. MRP 3.0 should not constrain the flexibility and timelines that permittees need to achieve the MRP low trash generation goal in these areas. The low hanging fruit (i.e., high trash generating areas) has largely been addressed. Innovative approaches are needed to address the areas with moderate trash generation, including ongoing support for regional scale stormwater capture projects that also include trash controls, retention of existing and new source control credits/creek and shoreline offsets, and ongoing collaboration with Caltrans.

One challenge that permittees will face during MRP 3.0 is addressing trash on private properties that are not directly connected to the permittee’s storm drainage system (i.e., trash from these properties flows to inlets owned and operated by the property owners, not the permittee inlets). These “private drainage areas” represent roughly 40% of the trash that is not currently addressed by full capture systems in the County. Although San Mateo County permittees understand that trash generated in substantial levels on these properties also needs to be addressed, solutions are not as straightforward for these properties as addressing trash in the public ROW. Flexibility is needed in MRP 3.0 to allow trash from these properties to be addressed over time (i.e., in future permit terms) through programmatic approaches that don’t unduly require property owners to install and maintain full capture devices during these times of economic hardship due to the COVID-19 pandemic.

## MERCURY/PCBs

### Catchment Characterization and Source Property Identification

C/CAG’s PCBs and mercury control program has focused on monitoring catchments in San Mateo County (referred to as Watershed Management Areas or WMAs) containing high interest parcels with land uses potentially associated with PCBs (e.g., old industrial, electrical, and recycling) and/or other characteristics potentially associated with pollutant discharge (e.g., poor housekeeping, unpaved areas, and storage tanks).

Monitoring objectives have included characterizing pollutant concentrations across the urban landscape and identifying source areas and properties. To-date, composite samples of stormwater runoff have been collected from the bottom of about 50 San Mateo County WMAs and over 400 individual and composite grab samples of sediment have been collected within priority WMAs to help characterize the catchments and identify source areas and properties. Most samples were collected in the public ROW. The grab sediment samples were collected from a variety of types of locations, including manholes, storm drain inlets, driveways, streets, and sidewalks, often adjacent to or nearby high interest parcels with land uses associated with PCBs and/or other characteristics potentially associated with pollutant discharge. C/CAG’s PCBs and mercury monitoring program has also included collecting sediment samples in the public ROW (e.g., from streets and the MS4) by every known PCBs remediation site in San Mateo County, to the extent applicable and feasible).

When a previously unknown potential source property was revealed via the PCBs and mercury monitoring program, C/CAG conducted a follow-up review of current and historical records regarding site occupants and uses, hazardous material/waste use, storage, and/or release, violation notices, and any remediation activities. In addition to databases such as EPA’s Toxic Release Inventory (TRI) and Envirofacts, and the State of California’s

Geotracker and Envirostor, some of the most useful records have been found at the San Mateo County Department of Environmental Health.

Four previously unknown potential source properties have been identified in San Mateo County, all in WMA 210 (Pulgas Creek Pump Station South) in the City of San Carlos. C/CAG is working with the City of San Carlos to determine next steps for these properties, including additional monitoring and/or potential referral to the Regional Water Board. In addition, C/CAG's PCBs and mercury monitoring program has led to C/CAG referring four other properties (two sets of two adjacent properties, all in San Carlos) to the Regional Water Board for potential further PCBs investigation and abatement.

## Extent of Industrial Land Use in San Mateo County

The PCBs load reduction credited when a source property is referred to the Water Board is directly proportional to the area of the referred property (acres is the unit used in the load reduction calculation). In September 2018, C/CAG conducted an analysis of total industrial area and average industrial parcel size among the four most populous counties in the MRP area, based on county assessor parcel data. Table 3 and Figure 3 show the results (it is important to note that the y-axis of Figure 3 is on a log scale). The total industrial acreage and average industrial parcel size are much lower in San Mateo County relative to the other counties, illustrating the challenge for San Mateo County permittees to achieve PCBs load reductions via source property referrals relative to the other counties, though this is still considered the more cost-effective and practical approach to addressing PCBs in old industrial areas as compared to installing GI in the public ROW. In particular, even though the total population of Contra Costa County is roughly only 50% greater than San Mateo County, the total industrial acreage and average industrial parcel size in Contra Costa County exceed San Mateo County by roughly a factor of four and six, respectively.

**Table 3. Total Industrial Acreage and Average Industrial Parcel Size in Most Populous MRP Counties**

	San Mateo County	Alameda County	Contra Costa County	Santa Clara County
<b>Total Industrial Area (acres)</b>	3,043	14,034	12,833	16,039
<b>Average Industrial Parcel Size (acres)</b>	1.25	2.03	7.55	3.00

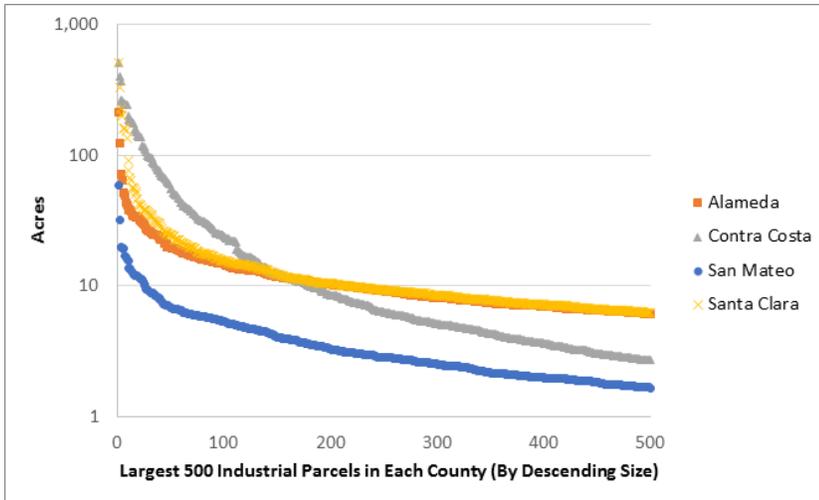


Figure 3. Area of 500 Largest Industrial Parcels in Most Populous MRP Counties

**C/CAG COMMENT LETTER ON MRP 3.0 TENTATIVE ORDER**

**ATTACHMENT 2**

**SUB-PROVISION SPECIFIC COMMENTS AND SPECIFIC REQUESTED REVISIONS,  
WITH HIGHER PRIORITY SUB-PROVISIONS HIGHLIGHTED**

C.2 Municipal Operations

11/16/2021

Subprovision	Description of Change from MRP 2.0 to MRP 3.0 (text change in TO in red)	Key Issues/Concerns	Response/Recommendation
C.2.a. Street and Road Repair and Maintenance C.2.b Sidewalk/Plaza Maintenance and Pavement Washing C.2.c Bridge and Structure Maintenance and Graffiti Removal	ii Reporting – Added reporting requirement to provide supporting documents in the 2024 Annual Report.  in the 2024 Annual Report, Permittees shall make applicable supporting BMP documents available to the Water Board by providing links to online documents or submitting documents as part of the Annual Report.	This is an increase in reporting requirements. Overall, reporting requirements for C.2 have increased, although WB staff and permittees had agreed on a goal to reduce reporting throughout the permit.	There is general concern with the overall increase in reporting requirements.
C.2.b Sidewalk/Plaza Maintenance and Pavement Washing – i. Task Description	Added requirement  BMPs for washing down outside areas of human habitation shall include sanitizing procedures.”	This topic is already included in Provision C.17.a.ii.(3) “Examples of actions that may be implemented include, but are not limited to, ...establishing and updating sidewalk/street/plaza cleaning standards for the cleanup and appropriate disposal of human waste”.  In addition sanitizing municipal owned and operated areas (e.g. right-of-way, sidewalks, etc.) only needs to be performed in times of elevated risk to public health. This requirement should be removed or include text such as “as needed” or “as appropriate”.	Delete new language in C.2.b.i or revise to: BMPs for washing down outside areas of human habitation shall include sanitizing procedures, <u>as appropriate.</u>
C.2.f Corporation Yard BMP Implementation – iii. Implementation Level	Added requirement for vehicle and equipment wash areas  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. <u>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 to collect, properly treat, and reuse wash water onsite without any discharge.</u>	In corporation yards the wash area may not have a sanitary sewer drain but there may be another approved sanitary sewer connection that could be used for discharge of wash waters (e.g. areas where tractor trucks deposit contents to drain). The option should be provided to collect and discharge wash water to an approved sanitary sewer connection rather than hauling directly to the wastewater treatment plant.	In areas where a sanitary sewer connection is not available, the Permittees shall collect and haul the wash water to <u>an approved sanitary sewer connection or a</u> municipal wastewater treatment plant, or implement appropriate BMPs to collect, properly treat, and reuse wash water onsite without any discharge.
C.2.f Corporation Yard BMP Implementation – iii. Reporting	New reporting requirement:  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.	This is an increase in reporting requirements. Overall, reporting requirements for C.2 have increased, although WB staff and permittees had agreed on a goal to reduce reporting throughout the permit.	There is general concern with the overall increase in reporting requirements.
C.2.g Storm Drain Inlet marking	This Provision was moved from MRP 2.0 Provision C.7.a Public Information and Participation.	This Provision covers both municipally-maintained storm drain inlets and newly approved, privately maintained streets. We recommend the requirements related to municipally-maintained storm drain inlets remain in Provision C.2 and the private street development requirements be moved to Provision C.3. Note Provision C.3.c.i.(1)(f) already requires storm drain system stenciling or signage.	Delete private street requirements from this Provision
C.2.h Staff Training – ii. Implementation Level	This is a new subprovision that requires training at least once within the permit term on specific topics.  (1) Stormwater pollution prevention; (2) Appropriate BMPs for maintenance and cleanup activities	The topic “Appropriate BMPs for maintenance and cleanup activities” is general and duplicative. Maintenance and cleanup activities are general and not related to any specific maintenance activities and facilities identified within this Provision (i.e. street and road repair and maintenance, bridge and structure maintenance, etc.). This is duplicative of the stormwater pollution prevention general topic included in the list.	Delete C.2.h.ii.(2)
C.2.h Staff Training – ii. Implementation Level	(7) <u>Spill and discharge response and notification procedures and contacts</u>	The topic “Spill and discharge response and notification procedures and contacts” is duplicative and inconsistent with other Provision requirements. If maintenance staff are responsible for illicit discharge investigation, notification or contacts the training would be covered under Provision C.4.e.ii.(5) Illicit Discharge Detection and Elimination. In addition, there is already a requirement in Provision C.5.c.ii.(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.” Therefore, including this requirement in Provision C.2 is repetitive and inconsistent with other sections of the Permit.	Delete C.2.h.ii.(7) a: <del>(7) Spill and discharge response and notification procedures and contacts</del>
C.2.h Staff Training – iii Reporting	This is a new subprovision that requires reporting of staff trained.  (1) Dates of training; (2) Training topics covered; (3) Total number of Permittee maintenance staff; <u>    </u> (4) Number and percentage of Permittee staff implementing municipal maintenance activity who attended training; (5) Total number of corporation yard staff performing corporation yard inspections for the Permittee; and (6) If there was no training in a given year, so state <u>    </u> .	The requirement to report “Total number of corporation yard staff performing corporation yard inspections for the Permittee” is duplicative of other reporting requirements. It is unclear why this number must be reported separately from “(3) total number of maintenance staff and (4) number and percentage of staff implementing activity who attended training”. If the training topic “corporation yard SWPPPs” is covered then the number and percentage of maintenance staff implementing corporation yard BMPs will be reported. Staff who perform the annual corporation yard inspections typically do not require any additional training other than being knowledgeable of the SWPPP and annual inspection form. Typically there is one staff person who conducts the annual inspection. It is not clear the benefit of reporting this single number in each Annual Report.	Delete ii.(5): <del>Total number of corporation yard staff performing corporation yard inspections for the Permittee;</del>
Permit Fact Sheet C.2-1 (page 352)	New text: <u>Maintenance personnel also play an important role in educating the public and in reporting and cleaning up illicit discharges.</u>	Typically maintenance personnel do not educate the public regarding illicit discharges unless they also happen to perform illicit discharge inspections. An illicit discharge inspector may contact municipal maintenance staff to assist with illicit discharge clean but the inspector is generally responsible for interacting with the general public and not the municipal maintenance staff involved in the clean up activities.	Maintenance personnel also play an important role in <del>educating the public and in</del> reporting and cleaning up illicit discharges.
Permit Fact Sheet Provision C.2.h Staff Training	New Provision and text including: <u>“This provision continues to require Permittees to conduct annual trainings for municipal staff.”</u>	While Permittees previously conducted training for municipal maintenance staff this text implies the Provision was in the previous permit. However, this is a new provision with specific training topics and reporting which are new requirements. This wording should be revised to indicate it is a new Provision and provide the basis for including additional requirements and reporting.	Revise: This provision <del>continues to</del> requires Permittees to conduct <del>annual</del> trainings for municipal staff <u>for specific topics and includes specific reporting requirements. This new Provision was added because <u>    </u></u>

C.3 New Development and Redevelopment

11/16/2021

Subprovision	Description of Change from MRP 2.0 to MRP 3.0 Tentative Order	Key Issues/Concerns	Response/Recommendation
C.3.b.ii.(1)(b)(i) Regulated Projects - Special Land Use - Pavement Maintenance Exclusions	Changes exclusions for Special Land Use Projects and all other regulated projects. Replaces exclusion for "pavement resurfacing within the existing footprint" with more detailed "pavement maintenance" language. Specifies certain maintenance to existing roads that is not excluded, such as removing pavement down to the base course, extending the pavement edge, and upgrading from dirt or gravel to chip seal, asphalt or concrete.	Issues with what pavement maintenance activity and other public works projects in the right-of-way are not excluded from C.3.b. Will cause more expense to Permittees and potentially delay needed maintenance, which will have impacts on water quality and public safety. Absence of "contiguous" in non-excluded public ROW projects will cause more projects to be regulated. For example, piecemeal projects such as gap closures, sidewalk section replacement, utility trenching, ADA curb ramps, LID, etc. that are not "contiguous" and add up to 5,000 sq. ft. or more in total would become regulated. These projects will be delayed due to lack of funding. Pavement maintenance funding sources such as SB1 cannot be used for GSI. No exclusion for extending the pavement edge is a concern, as it will discourage bike/ped and Safe Routes to School improvements.	Oppose non-exclusion of pavement maintenance activities for roads. Language on regulation of pavement maintenance activities is confusing and should be clarified, as well as placed in a separate subprovision and not included as part of the Special Land Use Projects provisions. Allow extension of pavement edge for bike lanes, sidewalks and public safety projects. Clarify language around when pervious road becomes impervious, including defining gravel as pervious, and exempt placement of gravel on dirt roads for erosion control as a regulated maintenance practice. Requested language changes in redline/strikeout are provided in Attachment 3.
C.3.b.ii.(2)-(4) Regulated Projects - Other Development/Redevelopment and New or Widening Road Projects	Lowers the regulated project threshold to 5,000 sq.ft. impervious surface created/replaced for all types, including new roads and widening of existing roads. Clarifies that adjacent sidewalks and other portions of the public ROW are included as part of the regulated parcel-based project's scope.	Will significantly increase number of regulated projects and burden on municipal staff for design review, construction inspection, and O&M inspection, without commensurate water quality benefit.	Oppose changes to thresholds - water quality benefit not apparent versus increased burden on municipalities. Oppose lower threshold for new/widened road project requirements. Maintain exemption for bike lanes and sidewalks along existing roads (i.e., maintain MRP 2.0 road requirements) to support active transportation and ped/bike safety improvements. At a minimum, delay the effective date for reduction of thresholds and addition of new regulated project categories to mid-permit term to allow Permittees more time to prepare. Propose changing language to exclude all off-road bike and/or pedestrian facilities such as Class 1 designated and/or signed multi-use paths of any width. Oppose change that gravel is automatically considered impervious. Incorporate language changes that specify that gravel is considered pervious within certain ranges of compaction (see requested language changes in Attachment 3).
C.3.b.ii.(5) Regulated Projects - Road Reconstruction Projects	Adds new category of regulated project, "Road Reconstruction Projects", that involve the "reconstruction of existing public roads, disturbing greater than or equal to one acre of impervious surface (collectively over the entire project site) ... including sidewalks and bicycle lanes that are built or rebuilt as part of the existing streets or roads." 50% rule applies. Replaces maintenance definition and exemptions with new language.	Major concerns about this new regulated project category. Will cause significant additional expense to Permittees and potentially delay needed road maintenance projects. Pavement maintenance funding sources such as SB1 cannot be used for GI. Would also affect/delay implementation of Active Transportation Plans.	Delete this category and allow use of C/CAG Sustainable Streets Master Plan, Permittee GI Plans and GI feasibility analysis to determine best locations for green street retrofits. If this category must be included, define reconstruction as pavement replacement down to the subbase, not base layer, as milling and grinding for resurfacing can disturb base layer. See requested language changes in Attachment 3.
C.3.b.ii.(6) Regulated Projects - Large Detached Single Family Home Projects	Removes exemption for "detached single-family home projects that are not part of a larger plan of development" and adds new category of regulated project, "Large Detached Single-Family Home Projects", that create and/or replace 10,000 sq.ft. or more of impervious surface.	Will increase number of regulated projects and cost burden on municipalities for design review, construction inspection, and O&M inspection, without significant water quality benefit. Would require a change in the review process for single family home projects and associated costs. Especially impacts smaller, mostly residential communities. Single family home project developers typically take more resources (hand-holding) to understand requirements. Costs cannot be recovered through development review fees.	Remove this requirement. This not a water quality priority or cost-effective approach. Keep treatment exemption for detached single-family homes and address runoff with site design measures. At a minimum, remove "50% rule" which could cause significant expense to home owners. Allow flexibility for some communities to use requirements on private property to achieve GI goals. At a minimum, delay the effective date for reduction of thresholds and addition of new regulated project categories to mid-permit term to allow Permittees more time to prepare.
C.3.b.v.(2) Annual Reporting – C.3.b.ii. Regulated Projects	No changes - continues to require detailed information on approved projects to be reported in each Annual Report	Permittees had discussed with Water Board staff potential approaches for reducing reporting requirements in Provision C.3, and one option requested was to track but not report data on approved projects, and make the data available to Water Board staff upon request. This is not reflected in the Tentative Order.	Recommend that reporting requirements be reduced by allowing permittees to maintain data on approved projects in their local databases and only providing the data to Water Board if requested.
C.3.d.iv. Numeric Sizing Criteria for Stormwater Treatment Systems - Tree Runoff Reduction and Tree-Based Stormwater Treatment Systems	Added new section allowing a collective proposal evaluates the benefit and associated criteria of runoff reduction associated with trees.  Does not allow the use of Tree Interceptor Credits.	No issues.	No issues.
C.3.e.i. Alternative or In-Lieu Compliance with Provision C.3.b.	Changed the two alternative compliance options in MRP 2.0 to require onsite treatment to the MEP prior to providing treatment offsite (language unclear).  Did not include a third option for a more detailed regional alternative compliance program as discussed with Permittees.	Tentative Order does not include Alternative Compliance language changes proposed by Permittees to allow offsite treatment only and remove the requirement for some onsite treatment. If the offsite treatment meets the criteria and provides a net benefit, it should be allowed under this provision. The proposed language also does not support regional project implementation and innovative credit trading programs as well as it could.	Modify text to remove requirement to treat onsite to the MEP, and allow for only offsite treatment, which is consistent with current interpretation and practice and would support regional alternative compliance and credit trading programs. Modify text to allow a Permittee to use a Regional Project in its jurisdiction as offsite compliance (Option 1) as well as be able to contribute in-lieu fees to a Regional Project (Option 2) - see specific language changes in Attachment 3. Expand the definition of a Regional Project (as shown in Footnote 12) to allow a project with demonstrated multiple benefits and constraints such as lack of infiltration feasibility, lack of available demand for non-potable use, and significantly constrained space to use media filtration as a treatment measure for some or all of the stormwater managed (see Attachment 3).
C.3.e.ii. Special Projects	<ul style="list-style-type: none"> <li>No changes to Special Projects Categories A and B.</li> <li>Changed Category C from TOD focus to "Affordable Housing" with various changes to existing credit system and new credits.</li> <li>Added a definition for "Dwelling Unit"</li> <li>Added definition for Affordable Housing from HUD: as housing for which rent or mortgage costs (including utilities) are no greater than 30 percent of total household income. For metropolitan areas, HUD defines extremely low household incomes as 0 - 30 percent of area median income (AMI) and very low household incomes as 31 - 50 percent of AMI. To qualify as Category C, the project must meet Affordable Housing criteria and also (i) be primarily a residential development project and (ii) Achieve at least a gross density of 40 DU/Ac.</li> <li>Added definition for "deed-restricted affordable housing" as preserved housing with deed restrictions running at least 55 years, at rent/mortgage rates no greater than 30 percent of the household income or Very Low Income (50 percent of AMI) households", with a table of max allowable monthly rent/mortgage for each County.</li> </ul>	Changes to Category C have made it confusing and unusable for many permittees and have essentially eliminated this category. Affordable housing criteria are too prescriptive and location and parking credit criteria have become more strict. Many TOD projects still have a need for some Special Project non-LID credits and offer environmental benefits.	Retain TOD project credits and allow projects to use Category C that have TOD benefits and may not meet Affordable Housing criteria. Allow changes to Category C to take affect mid-permit term.

C.3 New Development and Redevelopment

11/16/2021

Subprovision	Description of Change from MRP 2.0 to MRP 3.0 Tentative Order	Key Issues/Concerns	Response/Recommendation
C.3.i. Required Site Design Measures for Small Development and Redevelopment Projects and Smaller Detached Single-Family Home Projects	Changes the threshold for "small development and redevelopment projects" from 2.5k-10k sq.ft. to 2.5k-5k sq.ft. and added "smaller detached SF home projects" of under 10,000 sf	Change made to recognize drop in threshold to 5,000 sq.ft. for most regulated projects and 10,000 sq.ft. for detached single family homes.	See responses above related to threshold changes.
C.3.j.i.(1) Green Infrastructure Planning and Implementation - Programmatic	<ul style="list-style-type: none"> <li>Requires updates and/or supplements to GSI Plans to: revise implementation mechanisms; continue to update related municipal plans; develop funding mechanisms; update guidance, details and specifications as appropriate; implement tracking/mapping tools; adopt/amend legal mechanisms as necessary.</li> <li>Continues to require GI outreach and training.</li> </ul>	No issues.	No issues.
C.3.j.i.(2) Green Infrastructure Planning and Implementation - Numeric	<p>Sets Permittee GI retrofit targets to 3 acres treated per 50,000 population (prorated, maximum 10 acres). Can meet at a countywide level. Projects given "final discretionary approval" after July 1, 2021, may be counted towards the Provision C.3.j.i.(2) retrofit requirements.</p> <p>Each permittee must implement or "cause to be implemented" one project, with a minimum of 0.2 acres treated (can contribute to construction &amp; O&amp;M of a regional project)</p> <p>Regulated and GI projects that go beyond requirements in C.3.d can be counted toward the numeric target.</p> <p>Projects constructed or funded by end of permit term (between Jan. 1, 2021 and June 30, 2027), including road reconstruction projects, count toward target</p> <p>Projects can also be used to meet C.11/12 requirements if those criteria are met</p> <p>Allows alternative GI implementation approach (pilot projects) to be proposed by rural jurisdictions</p> <p>Permittees with "reach" ordinances can get 25% credit towards GI targets for regulating non-regulated projects</p>	<p>The Tentative Order specifies a GI greened acres retrofit target for San Mateo County Permittees of approximately 46 acres at the countywide scale during the permit term. However, the Fact Sheet recognizes that on a countywide basis the Orange Memorial Park regional stormwater capture project will provide adequate credit to meet the GI retrofit requirements. This demonstrates the considerable potential of collaborative regional-scale multi-benefit stormwater capture projects to provide cost-effective stormwater management consistent with MRP requirements. Need to allow more flexibility in the MRP regarding the placement and treatment configurations of regional projects to get maximum credit for "greened acres". More clarity needed as to how regional projects count toward the GI targets and what represents a "substantial contribution". Not acceptable that no projects constructed under the "no missed opportunities" provision of MRP 2.0 will be counted; does not give credit to early implementers or long-range CIP commitments. "Final discretionary approval" does not really apply to public projects, so hard to define. "No missed opportunities" requirement no longer makes any sense.</p>	<p>Allow permittees more flexibility for GI implementation, such as requiring GI retrofits in ROW along frontage, in lieu of other requirements like lowering thresholds and regulating road reconstruction projects. Request that, with demonstrated cause (e.g. lack of infiltration feasibility, lack of available demand for non-potable use, significantly constrained space, or other substantial constraints), Permittees be allowed to claim green infrastructure numeric implementation credit for the impervious surface retrofits via regional projects that achieve multiple benefits, such as pollutant load reduction, peak flow and flood reduction, water supply, and/or climate resiliency, and use media filtration as a treatment measure for some or all of the stormwater managed (see specific language changes in Attachment 3). Support the opportunity to work with Water Board staff in the Technical Working Group and request that this process be used to create a more equitable and achievable set of longer term GI targets that allow recognition of GI projects completed by municipalities to date.</p>
C.3.j.ii.(2) Green Infrastructure Planning and Implementation - Long-Term Green Infrastructure Implementation	Allows Permittees to form a Technical Working Group (TWG) to discuss long-term GI goals and submit a report of recommendations.	No issues.	No issues. Support this approach.
C.3.j.iii Green Infrastructure Planning and Implementation - No Missed Opportunities	Continues "no missed opportunities" requirement to review CIP lists for projects with GI potential and submit list of projects with GI potential in annual reports.	Unclear if this is in addition to the GI implementation requirements, or a process that can be used to identify potential GSI retrofits.	Delete this section, since it is no longer relevant with the GI numeric targets.
C.3.j.v.(1) Green Infrastructure Planning and Implementation - Tracking and Mapping Tools	Adds language stating tracking and mapping tools should inform issues such as asset management, life cycle costs, O&M frequency and "beneficial design changes". Contains more specific details as to what needs to be included in the tracking tools and requires tools to be completed by 2023 Annual Report. Specifies what information must be available to the public, and that any other information must be available to Water Board staff upon request.	Requires that 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.	The countywide tracking and mapping tools will not necessarily be used by Permittees for asset management, cost, and design information, etc. This language should be revised to allow flexibility for Permittees to comply using other tools if desired and appropriate (see requested changes in Attachment 3).
C.3.j.v.(2) & (3) Green Infrastructure Planning and Implementation - Reporting	<p>With the 2026 Annual Reports, Permittees shall provide a summary of lessons learned to-date with regard to [GI Plan implementation], 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.</p> <p>"Rural" Permittees can submit a proposal for use of alternative GI techniques by the 2023 AR.</p> <p>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) with the 2023 Annual Report, subject to Executive Officer approval.</p>	Major reporting requirement.	Overall, reporting requirements for C.3 have increased, although WB staff and permittees had agreed on a goal to reduce reporting throughout the permit.

C.4 Industrial and Commercial Site Controls

11/16/2021

Subprovision	Description of Change from MRP 2.0 to MRP 3.0 (text change in TO in red)	Key Issues/Concerns	Response/Recommendation
C.4.b. Business Inspection Plan – ii. Implementation Level	Added the following: <u>“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.”</u>	The Provision should not specifically state how a Permittee must meet the requirement to identify new businesses. This language should be placed in the Fact Sheet.	Delete from Permit Provision and move to the Fact Sheet.
C.4.b. Business Inspection Plan – ii. Implementation Level	Added fueling areas to the list of functions that would mean a business is included in the Inspection Plan:  (a) Sites <del>that include</del> <u>the following types of functions or facilities</u> that may <del>produce</del> be sources of pollutants when exposed to stormwater <del>include, but are not limited to:</del> <ul style="list-style-type: none"> <li>• Outdoor process and manufacturing areas</li> <li>• Outdoor material storage areas</li> <li>• Outdoor waste storage, <u>handling</u>, and disposal areas</li> <li>• Outdoor vehicle and equipment storage and maintenance areas</li> <li>• Outdoor wash areas</li> <li>• Outdoor drainage from indoor areas</li> <li>• <u>Fueling Areas</u></li> <li>• Rooftop equipment</li> <li>• Other sources determined by the Permittee or Water Board as reasonably likely to contribute to pollution of stormwater runoff.</li> </ul>	The addition of fueling areas will lead to additional businesses being added to Business Inspection Plans. This is an increase in requirements and new addition to the Permit with no rationale provided in the Fact Sheet for the need to include this category.	Delete fueling areas from the list or provide a rationale in the Fact Sheet for this addition.
C.4.b. Business Inspection Plan – ii. Implementation Level	Added “restaurants and other food service businesses” and “Supermarkets or large grocery stores with outdoor waste storage or cardboard compacting areas” to the list of businesses that must be included in the Inspection Plan.	Most (if not all) Permittees have restaurants identified in their Business Inspection Plans. One of the reasons restaurants are included is because of the grease handling and storage (i.e. waste storage function). However, “other food service businesses” is too general and could lead to the incorporation of a significant number of other businesses that do not have a reasonable likelihood to be sources of pollutants, such as an ice cream shops, coffee shops that do not serve any food, places that only serve prepackaged food, etc. This would be overly burdensome to municipal inspection programs with no likely additional water quality benefit.  It is unclear why Supermarkets or large grocery stores with outdoor waste storage or cardboard compacting areas were added to the list. There is no supporting reason provided in the Fact Sheet for these additional business categories. Note that outdoor waste storage, handling, and disposal areas are already included in the type of functions that Permittees evaluate for including businesses in the Business Inspection Plans.	Revise as follows: Restaurants <del>and other food service businesses;</del>
C.4.b. Business Inspection Plan – iii. Reporting	Added the following reporting requirement:  <u>(1) Permittees shall include the following information in the 2023 Annual Report:</u>  <u>A brief description of how the 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.</u>	This is an increase in reporting requirements and duplicative of SB 205 requirements. Overall, reporting requirements for C.4 have increased, although WB staff and permittees had agreed on a goal to reduce reporting throughout the permit.	Delete new reporting requirements.
C.4.c. Enforcement Response Plan – ii. Implementation Level	Revisions to (2) Enforcement Tools and Field Scenarios - To the example list of potential discharges added “lack of emergency response plans”	Emergency response plans are regulatory reports required for businesses by other regulations (e.g. hazardous materials regulations, state emergency preparedness, etc.). Stormwater inspectors inspect businesses for compliance with local stormwater ordinances which require appropriate BMPs but do not require emergency response plans. These plans should be reviewed by the appropriate agencies requiring their completion (e.g. Fire Departments, CUPA, etc.) to avoid inconsistent and duplicative requirements.	Delete lack of emergency response plans from list of examples.
C.4.c. Enforcement Response Plan – ii. Implementation Level	In (3) Timely Correction of Potential and Actual Non-stormwater Discharges revised the following sentence:  “Corrective actions can be temporary, and mMore time can be allowed for permanent corrective actions.”	By breaking up this sentence it implies any corrective action can be temporary. While the intent is to allow a facility to implement a temporary corrective action while a permanent corrective action is being implemented over a longer time schedule.	Keep original text: Corrective actions can be temporary <del>→M and</del> more time can be allowed for permanent corrective actions.
C.4.d Inspections – iii Reporting	Additional Annual Reporting requirements were added:  <u>(b) Number of sites with enforcement actions at each enforcement level.</u>	The reporting requirements now include <ul style="list-style-type: none"> <li>• the number of enforcement actions (<i>current requirement</i>) <b>and</b></li> <li>• the number of <b>sites</b> with enforcement actions (<i>new requirement</i>).</li> </ul> MRP 1.0 had both the number of enforcement actions issued and percentage of sites with enforcement actions. The RWB reduced these reporting requirements in MRP 2.0. It is not clear why these reporting requirements are being put back into MRP 3.0. Overall the MRP 3.0 reporting requirements are being increased and it is unclear the benefit of the additional information.	Delete new reporting requirements.

Subprovision	Description of Change from MRP 2.0 to MRP 3.0 (text change in TO in red)	Key Issues/Concerns	Response/Recommendation
C.4.d Inspections – iii Reporting	(c) <del>Number of sites with enforcement actions unresolved after 10 days or a reasonable time (and no compliance schedule);</del>	<p>The reporting requirements now include</p> <ul style="list-style-type: none"> <li>the number of enforcement actions not resolved within 10 working days or otherwise deemed resolved in a longer, but still timely manner (<i>current requirement</i>) and</li> <li>the number of <b>sites</b> with enforcement actions unresolved after 10 days or a reasonable time (and no compliance schedule) (<i>new requirement</i>).</li> </ul> <p>MRP 1.0 previously included reporting sites with enforcement actions but the RWB reduced these reporting requirements in MRP 2.0. It is not clear why these reporting requirements are being put back into MRP 3.0. Overall the MRP 3.0 reporting requirements are being increased and it is unclear the benefit of the additional information.</p> <p>The new reporting requirement includes identifying sites with enforcement actions "unresolved after 10 days or a reasonable time". The term "or otherwise deemed resolved in a longer, but still timely manner" is used in reporting requirement C.4.d.iii.(1)(f). Consistent terminology should be used throughout this Provision and other related Provisions (e.g. C.5 and C.6).</p> <p>The new reporting requirement includes identifying sites "with no compliance schedule". The term "compliance schedule" has a regulatory definition. The term "expected time frame for compliance" is used in C.4.c.ii.(2). Note that the documentation of the expected time frame for compliance is required when more than 10 business days for compliance is allowed by the Permittees. If Permittees allow more than 10 business days for compliance they must record a rationale and expected time frame for compliance. In these cases the enforcement action would be considered "otherwise deemed resolved in a longer, but still timely manner. Therefore, if consistent terminology is used the requirement should be to report "number of sites with enforcement actions not fully resolved within 10 working days, or otherwise deemed resolved in a longer, but still timely manner".</p>	Delete new reporting requirement
C.4.d Inspections – iii Reporting	(d) <del>The highest level of enforcement implemented, including a list with the name and address of sites in the highest level of enforcement;</del>	<p>The requirement for the "highest level of enforcement implemented, including a list with the name and address of sites in the highest level of enforcement" is unclear. If a Permittee only issues 12 verbal warnings will they need to list the names/address of those sites since this is the highest level of enforcement implemented for the reporting FY. If a Permittee issues 12 verbal warnings and 1 notice of violation will they need to list the name/address of just the business that received the notice of violation. Therefore, the RWB will be receiving a list of businesses from different enforcement levels from each Permittee. If the intent is to list any business that reaches the Permittee's highest level of enforcement (e.g. legal action) the text should be revised to reflect that intent. In addition, a business that receives a higher level enforcement action may not be a problematic business. It may be that the type of discharge warranted a higher level enforcement but the business responded quickly when educated about the problem.</p> <p>RWB staff indicated the intent is to identify problem facilities. However, the majority of businesses inspected by Permittees are small commercial businesses. Is it the intent of RWB to provide additional regulatory scrutiny to these small commercial businesses (e.g. a vehicle maintenance shop that took additional time to provide a cover for a waste bin). If the RWB wants to review the specific businesses that receive enforcement actions, and better understand the underlying issues, they can request the inspection data tracking tables for this level of detail.</p>	Delete new reporting requirement
C.4.d Inspections – iii Reporting	(f) Number of enforcement actions <del>or, including</del> discrete number of potential and actual discharges fully resolved within 10 working days or otherwise deemed resolved in a longer, but still timely manner;	<p>The revision would mean an increase in reporting and tracking requirements. Very few Permittees electronically track resolution for each potential and actual discharge identified in a manner that would allow for easy data summaries. Most Permittees track resolution by enforcement actions. For example, a Permittee finds three issues at a site during an inspection and issues one enforcement action for the site. If after 10 working days all three issues are resolved the enforcement action is considered resolved. However, if only two of the three issues are resolved the enforcement action is not considered resolved. Requiring <u>all</u> Permittees to electronically track the discrete number of potential and actual discharges is a significant level of effort.</p> <p>Recommend this be revised to be consistent with Provision C.6 reporting which allows flexibility for Permittees to report resolutions by enforcement actions or by discrete actual/potential discharges. In Provision C.6 a footnote specifies that Permittees who track by discrete potential/actual discharges, report by discrete discharges and Permittees who track by enforcement actions shall report by enforcement actions.</p> <p>Note there is another reporting requiring to report frequency of potential and actual non-stormwater discharges by business category. So a summary of potential/actual discharges is still being reporting in Annual Reports.</p>	<p>Number of enforcement actions <del>including</del> discrete number of potential and actual discharges fully resolved within 10 <del>working</del> business days or otherwise deemed resolved in a longer, but still timely manner.</p> <p>Footnote (1) <del>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.</del></p>
C.4.d Inspections – iii Reporting	(h) <del>A list of facilities that are required to have coverage under the Industrial General Permit, but have not filed for coverage. 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 list shall include the date when the facility was first identified and the date when it was most recently inspected or evaluated.</del>	<p>The information required for the list of facilities that may need coverage under the Industrial General Permit but have not filed for coverage has increased. Reporting the date the facility was <b>first</b> identified may be difficult since this information was not required to be tracked in previous Permits. It could be a significant amount of resources to review past inspection reports of the previous 10 years to identify when a facility was first reported to the RWB. RWB staff should have the dates facilities were previously reported since they have all of the previous Annual Reports from Permittees.</p> <p>In addition since this list is available upon request it should not be included under the Annual Report requirements. This should be identified as item C.4.d.iii.(2).</p>	Delete new requirement to identify date when facility was first identified. Revise section to be C.4.d.iii.(2).
C.4.e. Staff Training – iii Reporting	<p>Added Annual Reporting requirements:</p> <p>(3) <del>Total number of industrial and commercial site inspectors performing inspections for the Permittee;</del></p> <p>(4) <del>Total number of illicit discharge detection and elimination inspectors performing inspections for the Permittee;</del></p> <p>(5) <del>Total number and percentage of industrial and commercial site inspectors attending training; and</del></p> <p>(6) <del>Total number and percentage of illicit discharge detection and elimination inspectors attending training.</del></p>	This is an increase in reporting requirements. Overall, reporting requirements for C.4 have increased, although WB staff and permittees had agreed on a goal to reduce reporting throughout the permit.	Delete new reporting requirements.

C.4 Industrial and Commercial Site Controls

11/16/2021

Subprovision	Description of Change from MRP 2.0 to MRP 3.0 (text change in TO in red)	Key Issues/Concerns	Response/Recommendation
Fact Sheet	There is no rationale provided in the Fact Sheet for the new reporting requirement to describe how Permittees are reviewing and approving business licenses.	There is an increase in reporting requirements with no rationale provided for the need for this information.	Provide rationale for increased reporting requirements
Fact Sheet	There is no rationale provided in the Fact Sheet for the increase in reporting requirements related to reporting individual potential/actual discharges resolved, sites at each enforcement action level, number of sites with enforcement actions unresolved in a timely manner and highest level of enforcement implemented including business names/addresses.	There is an increase in reporting requirements from MRP 2.0 to MRP 3.0 with no rationale provided for the need for this information.	Provide rationale for increased reporting requirements

C.5 Illicit Discharge Detection and Elimination

11/16/2021

Subprovision	Description of Change from MRP 2.0 to MRP 3.0 (text change in TO in red)	Key Issues/Concerns	Response/Recommendation
C.5.a Legal Authority – ii. Implementation Level	(4) <del>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.</del>	Generally Permittees want discretion to issue enforcement actions to any or all parties involved. However, Permittees must discuss with legal counsel. Suggest revising wording to provide more flexibility by replacing "and" with "or".	Revise (4): Permittees shall have adequate legal authority to hold mobile businesses, and the businesses, property managers, property owners, <del>and</del> or 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 – ii Implementation Level	Revisions to (2) Enforcement Tools and Field Scenarios - To the example list of potential discharges added " <del>lack of emergency response plans</del> "	Emergency response plans are regulatory reports required for businesses by other regulations (e.g. hazardous materials regulations, state emergency preparedness, etc.). Stormwater inspectors inspect businesses for compliance with local stormwater ordinances which require appropriate BMPs but do not require emergency response plans. These plans should be reviewed by the appropriate agencies requiring their completion (e.g. Fire Departments, CUPA, etc.) to avoid inconsistent and duplicative requirements.	Delete lack of emergency response plans from list of examples.
C.5.b Enforcement Response Plan – ii Implementation Level	In (3) Timely Correction of Potential and Actual Non-stormwater Discharges revised the following sentence:  "Corrective actions can be temporary, <del>and no</del> more time can be allowed for permanent corrective actions."	By breaking up this sentence it implies any corrective action can be temporary. While the intent is to allow a facility to implement a temporary corrective action while a permanent corrective action is being implemented over a longer time schedule.	Keep original text: Corrective actions can be temporary. <del>And</del> more time can be allowed for permanent corrective actions.
C.5.c Spill Dumping, and Complaint Response Program – ii. Implementation Level	(2) Each Permittee shall publicize the phone number <del>on its website, and, if used, a web reporting address or link to a web-based reporting application, if used, to internal Permittee's staff and the public. The Permittee's website shall be one of the places the central contact point is publicized. The Permittee's website shall be updated with the central contact point to report spills and dumping by June 30, 2016. The contact information on the permittee's website shall be kept up-to-date, and updated at least annually.</del> This central contact point shall be readily searchable and accessible on the Permittee's website.	The revisions makes the Permittee's website the only place the central contact phone number needs to be publicized. Permittees may also publicize the phone number on outreach material and Countywide Program websites.  Note the reporting requirements in C.5.c.iii.(3) still contain language asking for a discussion of how the central contact point is being "publicized to the Permittee's staff and the public" even though this wording was deleted from this implementation section.	Revise as follows: Each Permittee shall publicize the phone number <del>on its website,</del> and, if used, a web reporting address or link to a web-based reporting application <del>to internal Permittee's staff and the public. The Permittee's website shall be one of the places the central contact point is publicized.</del> The contact information on the permittee's website shall be kept up-to-date, and updated, <del>as needed,</del> at least annually. This central contact point shall be readily searchable and accessible on the Permittee's website.
C.5.c Spill Dumping, and Complaint Response Program – ii. Implementation Level	Added time frame for illicit discharges to be investigated: (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. <del>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.</del>	There may be instances when it is reasonable for the start of an investigation to take longer than 3 business days. In these few number of cases there should be an option to document a rationale.	Add the following text: 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, <del>unless an appropriate rationale is documented.</del>
C.5.d Tracking and Case Follow-up – ii Implementation Level	Additions to information the electronic data tracking system must contain:  (2) Investigation information:  (a) Date and time <del>investigation of spill or discharge</del> started,	The implementation level specifies the records are for tracking "water quality spills, dumping, and complaints that might discharge into the MS4". Therefore, this clarification is not needed.	Delete added language
C.5.d Tracking and Case Follow-up – ii Implementation Level	Additions to information the electronic data tracking system must contain:  (2) Investigation information:  <del>(b) Date and time response to illegal dumping report or complaint started.</del>	The stated purpose of this provision is to control illicit discharges. Illegal dumping is not necessarily an illicit discharge. For example, illegal dumping of mattresses, furniture, etc. would not lead to a discharge to receiving water. This type of illegal dumping is typically handled and tracked by other programs and departments and should not be tracked in the illicit discharge tracking system. This is duplicative of requirements in Provision C.10 related to trash hot spot cleanups.  If illegal dumping is required to be tracked in the illicit discharge tracking system it would be a significant amount of work for Permittees to coordinate with other departments and update their electronic tracking system.  The implementation level specifies the records are for tracking "water quality spills, dumping, and complaints that might discharge into the MS4". Therefore, this additional tracking requirement is outside of the scope of this Provision.	Delete added language
C.5.d Tracking and Case Follow-up – ii Implementation Level	Additions to information the electronic data tracking system must contain:  (2) Investigation information:  <del>(c) Agency, department, or other entities responding to the complaint or discharge.</del>	The requirement should be to only track other agencies if they oversee the resolution.	Revise as follows: (c) Agency, department, or other entities responding to the complaint or discharge <del>if Permittee does not otherwise track resolution of discharge in their jurisdiction;</del>
C.5.d Tracking and Case Follow-up – ii Implementation Level	Additions to information the electronic data tracking system must contain:  (2) Investigation information:  (e) <del>Identify the</del> entered storm drain and/or receiving water; (f) Date and time abated; and (g) Type of enforcement based on the Permittee's ERP.	This would require a significant amount of effort to revise electronic data tracking systems to identify the specific storm drain or specific receiving water instead of a yes/no response if it entered a storm drain or receiving water.	Revise: (e) <del>Identify the</del> entered storm drain and/or receiving water;
C.5.d Tracking and Case Follow-up – ii Implementation Level	Additions to information the electronic data tracking system must contain:  <del>(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.</del>	The purpose of this Provision is to address "illicit discharges not otherwise controlled under provisions C.4 ..., C.6 ..., and C.17 – Discharges Associated with Unsheltered Homeless Populations". Therefore, tracking discharges associated with unsheltered populations should not be included in Provision C.5.	Delete added language.

C.5 Illicit Discharge Detection and Elimination

11/16/2021

Subprovision	Description of Change from MRP 2.0 to MRP 3.0 (text change in TO in red)	Key Issues/Concerns	Response/Recommendation
C.5.d Tracking and Case Follow-up – iii Reporting	<p>New reporting requirements:  <del>(4) Copies of the phone trees and contact lists required in 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.</del></p>	<p>This new requirement is listed under the Annual Report. To avoid confusion renumber this Reporting section to separate the Annual Reporting requirements from the 2026 reporting requirement and the requirement to make materials available to the RWB.</p> <p>This is an increase in data tracking requirements. Overall, data tracking and reporting requirements for C.5 have increased, although WB staff and permittees had agreed on a goal to reduce reporting throughout the permit.</p>	<p>Revise as illustrated below:                      iii. Reporting –                      (1) Permittees shall provide the following information in the Annual Report:  <del>(4)</del> Number of discharges reported;  <del>(2)</del> Number of discharges reaching storm drains and/or receiving waters; and  <del>(5)</del> Number of discharges resolved in a timely manner.                      (4) Copies of the phone trees and contact lists required in 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) 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.</p>
C.5.e Control of Mobile Sources – ii Implementation Level	<p>A new mobile business category was added:                      (a) Implementation of minimum standards and BMPs for each of the various types of mobile businesses such as, including, but not limited to, automobile washing, vehicle fueling, power washing, steam cleaning, <del>graffiti removal</del>, and carpet cleaning</p>	<p>Graffiti removal mobile businesses that utilize power washing are already included in the power washing category.</p>	<p>Delete graffiti removal from list of mobile business categories.</p>
C.5.e Control of Mobile Sources – ii Implementation Level	<p><del>(c) Regularly updating and maintaining a mobile business inventory at least annually.</del></p>	<p>This addition of specifying mobile business inventories be updated annually is in conflict with the Fact Sheet statement that this Permit shifts the enforcement approach focus from <b>developing an inventory of mobile businesses</b> and direct observation of mobile business activities to reiterating that the entity hiring the mobile business and the mobile business themselves are responsible for any polluted discharge from the business or property." This revision to Permit language is requiring an increase in effort to update inventories.</p>	<p>Keep current language to "Regularly updating mobile business inventories".</p>
C.5.e Control of Mobile Sources – ii Implementation Level	<p>Deleted the "as needed".                      (e) Inspection of mobile businesses, <del>as needed</del>.</p>	<p>Currently mobile businesses are inspected in the illicit discharge program. Removing the text "as needed" implies a change to proactive inspections. There are many factors that make proactive inspections extremely difficult. Keep the text of "as needed" or "when notified of issue through illicit discharge program".</p> <p>In addition this revision is in conflict with the Fact Sheet statement that this Permit shifts the enforcement approach focus from developing an inventory of mobile businesses and <b>direct observation of mobile business activities</b> to reiterating that the entity hiring the mobile business and the mobile business themselves are responsible for any polluted discharge from the business or property."</p>	<p>Keep current language "inspection of mobile businesses, as needed."</p>
C.5.e Control of Mobile Sources – iii Reporting	<p>Change in the reporting requirements for the 2026 Annual Report:                      (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;</p>	<p>These are duplicative of new Annual Reporting requirements to report number of inspections and summary of enforcement actions taken. These requirements should be deleted from the 2026 Annual Report or the Annual Report requirements in C.5.e.iii.(2) should be deleted.</p>	<p>Delete added language</p>
C.5.e Control of Mobile Sources – iii Reporting	<p><del>(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.</del></p>	<p>This is an increase in reporting requirements and duplicative of reporting requirements in C.5.e.iii.(1)(c) and (d).</p> <p>Overall, reporting requirements for C.5 have increased, although WB staff and permittees had agreed on a goal to reduce reporting throughout the permit.</p>	<p>Delete language for Annual Reporting and retain reporting in 2026 Annual Report (C.5.e.iii.(1)).</p>
C.5.f MS4 Map	<p><b>Task Description</b> – Each Permittee shall make the map(s) of its MS4 available <del>to the public upon request</del>.</p>	<p>The added text of making the MS4 map available to the public "upon request" is in conflict with the requirements in C.5.f.ii.(1) to make MS4 maps publicly available and reporting requirement C.5.f.iii.(1) to discuss how Permittees make MS4 maps available to the public and how they publicize the availability of the MS4 maps.</p> <p>There are different reasons why a MS4 map should be made public. The level of detail needed for an MS4 map is different depending on the target audience.</p>	<p>Separate the requirement to "make MS4 maps available to the general public and publicize availability" from the requirement to "update storm drain system maps with more detailed information".</p> <p><u>Task Description – Each Permittee shall have MS4 map(s) of the storm sewer system in their jurisdiction. MS4 maps of major outfalls shall be made available to the public.</u></p>

Subprovision	Description of Change from MRP 2.0 to MRP 3.0 (text change in TO in red)	Key Issues/Concerns	Response/Recommendation
C.5.f MS4 Map	<p>Task Description - the following was added to the task description:</p> <p><u>Permittees shall identify information missing from the current MS4 maps and develop a plan and schedule to compile additional storm sewer system information, including component locations, size or specifications, materials of construction, and condition. This information will be used to update Permittee maps and databases.</u></p>	<p>Overall this Provision is poorly written with conflicting requirements, references to specific Oakland Museum maps not used by all Permittees to meet requirements, and unclear intent of MS4 map uses and target audiences.</p> <p>The added text of making the MS4 map available to the public "upon request" is in conflict with the requirements in C.5.f.ii.(1) to make MS4 maps publicly available and reporting requirement C.5.f.iii.(1) to discuss how Permittees make MS4 maps available to the public and how they publicize the availability of the MS4 maps.</p> <p>The requirement to have a map/database of storm sewer system "component" locations, size, specifications, materials and condition is way beyond what is required by 40 CFR 122.26(d)(1)(iii)(B)(1) and 40 CFR 122.26(d)(1)(iii)(B)(5) to identify the location of any major outfall that discharges to waters of the United States, as well as the location of major structural controls for stormwater discharges. A major outfall has a regulatory definition of any outfall that discharges from a single pipe with an inside diameter of 36 inches or more or its equivalent (discharge from a single conveyance other than a circular pipe which is associated with a drainage area of more than 50 acres) or; for areas zoned for industrial activities, any pipe with a diameter of 12 inches or more or its equivalent (discharge from other than a circular pipe associated with a drainage area of 2 acres or more). These 40 CFR 122 requirements are cited in the Fact Sheet.</p> <p>There are different reasons why a MS4 map should be made public. The level of detail needed for an MS4 map is also different depending on the target audience and use of the MS4 map. For example MS4 maps that meet the 40 CFR 122 requirements above, only indicating the major outfalls and structural controls, are suitable for educating the general public on stormwater and stormwater pollution prevention outreach messages. It would be beneficial to publicize the availability of these types of MS4 maps. However, it is unclear why maps with a greater level of detail need to be provided to the public. In fact, details of public utilities are often specifically not made available to the general public.</p> <p>It is unclear in this Provision, given the new requirements, if there are different MS4 maps required for different purposes.</p>	<p>Reduce requirements for storm drain system map updates to eliminate inclusion of materials of construction and condition.</p> <p><u>Permittees shall maintain current MS4 maps for internal use. For each Permittee jurisdiction, the internal map(s) shall have information deemed necessary by the Permittee to assist with illicit discharge investigations and maintenance of storm sewer system such as component locations, size, and identifying types of components (e.g. open channels or underground pipes).</u></p>
C.5.f MS4 Map – ii. Implementation Level	<p>(1) Current MS4 Maps – Permittees shall make 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.</p>	<p>This is same wording as current Permit. However, this text is now in conflict with new requirement in C.5.f.ii.(2)(b) "Identify and make available upon 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."</p>	<p>(1) <u>Current MS4 Maps of major outfalls</u> – Permittees shall make maps of the MS4 <u>major outfalls</u> 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 staffed counter or web-accessible maps. The MS4 map availability shall be publicized through Permittee directories and web pages.</p>
C.5.f MS4 Map – ii Implementation Level	<p>(2) <u>Updates to MS4 Maps - During the current Permit term, each Permittee shall complete the following:</u></p> <p>(a) <u>Determine MS4 information missing from the Oakland Museum watershed maps, existing MS4 maps or drawings in the Permittee files, or other storm sewer system information databases.</u></p>	<p>Not every Permittee uses the Oakland Museum maps to meet the current Permit requirement to make maps of the MS4 available to the public. All references to the Oakland Museum maps should be removed.</p> <p>It is also not clear what "missing information" refers to. The task description refers to "component locations, size or specifications, materials of construction, and condition".</p> <p>The Fact Sheet states "To effectively manage and respond to illicit discharges, as well as potential impacts from conditionally exempted discharges like emergency firefighting discharges, it is essential for Permittees to understand their current MS4 system layout and conditions, as well as how discharge sources are connected to outfalls that discharge to their system." However, specifications, materials of construction and condition are excessive data requirements and not needed for effective illicit discharge detection and elimination. A Permittee may need a MS4 map with more detail than 40 CFR 122 requires but this map would not need to be made available to the public.</p> <p>The Fact Sheet references three other Permits as examples of a requirement to keep MS4 system maps up to date by submitting annual revisions or verifying that no modifications to the system occurred during the annual reporting period. The requirement to keep MS4 system maps up to date is reasonable. We would support language that requires MS4 system maps to be updated, as needed. However, this requirement should be separate from making maps publicly available and including data other than component type and location.</p>	<p>Delete references to Oakland Museum maps. Implementation level should be limited to updating location and size of storm drains.</p> <p>Reduce requirements for storm drain system map updates to eliminate inclusion of materials of construction and condition.</p>
C.5.f MS4 Map – ii Implementation Level	<p>(b) <u>Identify and make available upon 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.</u></p>	<p>Not every Permittee uses the Oakland Museum maps to meet the current Permit requirement to make maps of the MS4 available to the public. All references to the Oakland Museum maps should be removed.</p> <p>The assumption is that "other stormwater controls" refers to 40 CFR 122.26(d)(1)(iii)(B)(5) requirement for location of "major structural controls for stormwater discharge (retention basins, detention basins, major infiltration devices, etc.). For MS4 maps required under this Provision the "other stormwater controls" should be limited to municipal owned major structural controls and not individual low impact development or green stormwater infrastructure. These systems are discussed in Provision C.21 Asset Management.</p> <p>This requirement should simply state that the MS4 maps made publicly available during the previous Permit term should be updated, as needed. As stated above, Permittees can submit annual revisions or verify that no modifications to the system occurred during the annual reporting period. This annual update requirement should only be applicable to the maps required by 40 CFR 122.26(d)(1)(iii)(B)(1) and 40 CFR 122.26(d)(1)(iii)(B)(5) of major outfalls and major structural controls.</p> <p>Delete requirement to make detailed maps available to the general public. Providing detailed utility maps to the general public may be a security concern.</p>	<p>Delete references to Oakland Museum maps.</p>

C.5 Illicit Discharge Detection and Elimination

11/16/2021

Subprovision	Description of Change from MRP 2.0 to MRP 3.0 (text change in TO in red)	Key Issues/Concerns	Response/Recommendation
C.5.f MS4 Map – ii Implementation Level	<p><u>(1) Develop a plan and schedule for updating the Permittee's storm sewer system information. Permittees or countywide storm water programs may work with the Oakland Museum of California to develop a plan and schedule for updating existing information, maps, drawings, and databases. These updates will include the identification of all storm sewer system component locations, size or specifications, materials of construction, and condition</u></p>	<p>Not every Permittee uses the Oakland Museum maps to meet the current Permit requirement to make maps of the MS4 available to the public. All references to the Oakland Museum maps should be removed.</p> <p>This requirement is in conflict with C.5.f.ii.(b) that states Permittees must make available maps of storm sewer system and other stormwater controls installed after publication of the Oakland Museum watershed maps since this only requires a Plan and Schedule to update the maps.</p> <p>The requirement to have a map/database of storm sewer system "component" locations, size, specifications, materials and condition is way beyond what is required by 40 CFR 122.26(d)(1)(ii)(B)(1) and 40 CFR 122.26(d)(1)(iii)(B)(5). The level of detail needed for an MS4 map is different depending on the target audience and use of the MS4 map. For example MS4 maps that meet the 40 CFR 122 requirements above, only indicating the major outfalls and structural controls, are suitable for educating the general public on stormwater and stormwater pollution prevention outreach messages. A MS4 map with smaller storm drain system pipes may be helpful for illicit discharge inspectors to investigate illicit discharges, and contain and clean up discharges. However, it is not clear how specific details on system component specifications, materials of construction and condition would assist with illicit discharges.</p> <p>The Fact Sheet includes examples of the City of Salinas, City of Long Beach and Los Angeles County MS4 mapping requirements. However, these requirements are still limited in scope to minimum component sizes (e.g. 8 inches diameter, 18 inches diameter or 36 inches diameter storm drain conveyances) and identifying open channels vs underground pipes. Therefore, we request this new information being required in maps or databases for the storm drain system be limited in scope.</p>	<p><u>(1) Updates to MS4 Maps for internal use - Develop a plan and schedule for updating the Permittee's storm sewer system information, as deemed necessary by the Permittee. The updated storm sewer system information may be used internally by Permittees for illicit discharge investigations and cleanup and maintaining the MS4. These internal maps and/or information systems may include component locations, size, and type of component (e.g., open channels or underground pipes). Permittees shall identify in the plan the information that is available and the minimum component size(s) documented.</u></p>
C.5.f MS4 Map - Reporting	<p>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.</p>	<p>This is same wording as current Permit. However, this text is now in conflict with new requirements make maps "available upon request". There should be a distinction between the types of maps that must be made publicly available and the maps with more component information that are now being required.</p>	<p><u>(1) In the 2024 Annual Report, Permittees shall discuss how they make MS4 maps of major outfalls available to the public and how they publicize the availability of the MS4 maps.</u></p>
C.5.f MS4 Map - Reporting	<p>New Reporting requirement related to storm drain system assets.</p> <p><u>(2) Submit a plan and schedule with the 2026 Annual Report to update existing storm sewer system information as described above.</u></p>	<p>There is no issue for submitting a plan and schedule to updating existing storm sewer system information. This issue, as discussed above, is the extent of information being requested.</p>	<p><u>(2) Submit a plan and schedule with the 2026 Annual Report to update existing storm sewer information for internal use with available data. These maps may be made available to the Regional Water Board upon request.</u></p>
Fact Sheet	<p>Provision C.5.e includes new text "This Permit shifts the enforcement approach focus from developing an inventory of mobile businesses and direct observation of mobile business activities to reiterating that the entity hiring the mobile business and the mobile business themselves are responsible for any polluted discharge from the business or property."</p>	<p>This statement is not consistent with the increase in requirements related mobile business inventories and inspections.</p>	<p>Remove additional requirements related to the inventory and inspections to be consistent with this statement of the RWB's intent.</p>

C.6 Construction Site Control

11/16/2021

Subprovision	Description of Change from MRP 2.0 to MRP 3.0 (text change in TO in red)	Key Issues/Concerns	Response/Recommendation
C.6.b Enforcement Response Plan – ii Implementation Level	Revisions to (2) Enforcement Tools and Field Scenarios - To the example list of potential discharges added " <del>lack of emergency response plans</del> "	Emergency response plans are regulatory reports required for businesses by other regulations (e.g. hazardous materials regulations, state emergency preparedness, etc.). Stormwater inspectors inspect businesses for compliance with local stormwater ordinances which require appropriate BMPs but do not require emergency response plans. These plans should be reviewed by the appropriate agencies requiring their completion (e.g. Fire Departments, CUPA, etc.) to avoid inconsistent and duplicative requirements.	Delete lack of emergency response plans from list of examples.
C.6.b Enforcement Response Plan – ii Implementation Level	In (3) Timely Correction of Potential and Actual Non-stormwater Discharges revised the following sentence:  "Corrective actions can be temporary_ <del>and</del> <del>no</del> <del>more</del> time can be allowed for permanent corrective actions."	By breaking up this sentence it implies any corrective action can be temporary. While the intent is to allow a facility to implement a temporary corrective action while a permanent corrective action is being implemented over a longer time schedule.	Keep original text: Corrective actions can be temporary <del>and</del> <del>no</del> <del>more</del> time can be allowed for permanent corrective actions.
C.6.e Inspections – ii Implementation Level	New electronic data tracking requirement:  (d) <del>The department, agency, or other entity performing the inspection.</del>	No issues identified. However, this is an increase in reporting requirements. Overall, reporting requirements for C.4 have increased, although WB staff and permittees had agreed on a goal to reduce reporting throughout the permit.	There is general concern with the overall increase in reporting requirements.
C.6.e Inspections – iii Reporting	New or revised Annual Reporting requirements:  (a) <del>Total number of construction sites requiring inspections during at least part of the Permit year.</del>  (g) Number of illicit discharges, actual and <del>those inferred through evidence suspected</del> of sediment or other construction-related materials;	Evidence of illicit discharges is a clearer statement of why it is suspected that there was an illicit discharge. Recommend not changing wording.	Revise the language as follows: (g) Number of illicit discharges, actual and <del>those inferred through evidence suspected</del> , of sediment or other construction-related materials;
C.6.f Staff Training – iii Reporting	Permittees shall include in each Annual Report the following information: (1) Dates of training; (2) Training topics covered; (3) <del>total number of municipal and non-municipal inspectors,</del> and (4) the number of <del>municipal and non-municipal</del> inspectors attending each training. If there was no training in that year, so state.	This is an increase in reporting requirements. Consultants that perform these inspections do so on behalf of the municipality. It is unclear why there needs to be a distinction.	There is general concern with the overall increase in reporting requirements.
Fact Sheet Provision C.6.c Best Management Practices Categories	Revised text: This section <del>now</del> requires all Permittees to require all construction sites to have year-round <del>or</del> seasonally appropriate effective BMPs in the following six categories...	It is misleading to add "now" to this Provision since the requirements were in previous permits. Also recommend not adding "or" since the intent is sites use BMPs all year long. Which BMPs are used throughout the year may be different (i.e. seasonally appropriate).	Keep original text: This section requires all Permittees to require all construction sites to have year-round seasonally appropriate effective BMPs in the following six categories
Fact Sheet Provision C.6.c Best Management Practices Categories	Because sites' terrain, soil type, soil disturbance, and proximity to waterbodies differ. It would be unduly prescriptive and inappropriate to require all sites to implement a specific set of BMPs.	text edit	Revise to: Because sites' terrain, soil type, soil disturbance, and proximity to waterbodies differ <del>it</del> would be unduly prescriptive and inappropriate to require all sites to implement a specific set of BMPs.

C.7 Public Information and Outreach

11/16/2021

Subprovision	Description of Change from MRP 2.0 to MRP 3.0 Tentative Order	Key Issues/Concerns	Response/Recommendation
C.7.a. Outreach Campaigns	Requires "timely evaluations to measure the effectiveness of the outreach campaigns. Effectiveness assessment/evaluation may be done regionally or countywide".	No issues.	None
	Reporting moved to Provision C.7.g.iii.(1)	No issues.	None
C.7.b. Stormwater Pollution Prevention Education	Removed requirement to report point of contact (or changes to point of contact) in each Annual Report. Reporting is required only in the 2023 Annual Report (Provision C.7.g.iii.(2))	No issues.	None
C.7.c. Public Outreach and Citizen Involvement Events	Reporting moved to Provision C.7.g.iii.(1)	No issues.	None
C.7.d.i. Watershed Stewardship Collaboration	Expanded types of activities related to watershed stewardship collaboration.	No issues.	None
	Reporting moved to Provision C.7.g.iii.(1)	No issues.	None
C.7.e. School-Age Children Outreach	Reporting moved to Provision C.7.g.iii.(1)	No issues.	None
C.7.f. Outreach to Municipal	Reporting moved to Provision C.7.g.iii.(3)	No issues.	None
C.7.g.i. Tracking and Reporting - Task Description	Requires Permittees to electronically track outreach efforts in a table or spreadsheet. The list of items that need to be tracked is described in the Admin Draft.	This is a new provision. Permittees will need to develop the tracking table.	None
C.7.g.i. Tracking and Reporting - Implementation	The table/spreadsheet is to be submitted to Water Board staff upon request.	No issues. However, this is an increase in reporting requirements.	None
C.7.g.iii. Tracking and Reporting - Reporting	(1) Requires Permittees or Countywide Programs to shall submit a table listing the number and types of outreach programs implemented during that Permit year. The table should be a cumulative table showing the number of each type of outreach campaigns or events occurring during each Permit year.	No issues.	None

C.8 Water Quality Monitoring

11/16/2021

Subprovision	Description of Change from MRP 2.0 to MRP 3.0 Tentative Order	Key Issues/Concerns	Response/Recommendation
C.8.a.i. Regional Collaboration	No change	Permittees are encouraged to assign tasks to the RMC, particularly reporting duties. However, with dissolution of BASMAA, it is challenging to develop regional reports.	
C.8.a.ii. Area-wide Stormwater Program	No change	No issues identified	N/A
C.8.a.iii. Third-party Monitoring	No change	No issues identified	N/A
C.8.b. Monitoring Protocols and Data Quality	No change	No issues identified	N/A
C.8.c. San Francisco Estuary Receiving Water Monitoring	No change	No issues identified	N/A
<b>C.8.d. Low Impact Development (LID) Monitoring</b>	<b>New requirement</b>	<b>See below</b>	
C.8.d.i. LID Monitoring Plans	New requirement	See below	
C.8.d.i.(1)(a) LID Monitoring Plans (Monitoring Questions addressed)	New requirement	This sub-provision implies that LID Monitoring Plans should address both management questions (MQs). Rather, it is more likely that monitoring plans will address one of two MQs.	Revise language to allow for studies that address just one MQ.
C.8.d.i.(1)(d) LID Monitoring Plans (Power Analysis)	New requirement	This sub-provision requires that a power analysis is conducted during development of the LID monitoring plan to ensure the number and frequency of sample events are sufficient to produce statistically valid monitoring results that will answer the MQs within a confidence level of 95% and a power level of 80%. Several concerns related to power analysis are described in the rows below.	As directed by the Water Board in the Tentative Order workshop, remove the requirement for a power analysis in developing the LID monitoring plan.
C.8.d.i.(1)(d) LID Monitoring Plans (Power Analysis)	New requirement	A power analysis, like most statistical tests, is dependent on appropriate statistical assumptions (e.g., normally distributed data). We do not know what the data sets look like yet because monitoring has not begun. However, these assumptions may not be met in environmental studies which are notorious for non-normality and spatial-temporal dependency due to responses to climate conditions. Therefore, power analysis is likely not appropriate for LID Monitoring studies.	As directed by the Water Board in the Tentative Order workshop, remove the requirement for a power analysis in developing the LID monitoring plan.
C.8.d.i.(1)(d) LID Monitoring Plans (Power Analysis)	New requirement	The permit provides a minimum number of samples, so it is unclear how the EO would respond to a LID Monitoring Plan that meets the minimum number of samples from the permit but does not meet the number of samples suggested by the power analysis.	As directed by the Water Board in the Tentative Order workshop, remove the requirement for a power analysis in developing the LID monitoring plan.
C.8.d.i.(1)(d) LID Monitoring Plans (Power Analysis)	New requirement	Power analysis can be a useful tool to estimate sample sizes needed for detecting trends over time in long-term monitoring programs of many years (10 or 20 years). However, the LID Monitoring studies conducted during MRP 3.0 are likely too short (less than five years) to detect trends, especially considering that precipitation conditions during the permit term may not represent long-term conditions. Therefore, power analysis is not likely to help the Programs develop useful LID Monitoring Plans.	As directed by the Water Board in the Tentative Order workshop, remove the requirement for a power analysis in developing the LID monitoring plan.
C.8.d.i.(1)(d) LID Monitoring Plans (Power Analysis)	New requirement	Detecting pollutant removal by an LID facility is not the standard type of trend that a power analysis informs. Power analysis is more suited to inform trends in large populations over long periods of time when a large number of samples can be collected.	As directed by the Water Board in the Tentative Order workshop, remove the requirement for a power analysis in developing the LID monitoring plan.
C.8.d.i.(1)(d) LID Monitoring Plans (Power Analysis)	New requirement	Running a power analysis requires technical expertise and existing data on the spatial and temporal variance in the system. Because the LID facilities likely to be monitored by the Programs are recently built, it is extremely unlikely that we know any of the input values needed to run a power analysis. The many assumptions required will compromise the power analysis results.	As directed by the Water Board in the Tentative Order workshop, remove the requirement for a power analysis in developing the LID monitoring plan.
C.8.d.i.(1)(d) LID Monitoring Plans (Power Analysis)	New requirement	If natural variability is high, as is likely in most water quality monitoring studies due to climate conditions and pollutant fate and transport mechanisms, it simply may not be possible to achieve the power level required in the TO.	As directed by the Water Board in the Tentative Order workshop, remove the requirement for a power analysis in developing the LID monitoring plan.
C.8.d.i.(1)(f) LID Monitoring Plans (QAPP)	New requirement	The TO requires development of "study-specific QAP/PPs" that are equivalent to the SWAMP QAPP. This appears to be a typo. The SWAMP Quality Assurance <b>Program</b> Plan (QAP/PP) differs from a study-specific Quality Assurance <b>Project</b> Plan (QAPP). Because these are different types of documents, it would be inappropriate for the study-specific QAPP to be <i>equivalent</i> to the SWAMP QAPP.	Revise to: "Include study-specific Quality Assurance Project Plans (QAPPs), which at a minimum are comparable to the SWAMP QAP/PP."
C.8.d.i.(1)(g) LID Monitoring Plans (cost estimates)	New requirement	This sub-provision requires that annual cost estimates for implementation of LID Monitoring Plans are provided, with the suggestion that costs should be commensurate with what the Program spent on Creek Status Monitoring and SSID studies in MRP 2.0. This requirement appears to discourage cost-savings in MRP 3.0 compared to MRP 2.0. It is unclear whether lower-cost LID Monitoring Plans would be approved by the EO.	Remove the requirement to provide annual cost estimates. Remove requirement to spend as much on LID monitoring in MRP 3.0 as they did on Creek Status and SSID Monitoring in MRP 2.0.
C.8.d.ii. Regional Collaboration	New requirement	This sub-provision requires that the draft LID Monitoring Plan is submitted to a newly built Technical Advisory Group (TAG) by January 1, 2023 (a National Holiday) for review and comment. The timing of these two tasks will be difficult to comply with. It may take more than 6 months to find willing TAG participants. In addition, the 6-month period to develop these plans is compromised by significant reporting requirements remaining from MRP 2.0 (i.e., Annual Reports due Sept. 30, 2022 and UCMRs due March 31, 2023) which affect availability of staff with specialized monitoring expertise. The revised deadline of May 1, 2023 is consistent with development of thoughtful, comprehensive, effective, and efficient monitoring plans.	Change the deadline for the draft LID Monitoring Plan submittal to the TAG to May 1, 2023.
C.8.d.iii. Methods Table 8.d.1	New requirement	Not all hydrologic performance monitoring methods are appropriate for all LID facilities. Therefore, these methods should have the word "or" placed after them in the list.	Add the word "or" after each hydrologic monitoring method in the list.
C.8.d.iii. Methods Table 8.d.1	New requirement	Management Question #2 could be addressed exclusively through analysis of existing data or maintenance records. This would allow investigations to look back in time. This method should be added. The use of the word "and" after each method in the list limits flexibility in monitoring designs and appears to force use of all methods in the design. The list should have "or" after each method rather than "and."	Add the word "or" after each hydrologic monitoring method in the list. Add additional method, Analysis of existing data or maintenance records.
C.8.d.iv. Parameters and Intensities Table 8.d.2	New requirement	There is an annual minimum number of samples and a total number of required samples over the permit term. The annual minimum makes monitoring designs less flexible and is insensitive to monitoring challenges presented by climate change. If LID monitoring programs are focused on storm monitoring, then the focus should be on practicality rather than meeting an annual minimum. For example, drought years could complicate the ability to meet annual minimums. In addition, the total overall number of samples may not be appropriate for a given monitoring design. The Permit should allow for flexibility in sample numbers provided the overall level-of-effort is equivalent to that listed in the provision.	Remove the annual minimum number of samples for LID Monitoring. Revise relevant footnote to include: "The exact number of samples and parameters may be adjusted as long as the overall level-of-effort in the final Monitoring Plan is equivalent to the level-of-effort included in this provision."

C.8 Water Quality Monitoring

11/16/2021

Subprovision	Description of Change from MRP 2.0 to MRP 3.0 Tentative Order	Key Issues/Concerns	Response/Recommendation
C.8.d.iv. Parameters and Intensities Table 8.d.2	New requirement	This table requires that each collected sample is analyzed for several parameters including flow. However, not all monitoring designs would require sampling of flowing water. For example, studies that assess O&M as well as performance through pollutant accumulation in media do not require flow monitoring. Flow should be removed from the list of parameters and a footnote should be added to address flow and flow modeling.	Remove flow from the list of required parameters and add a footnote that reads: "All studies shall include the collection of discrete and/or continuous flow and/or volume measurements to adequately address the applicable Management Question(s) identified in the Monitoring Plan(s). A combination of modeling and monitoring may be used to assess the hydrology of GSI facilities."
C.8.d.iv. Parameters and Intensities Table 8.d.2	New requirement	This table requires that each collected sample is analyzed for at least the following parameters: Total Hg, Total PCBs, TSS/SSC, PFAS, "Other Emerging Contaminants", TPH, Total and Dissolved Copper, Flow, and "Other Ancillary Parameters." There are several concerns with this list: 1) Many of these constituents are inappropriate for many types of studies and/or media (i.e., water vs. sediment). 2) This list represents a high per sample cost. 3) There are no standard EPA laboratory methods for PFAS and the "Other Emerging Contaminant" examples provided (e.g., microplastics, 6PPD-quinone), and there is an overall lack of commercial laboratory options for these constituents. 4) There are no standard sample collection protocols for some of these analytes and those that do exist require specialized equipment and specialized staff training. This fourth concern reduces comparability between projects. It also could cause difficulty with permit compliance if specialized staff are not available.	The list of required parameters should be revised to "Water samples: TSS/SSC, total PCBs, total mercury, PFAS. Sediment samples: total PCBs, total mercury." The relevant footnote should be revised to: "All water samples shall be analyzed for SSC or TSS, total PCBs, total mercury, and PFAS. All sediment samples shall be analyzed for total PCBs and total mercury. An alternative list of parameters could be selected by Permittees with input from the TAG as long as the overall level-of-effort in the final Monitoring Plan is equivalent to the level-of-effort included in this provision."
C.8.d.iv. Parameters and Intensities Table 8.d.2	New requirement	The Permit should include commercially available analytical methodologies for required parameters to ensure regionwide consistency in analytical data.	Add a table showing commercially available analytical methodologies for the required parameters in Table 8.d.2.
C.8.d.v. Implementation Level	New requirement	No significant issues identified	N/A
C.8.d.vi. Reporting	New requirement	The LID Monitoring Plan for EO approval is due by March 1, 2023, just 2 months after the Draft Plan for TAG review is due (i.e., Jan 1, 2023). This does not provide adequate time for the TAG to review and comment on the Plan, and for the Plan to be updated based on the comments. Furthermore, this timing is right in the midst of UCMR development for WY 2022 (MRP 2.0) monitoring. Program staff who specialize in monitoring will be stretched thin during this time period.	Change the deadline for the LID Monitoring Plan submittal for EO approval to July 1, 2023. Because RWB staff will be part of the TAG, it is assumed that EOA approval will be relatively rapid. This timing is still consistent with beginning implementation by October 1, 2023.
C.8.e. Trash Monitoring	Trash Receiving Water Monitoring was required by Provision C.10.b.v. of MRP 2.0. The new requirements in Provision C.8.e of MRP 3.0 are considerably more prescriptive and extensive than the MRP 2.0 requirements.	This requirement represents a significant increase in costs compared to MRP 2.0. There is no reduction in monitoring costs elsewhere in C.8 to offset the increase. Annual trash monitoring costs would increase from \$75,000/year under MRP 2.0 to approximately \$240,000 to \$850,000/year based on the requirements described in the Tentative Order.	See recommendations in the rows below.
C.8.e.i. Monitoring Components	New requirement	No significant issues identified	N/A
C.8.e.ii. Monitoring Methods	New requirement	see below	
C.8.e.ii.(1) and (2) Monitoring Methods (alternative methods)	New requirement	<b>Assessment Length.</b> The TO requires that indirect assessment methods are conducted for a 300-foot distance. This length may not be appropriate for many sites, particularly those with tributaries that discharge within the 300-foot reach, or contain steep banks and dense vegetation which make physical access to assessment reach challenging.	Change language to: ".....sample the shoreline and/or stream bank (on-land), within 300 feet downstream of the outfall."
C.8.e.ii.(3) Monitoring Methods (direct receiving water methods)	New requirement	<b>Lack of Direct Method Guidance.</b> The TO includes direct monitoring methods to assess trash, i.e., netting devices attached to the end of an outfall pipe, trash booms with skirts, and equivalent. However, the TO fails to provide any guidance or references supporting these methods. The two trash monitoring references included in the Fact Sheet do not describe these direct methods, and instead describe indirect methods.	Please provide references that describe how the direct monitoring methods could be applied in Bay Area streams.
C.8.e.ii.(3) Monitoring Methods (direct receiving water methods)	New requirement	<b>Permitting for Nets and Booms</b> The use of netting devices attached to the end of an outfall pipe, trash booms with skirts, and other equivalent methods will likely require permits from multiple agencies. These methods likely require modifications to the outfall or installation of platforms within the creek corridor to secure the monitoring equipment, and are considered discharges to Waters of the State or WOTUS. Most trash booms in the Bay Area took many years for approval and required 401(c) water quality certification from the RWB and a 1600 Streambed Alteration Permit from CA DFW. Some such installations require 404 Wetland Fill Permits from ACOE, NOAA Fisheries consultation, and CEQA documentation. This in-stream permitting process is expensive and can take a minimum of one year, and up to several years to complete. Therefore, it is unlikely that these methods could be implemented during the first few years of the permit term, if at all.	The MRP should include language that acknowledges the need for permits to install in-stream monitoring devices and/or to retrofit outfalls for the installation of netting devices, and should allow for delays in monitoring implementation as a result.
C.8.e.ii.(3) Monitoring Methods (direct receiving water methods)	New requirement	<b>Flooding Concerns</b> The use of trash booms with a skirt that extends to the bottom of the water column, seines, or other equivalent in-stream devices should not be used during storm events because they could cause flooding in adjacent upland areas. In practice, trash booms are generally removed during the wet season or when storm events are forecast.	Remove this monitoring method or revise to remove language about using these methods during storm events. The MRP should not encourage monitoring methods that pose a potential threat to lives and property in the vicinity of the monitoring station.
C.8.e.ii.(3) Monitoring Methods (indirect receiving water methods)	New requirement	<b>Method Applicability</b> It is uncertain whether the direct trash boom method and the indirect monitoring methods (i.e., RWTA) to be applied upstream and downstream of individual outfalls will answer the Management/Monitoring Questions. The indirect RWTA was not designed to measure the amount of trash coming from the MS4 at individual outfalls. Nor have trash booms been used for this purpose. Therefore, the TO is prescribing an extensive and expensive monitoring program which may not achieve the desired goals. These methods should be beta tested for the intended Management/Monitoring Questions prior to full-scale implementation.	Significantly reduce the trash monitoring level-of-effort so that the methods can be pilot tested for their ability to address the Management/Monitoring Questions.
C.8.e.ii.(3) Monitoring Methods (indirect receiving water methods)	New requirement	The TO has a footnote reference (32) after "riverine quantitative tally method" but there is no footnote text to go with the reference.	Remove footnote reference or add footnote text.
C.8.e.iii. Monitoring Sites, Events, Frequency, and Intervals	New requirement	see below	
C.8.e.iii.(1) Monitoring Sites, Events, Frequency, and Intervals (Outfall Monitoring)	New requirement	This provision requires that trash monitoring begin on October 1, 2022. The planning for this new type of monitoring will not be completed by this date, particularly given the desire to build a new TAG and receive planning input from the TAG prior to beginning monitoring. The methods described in Provision C.8.e are either untested by the Permittees and/or have not been assessed as to whether they can answer the Management/Monitoring Questions. Therefore, solid planning is essential to develop this new monitoring program. We suggest that the first year of the permit be devoted to working with the TAG to develop a well-thought out trash monitoring program, with monitoring beginning July 1, 2023. Furthermore, it is likely that outfall monitoring would require multiple permits from resource agencies. It is therefore infeasible that outfall nets could be implemented by Oct. 1, 2022.	Change this provision language to: "Permittees shall conduct monitoring, starting July 1, 2023, at no less than the number of sites and the number of events below."

C.8 Water Quality Monitoring

11/16/2021

Subprovision	Description of Change from MRP 2.0 to MRP 3.0 Tentative Order	Key Issues/Concerns	Response/Recommendation
C.8.e.iii.(1) Monitoring Sites, Events, Frequency, and Intervals (Outfall Monitoring)	New requirement	If Outfall Monitoring Methods are used, the TO requires an annual minimum number of three wet weather monitoring events at each site. Given uncertainties with storm forecasting, the high potential for ongoing drought, storm monitoring requirements associated with other C.8 subprovisions, and the fact that these methods have not yet been used or tested by the Program, a more achievable monitoring program would require an overall minimum number of wet weather monitoring events. We suggest nine events for the five-year permit term as a likely achievable goal given the factors listed above.	Change this provision language to: "Permittees shall conduct monitoring, starting October 1, 2023, at no less than the number of sites and the number of events below." The number of events in the table should be changed to "9" as it is no longer an annual minimum.
C.8.e.iii.(2) Monitoring Sites, Events, Frequency, and Intervals (requirements for indirect methods)	New requirement	<b>Lack of Justification for Increased Level-of-Effort.</b> If indirect monitoring methods are used, the TO requires that the number of trash monitoring sites is increased by a factor of 12 and that the number of storms monitored is increased from 3/year to 4/year. However, neither the TO nor the Fact Sheet provide justification for this increased level-of-effort, aside from a statement that the indirect methods produce "less reliable and informative" data. Significant increases in monitoring level-of-effort should be supported by robust and scientific references, rather than unsupported opinions.	Remove this sub-provision. The minimum number of sites and storm events shown in the table should apply to all types of monitoring methods.
C.8.e.iii.(2) Monitoring Sites, Events, Frequency, and Intervals (requirements for indirect methods)	New requirement	<b>Incorrect Assumption about MRP 2.0 Level-of-Effort Comparability.</b> If indirect monitoring methods are used, the TO requires that the number of trash monitoring sites is increased by a factor of 12 and that the number of storms monitored is increased from 3/year to 4/year. The Fact Sheet states the "exchange of 12:1 is based on the level of effort employed by the Permittees in their pilot trash monitoring program implemented during MRP 2, which level of effort they determined was reasonable and desirable to answer certain management and monitoring questions at the time." Although the level of effort applying the RWTA assessment tool during the pilot study was substantial, it was significantly less than what is required by the TO. The number of assessments conducted in the pilot study in SM County was 150 over 2 years (30 sites, 3 wet season samples, 2 dry season samples. These assessments were not applied u/s and d/s of outfalls, did not include trash characterization of collected material, and were not solely focused on storm events. The TO would require a 2-year total of 384 assessments (24 outfalls, 2 sites/outfall, 4 storm events). Therefore, the TO level of effort is over 3 times the level of effort compared to the pilot study.	Remove this sub-provision. The minimum number of sites and storm events shown in the table should apply to all types of monitoring methods. The MRP should not encourage monitoring methods that pose a potential threat to lives and property in the vicinity of the monitoring stations.
C.8.e.iii.(2) Monitoring Sites, Events, Frequency, and Intervals (requirements for indirect methods)	New requirement	<b>High Cost.</b> The TO requires sampling of a minimum number of sites (e.g., 2 sites in San Mateo County) during 3 storm events if direct methods are used (e.g., nets installed at the end of the outfall, trash booms with skits installed in the creek). If the Program uses the more feasible and safer indirect monitoring methods (e.g., shoreline/streambank assessments using the riverine volumetric method), then the minimum number of sites increases by a factor of twelve (12) and the number of storm events increases from 3 to 4. Because the direct monitoring methods are likely infeasible and unsafe to implement, this would result in SMCWPPP having to monitor upstream and downstream of 24 outfalls during four storms each year. The cost to implement this requirement is extremely high. The cost to implement this program would be approximately \$630,000/year which represents a significant increase over MRP 2.0 costs.	Remove this sub-provision. The minimum number of sites and storm events shown in the table should apply to all types of monitoring methods. The MRP should not encourage monitoring methods that pose a potential threat to lives and property in the vicinity of the monitoring stations.
C.8.e.iii.(2) Monitoring Sites, Events, Frequency, and Intervals (requirements for indirect methods)	New requirement	<b>Lack of Sites Meeting Selection Criteria.</b> If direct monitoring methods are deemed infeasible and unsafe to implement, this would result in SMCWPPP having to monitor 24 outfalls during four storms each year using indirect methods. It may be impossible to find 24 sites that meet the criteria (MS4 outfalls that drain tributary areas control to Low trash generation).	Remove this sub-provision. The minimum number of sites and storm events shown in the table should apply to all types of monitoring methods. The MRP should not encourage monitoring methods that pose a potential threat to lives and property in the vicinity of the monitoring stations.
C.8.e.iii.(2) Monitoring Sites, Events, Frequency, and Intervals (requirements for indirect methods)	New requirement	<b>Staffing Capacity Concerns.</b> If direct monitoring methods are infeasible and unsafe to implement, this would result in SMCWPPP having to monitor 48 sites (i.e., u/s and d/s of 24 outfalls) during (i.e., before and after) four storms each year using indirect methods. This represents a real capacity issue for the Program. A 2-person field crew can reasonably clear trash from 3 outfall sites per day. This represents 8 days of field work (128 labor hours) prior to each storm event and 8 days of work (128 labor hours) after each storm. It is not feasible for SMCWPPP to maintain on payroll the number of specially trained staff needed to conduct this level of episodic and unscheduled storm monitoring when there may not be tasks to keep them busy when it is not raining. Contractors in the Bay Area also have a finite ability to fill in staffing gaps. Furthermore, this would compromise the Program's ability to conduct the storm monitoring required by other C.8 subprovisions (LID Monitoring, POC Monitoring, P&T Monitoring).	Remove this sub-provision. The minimum number of sites and storm events shown in the table should apply to all types of monitoring methods. The MRP should not encourage monitoring methods that pose a potential threat to lives and property in the vicinity of the monitoring stations.
C.8.e.iii.(3) Monitoring Sites, Events, Frequency, and Intervals (storm event types)	New requirement	<b>Storms and Climate Change.</b> Whether direct or indirect methods are used, the trash monitoring program described in the TO is focused on storm monitoring (3 or 4 events/year). It is unlikely that enough qualifying storm events would occur and/or could be targeted. Analysis of rainfall measured at the San Jose Airport (SJC) and San Francisco Airport (SFO) highlights the consequences of climate change-fueled drought. At SJC, there were only three qualifying storm events in WY 2020 and one qualifying event in WY 2021. At SFO there were 4 in WY 2020 and 3 in WY 2021. Climate change has also caused storms to be more intense which poses a real safety concern at the monitoring sites and on the highways travelling to the sites. In addition, storms are now more difficult to forecast, which complicates planning for storm mobilization. Holidays, weekends, illness, and forecast errors limit SMCWPPP's ability to mobilize for every single event, suggesting that there may not be a path to permit compliance with respect to achieving the storm monitoring requirements described in the TO.	Reduce the minimum number of wet weather monitoring events.
C.8.e.iii.(3) Monitoring Sites, Events, Frequency, and Intervals (storm event types)	New requirement	<b>Storm Criteria.</b> There is a requirement to conduct annual monitoring of a storm event that is forecast to be greater than the one-year, one-hour event (i.e., full capture design standard). By definition, a "greater than the one-year, one-hour event" is unlikely to occur each year.	Change the requirement so that the one-year, one-hour event is monitored just once during the permit term. This is a more achievable goal.
C.8.e.iv. Regional Trash Monitoring Technical Advisory Group	New requirement	No significant issues identified	N/A
C.8.e.v. Reporting (Trash Monitoring)	New requirement	The reporting requirements for Trash Monitoring should be included with Provision C.8.h Reporting, which is where all the other C.8 reporting requirements are contained.	For consistency, Trash monitoring reporting requirements should be moved to Provision C.8.h
C.8.e.v.(1) Reporting Initial Trash Monitoring Plan	New requirement	The September 30, 2022 deadline for an "Initial Trash Monitoring Plan" is unreasonable, considering the MRP 3.0 is likely to become effective July 1, 2022, less than three months prior to the deadline. This plan seems unnecessary considering how prescriptive this sub-provision is. Furthermore, development of the Plan would be compromised because Permittees would be busy working on Annual Reports between July 1 and September 30. Finally, it is unlikely that Permittees would be able to form the TAG and hold productive meetings within such a short timeframe.	Remove the requirement for the "Initial Trash Monitoring Plan" -or- Change the deadline to May 2023. This date allows time for Program monitoring staff to give adequate thought to trash monitoring and does not conflict with LID monitoring planning, or UCMR development. If the deadline is changed, then trash monitoring should begin with WY 2024 (i.e., July 1, 2023).

C.8 Water Quality Monitoring

Subprovision	Description of Change from MRP 2.0 to MRP 3.0 Tentative Order	Key Issues/Concerns	Response/Recommendation
C.8.e.v.(1)(f) and (g) Reporting Initial Trash Monitoring Plan (input from others on Initial Plan)	New requirement	The requirements to include input from the TAG (g) and others (f) on the Initial Trash Monitoring Plan is unreasonable and likely impossible considering that the Plan is due less than 90 days after MRP 3.0 is anticipated to become effective.	Remove the requirements to include input from the TAG (g) and others (f) on the Initial Trash Monitoring Plan. Or change the deadline to May 2023.
C.8.e.v.(1)(e) Reporting Initial Trash Monitoring Plan (Power Analysis)	New requirement	There is a requirement to conduct a power analysis during development of the Initial Trash Monitoring Plan to ensure that the number, type and frequency of monitoring sites and events are sufficient to produce statistically valid monitoring results. However, the minimum number of monitoring sites and events is already provided in Provision C.8.e.iii.(3); therefore, it is unclear how the power analysis results would be used. There are several other concerns with using power analysis for this type of monitoring program including: cost, need for assumptions to run the analysis, uncertainty about monitoring question, high variability in natural systems, high variability in climate conditions. See more details under C.8.d.	As directed by the Water Board in the Tentative Order workshop, remove the requirement for a power analysis in developing the Trash monitoring plan.
C.8.e.v.(2) Annual Progress Report	New requirement	The TO requires that Permittees collectively submit Annual Progress Reports on Trash Monitoring. With the dissolution of BASMAA, regional reporting will be challenging.	Remove the language about collective reporting.
C.8.e.v.(3) Trash Monitoring Report	New requirement	The TO requires that Permittees collectively submit a comprehensive Trash Monitoring Report with the Integrated Monitoring Report. With the dissolution of BASMAA, regional reporting will be challenging.	Remove the language about collective reporting.
<b>C.8.f. Pollutants of Concern Monitoring</b>	<b>see below</b>	<b>See below</b>	
C.8.f.i. (MISSING)		No issues identified	Consider renumbering provision to eliminate missing element.
C.8.f.ii. Sampling Methods	Minor language additions for clarity.	No issues identified	N/A
C.8.f.iii. Parameters and Monitoring Frequency	see below	See below	
C.8.f.iii. Pollutants of Concern Monitoring Table 8.2 POC Monitoring Parameters, Effort and Type	The minimum number of samples for each monitoring type for PCBs was 8 for each type in MRP 2.0. It is now 8 for types 1-3 and 16 for types 4-5.	Although Provision C.12 (PCBs) increases the level of effort for source property identification, C.8.f allows fewer PCBs samples to count towards this information need by increasing the effort devoted to information needs loads and trends.	Change the minimum number of samples for each monitoring type for PCBs to 8 per type (similar to MRP 2.0).
C.8.f.iii. Pollutants of Concern Monitoring Table 8.2 POC Monitoring Parameters, Effort and Type footnote a	The TO puts a limit of 25% of samples for any pollutant that can be used to satisfy requirements for multiple monitoring categories for that pollutant. There was no limit in MRP 2.0.	This limit does not recognize that the majority of samples indeed address multiple information needs. It limits flexibility in monitoring programs and increases costs.	Remove the limit on how many information needs an individual sample can address.
C.8.f.iii. Pollutants of Concern Monitoring Table 8.2 POC Monitoring Parameters, Effort and Type (CECs & footnote c)	The TO adds several Emerging Contaminants to the list of required monitoring parameters.	Many of the CECs added to the list do not have EPA analytical methods and are not available at commercial labs. Footnote c allows Permittees to avoid these complications by meeting the CEC monitoring requirement through a collective contribution of \$100k to the RMP each year. If allocated based on population, this represents an annual SMCWPPP budget increase of \$14.2k. This increase is not balanced by reductions in monitoring requirements elsewhere in C.8.	Reduce monitoring requirements elsewhere in C.8 to mitigate for the increased costs associated with C.8.d CEC monitoring.
C.8.f.iv. POC Parameters and Analytical Methods	No significant changes	Table 8.3 showing analytical methods does not contain methods for the CECs listed in Table 8.2.	Update Table 8.3 to include EPA-approved and available analytical methods for all CECs listed in Table 8.2.
<b>C.8.g. Pesticides and Toxicity Monitoring</b>	<b>Added option to collaborate with CA Dept of Pesticide Regulation for data collection and analysis.</b>	<b>None</b>	<b>N/A</b>
C.8.g.i. Toxicity in Water Column - Dry Weather	Minor change in deadline for Fairfield-Suisun & Vallejo sample collection.	The TO includes bioassessment sites on the list of where toxicity samples should be collected; however, bioassessment is no longer required monitoring.	N/A
C.8.g.ii. Toxicity, Pesticides and Other Pollutants in Sediment - Dry Weather	Minor change in deadline for Fairfield-Suisun & Vallejo sample collection.	The TO includes bioassessment sites on the list of where toxicity samples should be collected; however, bioassessment is no longer required monitoring.	N/A
C.8.g.iii. Wet Weather Pesticides and Toxicity Monitoring	The required reporting level for imidacloprid is changed from 0.05 ppb to 0.01 ppb. Indoxacarb is removed from list of pesticides.	N/A	N/A
C.8.g.iv. Follow-up	no change	N/A	N/A
<b>C.8.h. Reporting</b>	<b>see below</b>	<b>See below</b>	
C.8.h.i. Water Quality Standard Exceedance	Minor changes to reflect additional permit provisions.	No issues identified	N/A
C.8.h.ii.(1) Electronic Reporting (SWAMP format)	no change	The Regional Data Centers which upload the data to CEDEN prefer that the data is submitted in CEDEN format.	Change the required data submittal format from SWAMP to CEDEN
C.8.h.iii. Urban Creeks Monitoring Report	The requirements for this report were changed to reflect the major changes to Provision C.8.	The requirement to include a statement of LID monitoring data quality is listed twice (1)(d) and (1)(g).	Remove either (1)(d) and (1)(g) so that the requirement to include a statement of LID monitoring data quality is listed just once.
C.8.h.iv. Pollutants of Concern Monitoring Reports	Minor change in deadline for this report.	No issues identified	N/A
C.8.h.v. Integrated Monitoring Report	MRP 3.0 requires the IMR submittal on March 31, 2026. This submittal date would include three years of data collection (WY 2023, WY 2024, WY 2025). MRP 2.0 required the IMR on March 31, 2020 which included four years of data collection (WY 2016, WY 2017, WY 2018, WY 2019).	The TO incorrectly states in provision C.8.v.(1)and C.8.v.(2) that the March 31, 2026 IMR submittal date would include four years of monitoring data. There are only three water years preceding March 2026 (WY 2023, WY 2024, WY 2025). Furthermore, for LID monitoring, which does not begin until October 1, 2023 (i.e., WY 2024), the IMR would represent just two years of monitoring data.	Change the IMR submittal date to March 31, 2027 so that more data can be evaluated.
C.8.h.v.(3) Integrated Monitoring Report ("all data")	No change	The TO requires that the IMR present a comprehensive analysis of all data collected since the previous IMR; however, monitoring requirements in the TO are dramatically different from those in MRP 2.0. The MRP 3.0 IMR should simply require comprehensive analysis of all data collected since the start of MRP 3.0. Inclusion of data types that are no longer collected under MRP 3.0 (Creek Status, SSID) represents a moderate level-of-effort with uncertain value.	Change this subprovision to require comprehensive analysis of data collected pursuant to Provision C.8 in MRP 3.0.
C.8.h.vi. Comprehensive Bioassessment Final Report	New requirement	This is a requirement for a regional report which is difficult to fund and organize without BASMAA. BASMAA already conducted a regional analysis of the first five years of bioassessment data (2012-2016) and prepared a report and Factsheet on the findings. SMCWPPP already conducted a countywide analysis of the first eight years of bioassessment data (2012-2019) in the MRP 2.0 IMR and reached similar conclusions as the regional study. It is unlikely that adding data to the prior regional or countywide bioassessment reports will result in new findings. Furthermore, with the dissolution of BASMAA, there is no longer a regional fiscal agent to facilitate shared report development.	Remove this requirement.

C.8 Water Quality Monitoring

11/16/2021

Subprovision	Description of Change from MRP 2.0 to MRP 3.0 Tentative Order	Key Issues/Concerns	Response/Recommendation
C.8.h.vii. Standard Report Content	Minor changes requiring clear, concise, and well-organized reports. New requirement for an Executive Summary.	No issues identified	N/A
Fact Sheet C.8-5	No change from C.8-4	Several sections of the Fact Sheet, including C.8-5, were not updated from MRP 2.0 and don't make sense given the significant change in monitoring requirements between MRP 2.0 and MRP 3.0. For example, the Fact Sheet discusses the importance of biological and physical monitoring on a watershed scale, as recommended by the National Research Council. This type of monitoring shows what is actually going on in receiving water. However, the TO does not include this type of monitoring.	N/A
Fact Sheet C.8.d.iv. Parameters and Intensities	N/A	The Fact Sheet states that a large list of analytes (including CECs with no standard EPA methods) is included with each LID Monitoring Plan, unless proper justification is provided. In many types of studies, TSS could be used as a cost-efficient proxy for other pollutants. If all parameters were required for each sample, costs could increase substantially. The need for justification adds uncertainty to monitoring designs and costs to implement the designs.	Remove the requirement to provide justification to eliminate parameters.
Fact Sheet C.8.d.iv. Parameters and Intensities	N/A	The Fact Sheet states that a minimum number of annual samples is required for LID Monitoring. As described in the row above, annual minimums significantly reduce flexibility in monitoring designs and can be difficult to achieve for storm-based monitoring approaches, particularly as we face climate change.	Remove the annual minimum requirement from the Fact Sheet.
Fact Sheet C.8.d.iv. Parameters and Intensities	N/A	The Fact Sheet states that a power analysis is conducted to ensure the number and frequency of sample events are sufficient to produce statistically valid monitoring results. Concerns and issues with power analysis are described above.	Remove the requirement for power analysis from the Fact Sheet.
Fact Sheet C.8.d.vi. Reporting	N/A	We suggest alternative deadlines in the Provision.	Update the deadlines in the Fact Sheet consistent with changes to the Provision.
Fact Sheet C.8.e. Trash Monitoring	N/A	We suggest alternative deadlines in the Provision.	To avoid confusion when the Permit is finalized, update the Fact Sheet consistent with changes to this Provision.

**C.9 Pesticides Toxicity Control**

11/16/2021

Subprovision	Description of Change from MRP 2.0 to MRP 3.0 Tentative Order	Key Issues/Concerns	Response/Recommendation
Introductory text	Added neonicotinoids (e.g., imidacloprid, acetamiprid, and dinotefuran) to the list of Pesticides of Concern	Will lead to increased reporting requirements.	General concern with overall increase in reporting requirements for all provisions. Staff should review the requirements to ensure that all required reporting is needed.
C.9.a. Maintain and Implement an Integrated Pest Management Policy or Ordinance and Standard Operating Procedures - Reporting	Requires that Permittees submit links to IPM Policies or ordinance and IPM Standard Operating Procedures in their 2023 Annual Report	None	N/A
C.9.e.ii. Public Outreach - Reporting	Requires an effectiveness evaluation of outreach efforts to be included in the 2026 Annual Report.	Will lead to increased reporting requirements.	Since effectiveness evaluation is being done as part of C.9.g in FY 2024-25, another evaluation of outreach efforts should not be required with the FY 2025-26 Annual Report.
C.9.g.iii. Evaluate Implementation of Pesticide Source Control Actions - Reporting	No change	None	N/A

C.10 Trash Load Reduction

11/16/2021

Subprovision	Description of Change from MRP 2.0 to MRP 3.0 Tentative Order	Key Issues/Concerns	Response/Recommendation
C.10.a. Trash Reduction Requirements - i. Schedule	Language was added requiring the achievement of a 90% trash reduction compliance benchmark by July 1, 2023	It is not practicable for Permittees to achieve the 90% reduction compliance benchmark in such a short timeframe (i.e., 1 year after effective date of permit). Prior to the COVID-19 pandemic, Water Board staff had agreed via discussions with Permittees to propose extending the 90% benchmark to 2023 due to the increased challenges in addressing the final 20% of the trash reduction required by the MRP. Now that the pandemic is significantly impacting Permittee budgets/staffing (and will continue to impact over the next few years) the ability of Permittees to maintain progress towards the benchmarks at the same pace as prior to the pandemic is not practicable.  Additionally, the proposed timeline (2023) for achieving the 90% compliance benchmark is not aligned with Caltrans' funding timeline for trash capture systems. Permittees would like to better collaborate with Caltrans on mutually beneficial projects, however, without an extension to the compliance benchmark, these collaborative projects will not occur.	Extend deadline to achieve 90% by two years to June 30, 2025.  Make the 90% benchmark a non-enforceable target, similar to the 60% goal in MRP 2.0 (i.e., "achieve 60 percent reduction.... This is not a mandatory deadline; rather, it shall be used as a performance guideline to meet the mandatory...70% deadline).  In factsheet indicate that compliance with the 80% benchmark will continue until the 90% benchmark date (i.e., June 30, 2025).
C.10.a. Trash Reduction Requirements - i. Schedule	Language was added requiring the achievement of a 100% trash reduction compliance benchmark by July 1, 2025	It is not practicable for Permittees to achieve the 100% reduction compliance benchmark by June 2025 (i.e., 3 year after effective date of permit). Prior to the COVID-19 pandemic, Water Board staff had agreed via discussions with Permittees to propose extending the 100% benchmark to 2025. Now that the pandemic is significantly impacting Permittee budgets/staffing (and will continue to impact over the next few years) the ability of Permittees to maintain progress towards the benchmarks at the same pace as prior to the pandemic is not practicable. This is especially the case if source control credit and offset options allowed during MRP 2.0 are not allowed as an option in MRP 3.0 towards the 100% compliance benchmark.  Additionally, the proposed timeline (2023) for achieving the 100% compliance benchmark is not aligned with Caltrans' funding timeline for trash capture systems. Permittees would like to better collaborate with Caltrans on mutually beneficial projects, however, without an extension to the compliance benchmark, these collaborative projects will not occur.	Extend deadline to achieve 100% by two years to June 30, 2027.
C.10.a. Trash Reduction Requirements - ii. Trash Generation Area Management	Language was added requiring Permittees to submit with 2024 Annual Report, a revised Trash Generation Area Map that includes trash management areas and private land drainage areas that will be retrofitted with full trash capture devices, or equivalent, by June 30, 2025. Maps are required to include the locations and associated drainage areas of full trash capture systems, and other trash control actions, and highlight any revisions or changes from the previous map(s).	Language requiring mapping of "other control measures" could pose an extensive level of effort expended by Permittees and is not likely helpful in illustrating implementation (e.g., street sweeping and source control actions).	Revise language to focus on mapping of full capture systems and make mapping of "other control measures" optional.
C.10.a. Trash Reduction Requirements - ii. Trash Generation Area Management; a - Full Capture or Low Trash Generation Goal	No changes from MRP 2.0.	No major issues.	None
C.10.a. Trash Reduction Requirements - ii. Trash Generation Area Management ; b - Trash Reduction on Private Drainage Areas connected to MS4	No changes from MRP 2.0, with the exception of the date to which trash from these areas needs to be fully addressed (i.e., July 1, 2025).	This provision requires that all areas draining to inlets on private properties are addressed by full capture or at low trash generation, using methods described in C.10.b, which is a significant expansion of this provision. Addressing properties >10,000 ft2 will take time, working collaboratively with private property owners. In San Mateo County, there are over 1,000 private drainage areas that generate moderate, high or very high levels of trash. These private drainages represent roughly 40% of the trash in SM county that isn't addressed by full capture systems. Requiring property owners to install full capture within the timeframes outlined would potentially create economic hardship due to the costs associated with new infrastructure and ongoing maintenance. Given the economic impacts from COVID, private properties owners do not need additional burdens, rather they need more time (i.e., 2027) to allow for some level of economic recovery prior to imposing additional requirements for these properties.	Revise the language to defer to the MRP 2.0 language that focuses on properties >10,000 square feet. Include additional methods in provision C.10 that allow Permittees to use a programmatic approach to demonstrating that trash in areas draining to inlets on private properties is addressed and will attain the low trash generation goal over time. This programmatic approach for these properties could be outlined in this provision and a control measure program plan could be submitted during the first year of the permit with more detail on the actions that will be conducted (e.g., inspections & enforcement) to ensure that these properties achieve the low trash generation goal.
C.10.a. Trash Reduction Requirements -iii. Mandatory Minimum Full Trash Capture Systems	Subprovision removed.	No major issues.	None
C.10.b. Demonstration of Trash Reduction Outcomes - i. Full Trash Capture Systems	Language was added requiring Permittees to provide their respective vector control agencies with the names and locations of new and existing full trash capture devices.	No major issues.	None
C.10.b. Demonstration of Trash Reduction Outcomes - i. Full Trash Capture Systems ; a. Inspection and Maintenance	Language was changed for clarity to better describe requirement. The following language that is in MRP 2.0 was removed: <b>"If this frequency of inspection is found excessive after two inspections, the inspection frequency can be reduced to once per year."</b>	Reduces the flexibility of Permittees to reduce inspection and maintenance frequencies at sites where there is no evidence of maintenance issues. Additionally, language is specific to catch basin inserts, not high flow capacity devices.	Add back in the language <b>"If this frequency of inspection is found excessive after two inspections, the inspection frequency can be reduced to once per year."</b> This language provides the flexibility needed to optimize inspection and maintenance frequencies at sites where issues are not observed. Not doing so will increase inspection and maintenance costs, with no water quality benefit.  Additionally, change the following language to read: <b>"For catch basin inserts, if any such device is found to have a plugged or blinded screen, or is 50 percent full or greater.... For high flow capacity devices, if any such device is found to have a plugged or blinded screen, or in any way exhibits a condition that meets or exceeds the manufacturer's guidelines for requiring maintenance..."</b>
C.10.b. Demonstration of Trash Reduction Outcomes - i. Full Trash Capture Systems ; b. Maintenance Triggers	No changes from MRP 2.0.	No major issues.	None
C.10.b. Demonstration of Trash Reduction Outcomes - ii. Maintenance Records	Minor enhancements to data tracking. Not identified as a significant issue.	Will require additional tracking and reporting.	None
C.10.b. Demonstration of Trash Reduction Outcomes - ii. Maintenance Records; a. Certification	In MRP 3.0, Certification is now included under Maintenance Records. There are no language changes in C.10.b.ii.a. from MRP 2.0.	No major issues.	None
C.10.b. Demonstration of Trash Reduction Outcomes - ii. Maintenance Records; b. Certification	Language was added, requiring Permittees, in their 2024 Annual Report, to 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 is required to include, but not be limited to, a detailed description of common issues associated with the O&M 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.	Will require additional compilation of data and enhanced reporting at the County level.	Justification and benefit is unclear. Remove requirement if benefit can't be stated and/or if the report is identified a low priority, compared to many other new/enhanced actions included throughout the TO.
C.10.b. Demonstration of Trash Reduction Outcomes - iii. Other Trash Management Actions	No changes from MRP 2.0.	No major issues.	None

C.10 Trash Load Reduction

11/16/2021

Subprovision	Description of Change from MRP 2.0 to MRP 3.0 Tentative Order	Key Issues/Concerns	Response/Recommendation
C.10.b. Demonstration of Trash Reduction Outcomes - iii. Other Trash Management Actions; a. Implementation Documentation	No changes from MRP 2.0.	No major issues.	None
C.10.b. Demonstration of Trash Reduction Outcomes - iii. Other Trash Management Actions; b. Visual Assessment of Outcomes of Other Trash Management Actions	Certain paragraphs with redundancy were rewritten for clarity. Requirements did not change from MRP 2.0.	No major issues.	None
C.10.b. Demonstration of Trash Reduction Outcomes - iv. Percentage Discharge Reduction	No changes from MRP 2.0.	No major issues.	None
C.10.b. Demonstration of Trash Reduction Outcomes - v. Source Control	Changes to source control credits, including which actions are permissible for source control credit. As proposed, Permittees will no longer be permitted to take credit for single-use carryover plastic bag and expanded polystyrene food service ware ordinances.  Also, credit for implementing new source control measures will be phased out at the end of this permit term (i.e., it can not be applied towards the 100% compliance benchmark).	Modifications proposed in the Admin Draft eliminate the impetus for enforcing existing source control ordinances and adopting new/expanded ordinances. Specifically:  - Disallowing credits for existing source control actions that are accounted for in MRP 2.0 does not acknowledge the ongoing benefits of these actions.  - By not allowing source control credits towards the 100% benchmark, the longer-term benefits of these actions are not recognized.	Credits for existing source control actions allowed in MRP 2.0 should remain in MRP 3.0. Credits for additional/new source control actions should also be allowed.  Credits for existing and additional/new source controls should be allowed towards the 100% compliance benchmark.
C.10.b. Demonstration of Trash Reduction Outcomes - vi. Partial Trash Reduction - Curb Inlet Screens	New provision. Optional to Permittees. Permittees may demonstrate through further assessment and study 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 conditions presented in the subprovision. Permittees are required to submit study results for Executive Officer approval prior to accounting for curb inlet screens.	Will require additional resource expenditures to conduct an additional study. Doesn't use the results of the recently completed studies as justification for reductions in moderate areas.	Results of existing studies are sufficient to acquire 100% reduction credit for moderate trash generating area. At a minimum 100% reduction should be "provisionally" allowed during MRP 3.0 as information gaps are addressed during MRP 3.0. Remove language/requirement for additional study or minimize to allow for reduced level of analysis needed to address highest priority information gaps.
C.10.c. Requirements for Flood Management Agencies	New subprovision. Generally consistent with MRP 2.0 language/requirements, but also adds the following language: "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.ii."	Language references "full" capture systems, which the examples are not certified as "full capture".  New language requires additional resource expenditures to address new requirements. Requirements are not directly associated with MS4 discharges.	Delete the word "full" since the devices mentioned are not certified as trash full capture.  <del>Remove all of the following language: "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.ii."</del>
C.10.d. Trash Load Reduction Plans - i.	No changes from MRP 2.0.	No major issues.	None
C.10.d. Trash Load Reduction Plans - ii.	Language was added requiring Permittees unable to attain a 90 percent trash load reduction, relative to 2009 baseline conditions, calculated without source control credits described in Provision C.10.b.v and/or offsets described in Provision C.10.f, by June 30, 2023, to develop and implement an updated Trash Load Reduction Plan. The Trash Load Reduction Plan is required to include detailed implementation actions and a schedule to attain a 100 percent reduction from 2009 levels, achieved through implementation of full trash capture, or other equivalent actions, consistent with the requirements of the Provision, by June 30, 2025. Permittees are required to submit their updated Trash Load Reduction Plans with their 2023 Annual Report.	Source controls credits should be allowed towards 100%, so they should not be eliminated from consideration. Source controls are allowable under the Statewide Trash Amendments.  Consistent with comments above, timeframes for achieving compliance benchmarks are impracticable.	Modify language to allow source controls to be used to demonstrate 100% compliance benchmark.  Extend deadline to achieve 90% and 100% benchmarks by two years to July 1, 2025 and July 1, 2027, respectively.  Extend deadline for updated plan submittal to March 31, 2026 to allow for sufficient time to identify controls and develop plan.
C.10.d. Trash Load Reduction Plans - iii. Mandatory Minimum Full Trash Capture Systems	Language was added requiring Permittees unable to attain 100 percent trash load reduction, relative to 2009 baseline conditions, by July 1, 2025, while accounting for credits from new source controls (as described in Provision C.10.b.v) may be granted additional time until July 1, 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.	Consistent with comments above, timeframes for achieving compliance benchmarks are impracticable.  Extension of one year for development and implementation of DD plan provides little/no impetus.	Extend deadline to achieve 100% benchmark by two years to July 1, 2027.  Extend additional time to achieve 100% to July 1, 2030 if Direct Discharge Control Plan is submitted.
C.10.e. Trash Reduction Impracticability Report	Optional provision. Language was added to allow Permittees to 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 report will be used by Permittees when developing the updated Trash Load Reduction Workplans required pursuant to Provision C.10.d.	Although it will require additional resources to produce, could provide basis for determining "impracticability" for reducing trash in specific areas via full capture or to low trash generation levels, and alternatives to the compliance pathways described in the MRP. Timeframe for submittal is somewhat problematic, however.	Extend timeframe to complete report by one year. (i.e., from March 31, 2023 to March 31, 2024.)
C.10.f. Optional Trash Load Reduction Offset Opportunities - i. Additional Creek and Shoreline Cleanup	Language was added to indicate that the offset is only available towards the 90% compliance benchmark in 2023. The offset is not available for the 100% compliance benchmark.	Proposed language reduces the tools that Permittees can use to demonstrate attainments of compliance benchmarks. Creek and shoreline cleanups provide invaluable direct water quality benefits and engage community members in environmental stewardship projects. Additionally, the State Trash Amendments allow for the use of creek and shoreline offsets to demonstrate achievement of trash goals.	Language should be changed to allow offsets to continue towards 100% trash reduction goal. Extending compliance benchmark to 2027 will allow the Water Board and SMCWPPP to work with State Water Board staff to develop and adopt an updated policy that allows for offsets to occur.
C.10.f. Optional Trash Load Reduction Offset Opportunities - ii. Direct Trash Discharge Controls	New requirement for approved DTDC plans to be resubmitted.  New/expanded requirements for what must be included/addressed by DTDC plans.  Offsets associated with DTDCs are no longer allowed towards the 100% compliance benchmark.	Resubmittals of existing Direct Trash Discharge Control Plans are unnecessary. Resubmittals cause an administrative burden. Additionally, the timeline for resubmittal is impractical.  Expanded tracking and reporting requirements create significant resource burdens.  Removal of the offset for DTDC plans towards the 100% compliance benchmark disincentivizes the trash prevention and cleanup actions that provide direct water quality benefits to continue/expand and the development of new DTDC plans.	Remove language requiring resubmittal of existing DTDC plans.  Reduce tracking and reporting requirements to MRP 2.0 levels.  Allow the use of offsets for DTDC plans towards the 100% compliance benchmark as described in MRP 2.0.
C.10.g. Reporting - i. Description of Trash Control Actions	No changes from MRP 2.0.	No major issues.	None
C.10.g. Reporting - ii. Submittal of updated Trash Generation Map	Annual reporting requirement reduced to once during permit term. Permittees, in their 2024 Annual Report submit a revised trash generation area map or maps, as described in Provision C.10.a.ii.	No major issues.	None
C.10.g. Reporting - iii. Trash Load Reduction Progress	Similar to MRP 2.0 language.	No major issues.	None
C.10.g. Reporting - iv. Full Capture Certification	No changes from MRP 2.0.	No major issues.	None
C.10.g. Reporting - v. Program wide Full Capture System O&M Evaluation	New report. With their 2023 Annual Report provide 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.	Will require additional compilation of data and enhanced reporting at the County level.	Justification and benefit is unclear. Remove requirement if benefit can't be stated and/or if the report is identified a low priority, compared to many other new/enhanced actions included throughout the Admin Draft.

C.10 Trash Load Reduction

Subprovision	Description of Change from MRP 2.0 to MRP 3.0 Tentative Order	Key Issues/Concerns	Response/Recommendation
C.10.g. Reporting - vi. OVTAs	This reporting requirement was also in MRP 2.0. No change.	No major issues.	None
C.10.g. Reporting - vii. Notice of Non-compliance with 90% and viii. Updated Trash Load Reduction Plan	Language was added, requiring that 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.23.c. and an updated Trash Load Reduction Plan as described in Provision C.10.d.ii.	Consistent with comments above, timeframes for achieving compliance benchmarks are impracticable.  Should timeframe of June 30, 2023 remain, timeframe for submittal of non-compliance is impractical given that on-land assessments will not be complete until the end of June 2025, time date that the submittal is due. Once data collection efforts are complete, time is needed to apply quality assurance and data validation procedures, and to calculate load reductions associated with data collected.	Extend deadline to achieve 90% and 100% benchmarks by two years to July 1, 2025 and July 1, 2027, respectively.  Change language so that the 90% benchmark is a non-enforceable target, but still requires that an updated plan be submitted.  Should timeframe of June 30, 2023 remain, extend timeframe for submittal of non-compliance to September 30, 2023, with the 2025 annual report.
C.10.g. Reporting - ix. Notice of Non-compliance with 100%	Language was added, requiring that 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 and 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.	Timeframe for submittal of non-compliance is impractical given that on-land assessments will not be complete until the end of June 2025, time date that the submittal is due. Once data collection efforts are complete, time is needed to apply quality assurance and data validation procedures, and to calculate load reductions associated with data collected.  Extension of one year of additional time for submitting a DDCP is not enough of an incentive for Permittees to develop a DDCP.	Extend timeframe for submittal of non-compliance to September 30, 2025, with the 2025 annual report.  Extend additional time to 2030 (as allowed in Trash Amendments) if DDCP is submitted.
C.10.g. Reporting - x. Impracticability Report	Optional Provision for Permittees to 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.	Although it will require additional resources to produce, could provide basis for determining "impracticability" for reducing trash in specific areas via full capture or to low trash generation levels, and alternatives to the compliance pathways described in the MRP.	None.
C.10.g. Reporting - xi. Summary of Water Quality Benefits of Creek/Shoreline Cleanups	Requirement for 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, submit a summary of the additional cleanup actions implemented, and the benefit to water quality achieved through those actions with their 2024 Annual Report.	Although it will require additional resources to produce, could provide basis for allowing offsets for creek/shoreline cleanups to achieve/maintain 100% load reduction compliance benchmark.	None.
C.10.g. Reporting - xii. Direct Trash Discharge Control Plans	Requirement for Permittees that offset part of their Provision C.10.a trash load percent reduction requirement via an approved DTDC plan, annually submit significant amounts of information.	Expanded tracking and reporting requirements create significant resource burdens. Disincentivizes development of DTDC plans.	Reduce tracking and reporting requirements to MRP 2.0 levels.
Fact Sheet - Provision C.10.g - Direct Trash Discharge Controls	Fact Sheet not included in Admin Draft.	The Fact Sheet states that "The State Trash Amendments do not allow offset credit for direct discharge controls in lieu of implementing M54 controls to meet the Trash Discharge Prohibition." This statement is not true and should be removed. The State Trash Amendments exclude the SF Bay Area from the explicit requirements in the amendments, and the amendments state that the Region 2 MRP approach (which includes Creek Cleanup and Direct Discharge offsets) is a Track 2 approach that is consistent and acceptable under the Amendments.	Remove Fact Sheet language stating that the State Amendments do not allow for offset credit for direct discharge controls.

C.11 Mercury Controls

11/16/2021

Subprovision	Description of Change from MRP 2.0 to MRP 3.0 Tentative Order	Key Issues/Concerns	Response/Recommendation
C.11.a. Assess Mercury Load Reductions from Stormwater	Similar overall to MRP 2.0, but refers to the load reduction accounting methodology described in the Fact Sheet, which is the revised methodology that Permittees (will submit) to WB in October 2021 (to replace the version that was submitted in Sept 2020).	*The Factsheet currently references the 2020 accounting methodology; this has been revised and will be submitted to WB in Oct 2021 - the 2021 version of the SCLRA report should be referenced in the Factsheet. *What does "public review" entail?	Provide approval of the revised methodology submitted in October 2021 and cite in the Fact Sheet.  Delete the statement in C.12.a.iii.(2) for "any refinements to the methodologies shall be subject to public review." Any refinements to the accounting methodology are already required to obtain Executive Officer approval. Public review is not clearly defined and is not necessary.
C.11.a. Assess Mercury Load Reductions from Stormwater	In each Annual Report, Permittees shall demonstrate 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.	The current language does not specify how Permittees would make this demonstration.	None.
C.11.a. Assess Mercury Load Reductions from Stormwater	In the 2026 Annual Report, Permittees required to report the cumulative mercury load reduced from each control measure implemented since the beginning of the Permit term.		Extend due date to submit with Report of Waste Discharge, which will be due six months prior to the permit termination date. This is the appropriate submittal for this type of information.
C.11.b. Program for Source Property Identification and Abatement	This new sub-provision requires Permittees to implement a Source Property Identification and Abatement Program during the permit term. Permittees are required to 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 are required to 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 are required to 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 are required to 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. San Mateo County Permittees are required to investigate 1,411 acres of likely mercury source properties.	SMCWPPP Permittees have made substantial progress towards conducting source investigations on old industrial areas. Investigations have already begun in some of the remaining 1,411 acres of old industrial areas and will continue during the permit adoption period, which will result in a reduced total number of acres remaining to be investigated at the start of MRP 3.0 in July 2022. All investigation work conducted by Permittees since January 2021 to investigate any of the remaining 1,411 acres should be allowed to count toward compliance with this provision.  The methods that Permittees will be required to use to conduct source property investigations are briefly described in the Factsheet and more description of the process is provided via reference to the 2020 SCLRA report. However, that report will be replaced by an updated/revised version prior to the start of the permit term, which no longer includes the detailed description of the source investigation process. The Factsheet would need to reference the version of the 2020 SCLRA report for that description. These methods are similar to those used by Permittees during MRP 2.0.	The Factsheet should reference the appropriate versions of the SCLRA report.  Explicitly state in the Fact Sheet that source property investigations that began prior to the effective date of MRP 3.0, but were not completed until after December 2020 (end of MRP 2.0) will be allowed to be counted towards the acreage requirement included in this provision.
C.11.c. Program for Treatment Control Measures in Old Industrial Areas	This new sub-provision requires Permittees to implement a Program for Treatment Control Measures in Old Industrial Areas. San Mateo County Permittees are required to implement control measures (treatment controls, diversion to wastewater treatment plants, or enhanced operation and treatment controls) in 30% of 4,450 acres of old industrial land use in SM County draining to an MS4 that have not been redeveloped or treated with GI or other treatment controls, or an equivalent mass reduction of mercury of 19 g/yr. 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 moderate to high mercury or PCBs soil concentrations (generally sediment concentrations greater than 0.3 mg mercury/kg or 0.2 mg PCBs/kg). 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.	The TO currently requires SMCWPPP co-permittees to address 445 acres of old industrial/moderate areas during the permit term with 70% treatment efficiency or achieve a load reduction of 19 grams/year.  Performance metrics may not be achievable within the permit term – thus no clear path to compliance.  Private properties are sources but PCBs containing sediments spread throughout urban landscape over many decades.  Need more time to: -Gather additional monitoring data to better delineate hot vs. warm vs. cold areas. -Work with private property owners to turn off tap.  -Plan cost-effective control strategies, including accounting for redevelopment occurring over time.	Adjust performance metrics downwards to achievable, practicable level. The actions required over the MRP 3.0 permit term should focus on addressing a realistic portion of the about 300 acres of old industrial land use areas currently identified via monitoring (and not redeveloped or treated by green infrastructure) to have moderate levels of PCBs. MRP 3.0 should require that a plan be developed early in the permit term to describe the process and actions that permittees can implement or cause to be implemented to address PCBs on these properties over the permit term.  Requirements should be phased over additional years and permit terms to allow enough time to:  -Gather additional monitoring data to better delineate hot vs. warm vs. cold areas.  -Work with private property owners to turn off tap.  -Plan cost-effective control strategies, including accounting for redevelopment occurring over time.
C.11.c. Program for Treatment Control Measures in Old Industrial Areas	Provides example load reduction calculation methods.	Need to clarify that all treatment/controls will be credited consistent with SCLRA methods. Enhanced source ID/abatement efforts should be credited here in addition to referrals made under C.11.b. program. O&M associated with source property referrals should be credited under C.11.c.	Clarify that all treatment/controls will be credited consistent with SCLRA methods. Enhanced source ID/abatement efforts should be credited under C.11.c. whereas referrals are credited under C.11.b. program. But O&M associated with source property referrals should be credited under C.11.c.
C.11.d. Mercury Collection and Recycling implemented throughout the Region	This sub-provision has requirements similar to those included in MRP 1.0 but not in MRP 2.0. Permittees are required to 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 this provision requires promotion, facilitation and/or participation in these region-wide recycling efforts to increase effectiveness and public participation.	During MRP 2.0, SMCWPPP maintained the reporting of the estimated mass of mercury collected via the Household Hazardous Waste (HHW) and Very Small Quantity Generator Business Collection (VSQGI) programs, so continuing this type of reporting during MRP 3.0 should not be a large burden. However, this subprovision includes a new requirement for Permittees to report on efforts to promote recycling of mercury-containing products and efforts to increase effectiveness of these recycling efforts.	None.
C.11.e. Plan and Implement Green Stormwater Infrastructure to Reduce Mercury Loads	This sub-provision is substantially revised and simplified compared to MRP 2.0. Mercury load reductions via GI are not mandated. Permittees are instead required to implement GI projects during the term of the Permit consistent with requirements in Provision C.3.	See comment on provision C.3	See comment on provision C.3
C.11.f. Prepare Implementation Plan and Schedule to Achieve TMDL Wasteload Allocations	This sub-provision requires updates to the RAA and Implementation Plan and Schedule to achieve TMDL WLAs that was submitted during MRP 2.0 to include controls that weren't reported or for which new info is available, and to include controls to be implemented during MRP 3.0 and subsequent permit terms. Permittees are required to identify all specific control measures to be implemented, the intensity of control measure implementation, accountability metrics to track, and the estimated load reduction benefit from control measures implemented during the subsequent permit term. The updated Implementation Plan and Schedule to Achieve TMDL Wasteload Allocations is due March 31, 2026.	Due same due date as the IMR, which is approximately 6 months earlier in the permit term than the similar submittal made during MRP 2.0.	Consider extending due date to submit with Report of Waste Discharge, which is due six month prior to the termination date of the permit and is the appropriate submittal for this type of information.

C.11 Mercury Controls

11/16/2021

Subprovision	Description of Change from MRP 2.0 to MRP 3.0 Tentative Order	Key Issues/Concerns	Response/Recommendation
C.11.g. Fate and Transport Study of Mercury: Urban Runoff Impact on San Francisco Bay Margins	New subprovision added to address mercury (this was an existing subprovision in MRP 2.0 for PCBs but not mercury). Permittees are required to 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.	None - it is anticipated that this work will continue to be mainly addressed by participation in the RMP.	None.
C.11.h. Implement a Risk Reduction Program	Similar to MRP 2.0 sub-provision requiring implementation of a risk reduction program, but with added direction for Permittees. New direction includes stating 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. In addition, Permittees are encouraged to collaborate with San Francisco Bay industrial and wastewater discharger agencies in meeting this requirement.	None.	None.

C.12 PCBs Controls

Subprovision	Description of Change from MRP 2.0 to MRP 3.0 Tentative Order	Key Issues/Concerns	Response/Recommendation
C.12.a. Assess PCBs Load Reductions from Stormwater	Similar overall to MRP 2.0, but refers to the load reduction accounting methodology described in the Fact Sheet, which is the revised methodology that Permittees (will submit) to WB in October 2021 (to replace the version that was submitted in Sept 2020).	*The Factsheet currently references the 2020 accounting methodology; this has been revised and will be submitted to WB in Oct 2021 - the 2021 version of the SCLRA report should be referenced in the Factsheet. *What does "public review" entail?	Provide approval of the revised methodology submitted in October 2021 and cite in the Fact Sheet.  Delete the statement in C.12.a.iii.(2) for "any refinements to the methodologies shall be subject to public review." Any refinements to the accounting methodology are already required to obtain Executive Officer approval. Public review is not clearly defined and is not necessary.
C.12.a. Assess PCBs Load Reductions from Stormwater	In each Annual Report, Permittees shall demonstrate 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.	The current language does not specify how Permittees would make this demonstration.	None.
C.12.a. Assess PCBs Load Reductions from Stormwater	In the 2026 Annual Report, Permittees required to report the cumulative PCBs load reduced from each control measure implemented since the beginning of the Permit term.		Extend due date to submit with Report of Waste Discharge, which will be due six months prior to the permit termination date. This is the appropriate submittal for this type of information.
C.12.b. Program for Source Property Identification and Abatement	This new sub-provision requires Permittees are required to implement a Source Property Identification and Abatement Program during the permit term. Permittees are required to investigate, using both conventional sampling and laboratory analysis techniques, land areas that likely contribute PCBs 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 PCBs or where high PCBs concentrations are found (generally areas with sediment concentrations greater than 0.5 mg PCBs/kg), Permittees are required to take action to abate the PCBs 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 are required to 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 are required to 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. San Mateo County Permittees are required to investigate 1,411 acres of land areas that likely contribute PCBs to MS4s (i.e., old industrial land uses).	SMCWPPP Permittees have made substantial progress towards conducting source investigations on old industrial areas. Investigations have already begun in some of the remaining 1,411 acres of old industrial areas and will continue during the permit adoption period, which will result in a reduced total number of acres remaining to be investigated at the start of MRP 3.0 in July 2022. All investigation work conducted by Permittees since January 2021 to investigate any of the remaining 1,411 acres should be allowed to count toward compliance with this provision.  The methods that Permittees will be required to use to conduct source property investigations are briefly described in the Factsheet and more description of the process is provided via reference to the 2020 SCLRA report. However, that report will be replaced by an updated/revised version prior to the start of the permit term, which no longer includes the detailed description of the source investigation process. The Factsheet would need to reference the version of the 2020 SCLRA report for that description. These methods are similar to those used by Permittees during MRP 2.0.	The Factsheet should reference the appropriate versions of the SCLRA report.  Explicitly state in the Fact Sheet that source property investigations that began prior to the effective date of MRP 3.0, but were not completed until after December 2020 (end of MRP 2.0) will be allowed to be counted towards the acreage requirement included in this provision.
C.12.c. Program for Treatment Control Measures in Old Industrial Areas	This new sub-provision requires Permittees to implement a Program for Treatment Control Measures in Old Industrial Areas. San Mateo County Permittees are required to implement control measures (treatment controls, diversion to wastewater treatment plants, or enhanced operation and treatment controls) in 10% of 4,450 acres of old industrial land use in SM County draining to an MS4 that have not been redeveloped or treated with GI or other treatment controls, or an equivalent mass reduction of PCBs of 81 g/yr. 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 moderate to high mercury or PCBs soil concentrations (generally sediment concentrations greater than 0.3 mg mercury/kg or 0.2 mg PCBs/kg). 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.	The TO currently requires SMCWPPP co-permittees to address 445 acres of old industrial/moderate areas during the permit term with 70% treatment efficiency or achieve a load reduction of 81 grams/year.  Performance metrics may not be achievable within the permit term – thus no clear path to compliance.  Private properties are sources but PCBs containing sediments spread throughout urban landscape over many decades.  Need more time to: -Gather additional monitoring data to better delineate hot vs. warm vs. cold areas. -Work with private property owners to turn off tap. -Plan cost-effective control strategies, including accounting for redevelopment occurring over time.	Adjust performance metrics downwards to achievable, practicable level. The actions required over the MRP 3.0 permit term should focus on addressing a realistic portion of the about 300 acres of old industrial land use areas currently identified via monitoring (and not redeveloped or treated by green infrastructure) to have moderate levels of PCBs. MRP 3.0 should require that a plan be developed early in the permit term to describe the process and actions that permittees can implement or cause to be implemented to address PCBs on these properties over the permit term.  Requirements should be phased over additional years and permit terms to allow enough time to: -Gather additional monitoring data to better delineate hot vs. warm vs. cold areas. -Work with private property owners to turn off tap. -Plan cost-effective control strategies, including accounting for redevelopment occurring over time.
C.12.c. Program for Treatment Control Measures in Old Industrial Areas	Provides example load reduction calculation methods.	Need to clarify that all treatment/controls will be credited consistent with SCLRA methods. Enhanced source ID/abatement efforts should be credited here in addition to referrals made under C.12.b. program. O&M associated with source property referrals should be credited under C.12.c.	Clarify that all treatment/controls will be credited consistent with SCLRA methods. Enhanced source ID/abatement efforts should be credited under C.12.c. whereas referrals are credited under C.12.b. program. But O&M associated with source property referrals should be credited under C.12.c.
C.12.d. Program for Controlling PCBs in Stormwater Infrastructure	This new sub-provision requires Permittees to implement a Program for Controlling PCBs in Stormwater Infrastructure during the permit term. Permittees are required to implement a Caltrans specification (to be developed through proposed requirement in Caltrans stormwater permit, see Fact Sheet for details) to manage, as part of 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. Permittees are required to 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.	The accountability metric is not clearly stated.	The accountability metric should be stated as implementation of the control program as specified in this subprovision.
C.12.d. Program for Controlling PCBs in Stormwater Infrastructure	Permittees are required, by December 31, 2022, or six months after availability of the specification, to implement or cause to be implemented the Caltrans specification during applicable replacement activities that are under the direction of the Permittee.		None.

C.12 PCBs Controls

Subprovision	Description of Change from MRP 2.0 to MRP 3.0 Tentative Order	Key Issues/Concerns	Response/Recommendation
C.12.e. Program for Controlling PCBs from Electrical Utilities	This new sub-provision requires Permittees to implement a Program Controlling PCBs from Electrical Utilities during the permit term. Permittees are required to 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 to collaborate with the Water Board to determine PCBs loadings in OFEE from non-municipally owned electrical utilities. Permittees are required to (1) develop and implement improved standard operating procedures to address spill response and reporting practices for releases from municipally owned OFEE, (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, and (4) collaborate with the Water Board to request information from non-municipally owned electrical utilities so that the Permittees can (a) utilize the information to determine the locations of PCBs-containing OFEE, (b) improve estimates of the total baseline mass of PCBs that have been used 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.	Permittee vs. Water Board staff roles are unclear for the requirement to "collaborate with Water Board". Permittees have limited ability to require PG&E to provide information and are reliant on Water Board staff to use their regulatory authority to compel PG&E to cooperate with any information requests.	Program staff will work with other Bay Area stormwater program reps and Water Board staff to clarify Water Board staff's role in using their regulatory authority to compel PG&E to cooperate with any information requests.
C.12.e. Program for Controlling PCBs from Electrical Utilities	Reporting requirements include (1) submitting in 2023 Annual Report the estimated PCBs loads avoided (along with supporting documentation) resulting from the removal of PCBs-containing OFEE through maintenance programs and system upgrades for the period 2002 up through the beginning of this permit term (2023), (2) submitting in 2023 Annual Report a description of the improved spill response practices implemented by municipally-owned electrical utilities, (3) submitting in 2024 Annual Report a summary of plans to maintain and upgrade OFEE for municipally owned electrical utilities, (4) submitting in every Annual Report, beginning with the 2022 report, a summary of the actions undertaken during that reporting year that remove PCBs-containing OFEE along with the loads avoided and the details of the calculations and assumptions used to estimate the load reduced, (5) submitting in 2026 Annual Report, as part of reporting under C.12.a.iii(2), the estimated PCBs loads reduced during the permit term associated with OFEE removal via ongoing maintenance programs and system upgrades, and (6) within 12 months of receiving the requested information from the non-municipally owned electrical utilities, submitting a report discussing (a) locations of the PCBs-containing OFEE still in service, (b) previous locations of PCBs-containing OFEE, and (d) opportunities to improve non-municipally owned electrical utilities' standard operating procedures for spill response, reporting, cleanup, and sampling and analysis	Requirement includes actions that are beyond the control of Permittees. Requirements depend upon PG&E information to be fulfilled.	Provision should be revised to only include requirements specific to MRP Permittees.
C.12.f. Plan and Implement Green Stormwater Infrastructure to Reduce PCBs Loads	This sub-provision is substantially revised and simplified compared to MRP 2.0. PCBs load reductions via GI are not mandated. Permittees are instead required to implement GI projects during the term of the Permit consistent with requirements in Provision C.3.	See comments on provision C.3.	See comments on provision C.3.
C.12.g. Manage PCB-Containing Materials and Wastes During Building Demolition Activities	Similar to MRP 2.0 subprovision requiring Permittees to manage PCB-containing materials and wastes during building demolition activities. However, new requirements would expand the oversight, tracking, and reporting required of municipal staff.	Requirements would expand the oversight, tracking, and reporting procedures developed and implemented as part of the protocol in MRP 2.0 and thus increase the burden on municipal staff without demonstrably leading to improvements in water quality. The program would no longer be self-certifying as originally designed.	The MRP 2.0 requirements should be retained rather than placing additional burdens on permittees.
C.12.h. Prepare Implementation Plan and Schedule to Achieve TMDL Wasteload Allocations	This sub-provision requires updates to the RAA and Implementation Plan and Schedule to achieve TMDL WLAs that was submitted during MRP 2.0 to include controls that weren't reported or for which new info is available, and to include controls to be implemented during MRP 3.0 and subsequent permit terms. Permittees are required to identify all specific control measures to be implemented, the intensity of control measure implementation, accountability metrics to track, and the estimated load reduction benefit from control measures implemented during the subsequent permit term. The updated Implementation Plan and Schedule to Achieve TMDL Wasteload Allocations is due March 31, 2026.	Due same due date as the IMR, which is approximately 6 months earlier in the permit term than the similar submittal made during MRP 2.0.	Consider extending due date to submit with Report of Waste Discharge, which is due six month prior to the termination date of the permit and is the appropriate submittal for this type of information.
C.12.i. Fate and Transport Study of PCBs: Urban Runoff Impact on San Francisco Bay Margins	Similar to MRP 2.0 subprovision requiring Permittees to 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.	None - it is anticipated that this work will continue to be mainly addressed by participation in the RMP.	None.
C.12.j. Implement a Risk Reduction Program	Similar to MRP 2.0 sub-provision requiring implementation of a risk reduction program, but with added direction for Permittees. New direction includes stating 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. In addition, Permittees are encouraged to collaborate with San Francisco Bay industrial and wastewater discharger agencies in meeting this requirement.	None.	None.

C.13 Copper Controls

11/16/2021

Subprovision	Description of Change from MRP 2.0 to MRP 3.0 (text change in TO in red)	Key Issues/Concerns	Response/Recommendation
C.13.a. Manage Waste Generated from Cleaning and Treating of Copper Architectural Features, Including Copper Roofs, during Construction and Post-Construction	Reporting (1) In the 2022 Annual Report, <del>those the</del> Permittees <del>that have not previously done so</del> 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.	With this wording, the RWB could receive some ARs with no certification that could mean they already certified or the Permittee can't certify. Recommend just having each Permittee certify legal authority in the 2022 AR, even if they previously certified.	Reporting (1) In the 2022 Annual Report, <del>those the</del> Permittees <del>that have not previously done so</del> 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.
C.13.b. Manage Discharges from Pools, Spas, and Fountains that Contain Copper- Based Chemicals	iii. Reporting: (1) In the 2022 Annual Report, the Permittees <del>that have not previously done so</del> 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.	With this wording, the RWB could receive some ARs with no certification that could mean they already certified or the Permittee can't certify. Recommend just having each Permittee certify legal authority in the 2022 AR, even if they previously certified.	iii. Reporting: (1) In the 2022 Annual Report, the Permittees <del>that have not previously done so</del> 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.

C.15 Exempted and Conditionally Exempted Discharges

Subprovision	Description of Change from MRP 2.0 to MRP 3.0 (text change in TO in red)	Key Issues/Concerns	Response/Recommendation
C.15.b.i.(2) Pumped Groundwater, Foundation Drains, and Water from Crawl Space Pumps and Footing Drains	Updated EPA sampling methods and reporting limits. Added chromium III, manganese, and chlorine, total residual reporting limit to (b)(ii) table.	Total Residual Chlorine is not an appropriate sampling parameter for groundwater and should be removed from the table.	Remove total residual chlorine from the list of sampling parameters.
C.15.b.iii Discharge Type – Emergency Discharges of Firefighting Water and Foam	Significant change in requirements.	Described in the rows below.  Over-regulation of firefighting activities during emergency situations. Municipal Fire Department representatives do not believe these specific requirements are needed or appropriate. Adds requirements for Permittees regarding things over which they have no jurisdiction. Greatly increases reporting requirements.	See rows below.
C.15.b.iii Discharge Type – Emergency Discharges of Firefighting Water and Foam	(1) Emergency Discharges—Discharges resulting from emergency firefighting activities	This is repetitive of Subprovision title.	Delete and reformat numbering.
C.15.b.iii - (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):	No issues identified  We support the idea of a Working Group to discuss potential issues with emergency firefighting discharges. There are a significant amount of new requirements with very little knowledge, background or research to support them. There are statements in the Fact Sheet that demonstrate a lack of understanding of Fire Departments, fire response and post-fire clean-up. Without this basic understanding it is detrimental to include so many new, specific requirements. For example, the Fact Sheet states: "The Permittees estimate that a portion of fires are fought not with municipal resources, but by private firefighting crews." This is not accurate. There are no "private" firefighting crews we are aware of in the Bay Area. During meetings with RWB staff Permittees expressed concern that not all Permittees, e.g. cities, have direct oversight over the Fire Departments that operate in their jurisdiction. These Fire Departments are still public agencies. For example, the Alameda County Fire Department operates in the City of Emeryville. Another example is the Menlo Park Fire District (MPFD) that provides fire protection services to Menlo Park, East Palo Alto, Atherton and portions of Unincorporated San Mateo County. The MPFD is not a department within these cities, it is a separate public agency. Therefore the cities this District serve do not have direct oversight.  This permit cycle should be used to learn more about the resources that are available to assist stormwater programs and fire departments meet water quality goals without jeopardizing the protection of life or property, during emergencies.	Retain Working Group but remove specific requirements in (ii)-(v).
C.15.b.iii - (2) Regional Coordination	(ii) Assess the adequacy of existing BMPs and standard operating procedures (SOPs) for containment and cleanup of firefighting water and foam discharged during emergencies, including coordination within and between municipal departments, districts and jurisdictions, coordination between firefighting personnel and containment and cleanup crews, and coordination with contracted staff, 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.	This task should not be included under Regional Coordination. Permittees should not collectively review individual agency SOPs/BMPs, etc. The Regional Work Group should be a place to share ideas, experiences, etc. The information from the Regional Work Group would need to be brought back to countywide and/or local agencies and used, as appropriate and applicable.  Cleanup BMPs/SOPs should only be for fires that occur in municipal/public property or right of way. Fires that occur on private property are the responsibility of the property owner for cleanup.  Should provide flexibility to implement at the individual Permittee, countywide or regional level.	Municipal Fire Department representatives do not believe these specific requirements are needed or appropriate. Recommend replacing the specific requirements with language that would encourage participation in a stakeholder group that would discuss options for Fire Departments and/or Permittees to address water quality concerns related to firefighting discharges.
C.15.b.iii - (2) Regional Coordination	(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, to facilitate containment and cleanup.	This task should not be included under Regional Coordination. Permittees should not "collectively" review individual agency maps. The Regional Work Group should be a place to share ideas, experiences, etc.  Should provide flexibility to implement at the individual Permittee, countywide or regional level.	Municipal Fire Department representatives do not believe these specific requirements are needed or appropriate. Recommend replacing the specific requirements with language that would encourage participation in a stakeholder group that would discuss options for Fire Departments and/or Permittees to address water quality concerns related to firefighting discharges.
C.15.b.iii - (2) Regional Coordination	(iv) Investigate which firefighting foams are the least environmentally harmful, 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.	Permittee ability to identify environmentally harmful foams and influence fire fighting operations is limited. Local stormwater programs should not be responsible for dictating what tools are used to fight fires. Local SW Programs should not be making decisions that have life safety consequences. The resources available to local SW Programs are limited and this topic for investigation would require a significant level of effort. We recommend this specific requirement be removed and only the topic be identified for discussion at the Regional Work Group.  These activities are better suited to be conducted at a State or National level and not have decisions made at a local level. For example, recent State legislation regarding the use of PFAS in firefighting foam.	Limit to discussion in Work Group.
C.15.b.iii - (2) Regional Coordination	(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. Distribute those outreach materials by September 30, 2024.  Subsequently, if it is identified that the outreach materials need to be revised or updated, they shall be revised or updated, and then redistributed.	This task should not be included under Regional Coordination. Permittees should have an option to develop their own outreach materials individually, countywide, or regionally. There is currently no mechanism for regional outreach to be developed.  The deadline should be for the development of outreach materials and not specifically distribution by a certain date. Outreach materials may be posted on websites to reach target audiences but would not be defined as distributing. In addition having a specific due date for distribution implies a single action, i.e. mailout. This type of outreach material is more likely to be distributed on an as-needed basis, potentially by illicit discharge inspectors.  Requirements for outreach do not need to explicitly state that if outreach materials are identified as needing to be revised or updated they shall be and then redistributed. This is unnecessary. It benefits Permittees to have current outreach materials. In every area of implementation, if outreach material is identified as out of date there is an effort to update as needed.	Delete or revise to provide flexibility to implement at the regional, countywide or individual Permittee level.  "Develop outreach materials on cleanup BMPs and SOPs for contractors hired by private parties to participate in the cleanup of discharges of firefighting water and foam associated with firefighting activities. Outreach materials may be developed on a Permittee, Countywide or Regional basis.  Report on outreach development and distribution in 2024 Annual Report."

C.15 Exempted and Conditionally Exempted Discharges

11/16/2021

Subprovision	Description of Change from MRP 2.0 to MRP 3.0 (text change in TO in red)	Key Issues/Concerns	Response/Recommendation
C.15.b.iii - (2) Regional Coordination	(b) Reporting – The Permittees shall collectively submit a Preliminary Report by September 30, 2024, and a Final Report by September 30, 2026, that describe 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).	There is currently no mechanism to have all MRP Permittees work collectively to submit a single report. This subprovision should be rewritten to provide an option for Permittees to work individually, Countywide or Regionwide. In addition, the report should focus on Permittees reporting participation in the Work Group since this should be a time for learning, sharing information, etc.	Revise to report on participation in stakeholder groups individually, Countywide or Regionwide.
C.15.b.iii - (3) Ongoing Implementation Practices	(a) When the Preliminary 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.	All Permittees may not be able to implement all recommendations in a regional or Countywide report. This requirement is too restrictive. In addition, it may not be possible to begin implementation of recommendations upon submittal of a report. As well it is counterproductive to begin implementation of Preliminary Report recommendations to only then, two years later, implement different requirements in the Final Report.	Delete requirement.
C.15.b.iii - (3) Ongoing Implementation Practices	(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.	It should be specified this applies to containment and cleanup activities that do not interfere with immediate emergency response operations or impact public health and safety and for cleanup in Permittee right-of-way.	Revise: <b>Permittees shall ensure proper BMPs and SOPs are included in contracts for non-municipal (contracted) staff hired by Permittees to assist with cleanup activities, that do not interfere with immediate emergency response operations or impact public health and safety, in the public right-of-way or on municipal owned property.</b>
C.15.b.iii - (3) Ongoing Implementation Practices	(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 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.	Is there any demonstration that this is an issue? What is the definition of a "large" industrial site? Just because an IGP facility is large it doesn't mean it has any elevated fire danger or issues.  The gas/chemical facilities identified generally have other regulatory programs (e.g. Spill Prevention, Control, and Countermeasure (SPCC) Plan, etc.) and Hazardous Materials Business Plan program that address emergency response plans. Stormwater Programs should not be reviewing or requiring actions related to firefighting (i.e., actions for stormwater protection may be counter to fire fighting measures). Fire Departments already work with these facilities through the HMBP program. Delete this section.  Stormwater municipal staff should not take on a role of determining fire response preparedness.	Delete requirement.
C.15.b.iii - (3) Ongoing Implementation Practices	(d) By June 30, 2026, Permittees shall require all municipal staff and contracted staff hired by Permittees that participate in the containment and cleanup of discharges of firefighting water and foam associated with firefighting activities within their jurisdictions to attend at least one training on containment and cleanup BMPs and SOPs. Trainings may be region-wide, program wide, or Permittee-specific. Trainings may be made available to contractors hired by private parties.	This training requirement is too restrictive because it states <b>all</b> municipal staff and contracted staff must receive training. Municipalities do not have control over specific personnel sent to job sites from contracted companies. This issue of contracted staff is address by the requirement to include BMPs/SOPs in contracts.  Cleanup of urban fires is not expected to be a potential source. Foam and/or water from firefighting activities has already been discharged. The cleanup is removal of debris and vacuuming/cleaning storm drain systems. Procedures are no different than any other illicit discharge cleanup (i.e. don't wash down, block storm drains for cleanup as needed). Therefore, training of municipal staff is duplicative of Provision C.2 requirements.  Having a due date for <b>all</b> municipal staff trained may lead to Permittees being out of compliance for situations out of their control. Typically training is required under implementation and training progress is reported in Annual Reporting. By having a requirement that all municipal staff are trained by a date essentially requires training occurs on that due date. Otherwise staff hired after training for the year occurs could be out of compliance. Or staff scheduled for training may be called into the field for an emergency and would then need to reschedule training before the due date. While we are requesting this training requirement be deleted, at the very least, it needs to be reworded to remove the date in the implementation section, remove the word "all" and have Permittees report on training progress in Annual Reports (i.e. number of municipal staff trained).	Delete training requirement
C.15.b.iii - (3) Ongoing Implementation Practices	(e) Reporting (i) In their Annual Reports, Permittees shall report on the implementation of Provision C.15.b.iii.(3)(a)-(c).	Increase in reporting requirements.  Overall, reporting requirements have increased, although WB staff and permittees had agreed on a goal to reduce reporting throughout the permit.	Limit reporting requirement to reporting on progress of including proper BMPs and SOPs in contracts for non-municipal (contracted) staff hired by Permittees to assist with cleanup activities, that do not interfere with immediate emergency response operations or impact public health and safety, in the public right-of-way or on municipal owned property.
C.15.b.iii - (3) Ongoing Implementation Practices	(ii) In the 2026 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.	Increase in reporting requirements.  Overall, reporting requirements have increased, although WB staff and permittees had agreed on a goal to reduce reporting throughout the permit.	Delete reporting requirement
C.15.b.iii - (4) Required BMPs	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:  (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;	Over-regulation of firefighting activities during emergency situations. Municipal Fire Department representatives do not believe these specific requirements are needed or appropriate.	Municipal Fire Department representatives do not believe these specific requirements are needed or appropriate. Recommend replacing the specific requirements with language that would encourage participation in a stakeholder group that would discuss options for Fire Departments and/or Permittees to address water quality concerns related to firefighting discharges.

C.15 Exempted and Conditionally Exempted Discharges

Subprovision	Description of Change from MRP 2.0 to MRP 3.0 (text change in TO in red)	Key Issues/Concerns	Response/Recommendation
C.15.b.iii - (4) Required BMPs	(iv) Use of the least environmentally harmful firefighting foams;	Permittee ability to identify environmentally harmful foams and influence fire fighting operations is limited.	Municipal Fire Department representatives do not believe these specific requirements are needed or appropriate. Recommend replacing the specific requirements with language that would encourage participation in a stakeholder group that would discuss options for Fire Departments and/or Permittees to address water quality concerns related to firefighting discharges.
C.15.b.iii - (4) Required BMPs	(v) Avoiding the use of firefighting foam when it is not necessary;	Permittees should not be required to implement measure that could have life and property safety implications. These decisions should only be made by properly trained and knowledgeable Fire Departments.	Delete BMP
C.15.b.iii - (4) Required BMPs	(vi) Use of the proper firefighting foam depending on the type of fire;	Adds requirements for Permittees regarding things over which they have no jurisdiction.	Delete BMP
C.15.b.iii - (4) Required BMPs	(vii) When firefighting foam is used, limiting the amount used;	This should not be a stormwater BMP. How much foam is used should only be determined by Fire Department staff judgement in fighting the fire.	Delete BMP
C.15.b.iii - (4) Required BMPs	(viii) 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.	This should not be a stormwater BMP. Which fires are treated with firefighting foam should be determined by Fire Departments based on their knowledge of the type of fire only and not water quality impacts.	Delete BMP
C.15.b.iii - (5) Reporting	<p>(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.</p> <p>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.</p> <p>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>43</sup>.</p> <p>footnote 43 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.</p>	<p>This is a significant effort of data collection for an emergency response situation.</p> <p>In addition, if discharge is reported to State Warning Center (i.e. Cal OES) these reports are provided to RWB. Therefore, this is duplicative reporting requirements.</p> <p>Given the jurisdictional issues previously discussed, it is unclear how Permittees would require Fire Departments to submit this information for their Annual Reporting requirements.</p>	<p>Municipal Fire Department representatives do not believe these specific requirements are needed or appropriate. Recommend replacing the specific requirements with language that would encourage participation in a stakeholder group that would discuss options for Fire Departments and/or Permittees to address water quality concerns related to firefighting discharges.</p>
C.15.b.iii - (5) Reporting	(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.	<p>This reporting is duplicative of the reporting to the State Fire Marshal under SB 1044. This requirement should be removed from the MRP and the RWB staff can obtain the required information from the State Fire Marshal. At a minimum the reporting requirements should match the SB 1044 reporting requirements to reduce the administrative burden of collecting slightly different information for two regulatory agencies.</p> <p>In addition, this section should specify "use of foam by municipal Fire Department".</p>	Delete reporting requirement.
Fact Sheet	The Permittees estimate that a portion of fires are fought not with municipal resources, but by private firefighting crews. Provision C.15.b.iii.(2) additionally requires the Permittees to collectively (e.g., through the Working Group): 1) develop (and revise on an ongoing basis, as-needed) outreach materials regarding BMPs and SOPs for the containment and cleanup of discharges of firefighting water and foam, for private contractors hired by either Permittees or by private parties to conduct firefighting, containment and cleanup within Permittees' jurisdictions, because a significant portion of fires on private properties are responded to by private contractors hired by the owners of those private properties.	<p>These statements in the Fact Sheet demonstrate a lack of understanding of Fire Departments, fire response and post-fire clean-up. Without this basic understanding it is detrimental to include so many new, specific requirements. For example, the statement: "The Permittees estimate that a portion of fires are fought not with municipal resources, but by private firefighting crews." This is not accurate. There are no "private" firefighting crews we are aware of in the Bay Area. During meetings with RWB staff Permittees expressed concern that not all Permittees, e.g. cities, have direct oversight over the Fire Departments that operate in their jurisdiction. These Fire Departments are still public agencies. For example, the Alameda County Fire Department operates in the City of Emeryville. Another example is the Menlo Park Fire District (MPFD) that provides fire protection services to Menlo Park, East Palo Alto, Atherton and portions of Unincorporated San Mateo County. The MPFD is not a department within these cities, it is a separate public agency. Therefore the cities this District serve do not have direct oversight.</p> <p>In addition, when private property owners contract for clean up services it is after the emergency is over, i.e. the fire is out. There is generally no need for containment because the water and foam used to extinguish the fire are no longer being used. Cleanup activities should be conducted using proper BMPs. These cleanup activities would be addressed through existing Illicit Discharge Detection and Elimination programs without the need for additional requirements.</p>	Revise to accurately reflect how fires are currently fought in most jurisdictions.

C.17 Discharges Associated with Unsheltered Homeless Populations

11/16/2021

Subprovision	Description of Change	Key Issues/Concerns	Response/Recommendation
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 efforts and complaint logs, 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.	Requires additional resources to gain understanding of homeless populations	Provide an exemption for all provision of C.17 if Permittee has no known permanent homeless encampments or if populations in the City are truly transient. Requirements should be commensurate to problem.
C.17.a Permittee Requirements - i. Task Description	(2) To encourage ongoing regional, countywide, and municipal coordination efforts, Permittees shall develop a best management practice report that identifies effective practices to address non-storm water discharges associated with homelessness that impact water quality and specific milestones for reducing such discharges within a given timeframe. The report shall...	Requires additional resources to produce report that will provide little benefit to addressing water quality concerns related to homeless encampments. Provide an option for other methods to document BMPs and share information regionally or statewide.	Require that Permittees communicate successful best management practice implementation among MRP permittees by conducting a workshop at the countywide or regional scale.
C.17.a Permittee Requirements - i. Task Description	(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.	Requires additional resources to produce report. Provide an option for other methods to document BMPs and share information regionally or statewide.	Require that Permittees report in summary format on actions that are currently being implemented to address water quality concerns associated with homeless encampments.
C.17.a Permittee Requirements - i. Task Description	(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.	Requires additional resources to produce report. Provide an option for other methods to document BMPs and share information regionally or statewide.	Require that Permittees report in summary format on actions that are planned to be implemented to address water quality concerns associated with homeless encampments.
C.17.a Permittee Requirements - i. Task Description	(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 had a water quality benefit. Permittees shall consider the practicability of such actions for longer-term implementation.	Requires additional resources to produce report. Provide an option for other methods to document BMPs and share information regionally or statewide.	Remove requirement. Not directly related to water quality concerns.
C.17.a Permittee Requirements - i. Task Description	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, Caltrans, sanitary sewer agencies, flood control districts, railroads, NGOs, social service agencies and organizations, and other agencies.	Requires additional resources to produce report. Provide an option for other methods to document BMPs and share information regionally or statewide (e.g., workshops).	Require that Permittees report in summary format on existing and planned collaborative actions to address water quality concerns associated with homeless encampments.
C.17.a Permittee Requirements - ii. Implementation Level	(1) Each Permittee shall create a map identifying, within its jurisdiction, the location(s) of unsheltered homeless populations, including homeless encampments and other areas where other unsheltered homeless people congregate. The map shall identify the location(s) of unsheltered homeless populations in relation to storm drain inlets and existing streams, rivers, and flood control channels, as well as other surface water bodies, within the Permittee's jurisdiction. The map shall be updated every two years during the Permit term (i.e., in 2023 and 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.	Mapping requires additional resources that provide limited benefit. For some Permittees, homeless populations are not geographically stable and frequently move around throughout communities. Therefore, mapping would not be practical or useful.  Additionally, mapping populations may pose a legal issue, depending on the types of personal information being tracked/mapped.	Remove requirement.
C.17.a Permittee Requirements - ii. Implementation Level	(2) Permittees shall report on the programmatic efforts that are being implemented within their jurisdiction, or at the countywide or regional level, to address discharges associated with homelessness. Examples of these efforts may include 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.	Requires additional resources to produce report. Not aligned with reporting for other programs/drivers.	Explicitly allow the submittal of reports developed via other drivers/programs, as applicable to reduce administrative burden.
C.17.a Permittee Requirements - ii. Implementation Level	(3) The Permittees shall identify and implement appropriate management practices to address discharges associated with homelessness that impact water quality and, as appropriate, public health impacts from such discharges to surface waters. Permittees shall also evaluate and assess the effectiveness of those practices (i.e., by reporting on the control measures being implemented, and the approximate portion of the Permittee's homeless population being served by those 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 cleanup or pickup programs within the Permittee's jurisdiction, or at the countywide or regional level.	Although not a prescriptive requirement, will require additional resources to implement new controls and evaluate the effectiveness of controls.	Minor modifications to language to be recommended.
C.17.a Permittee Requirements - ii. Implementation 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.	Requires additional resources to produce report.	Minor modifications to language to be recommended.

C.17 Discharges Associated with Unsheltered Homeless Populations

11/16/2021

Subprovision	Description of Change	Key Issues/Concerns	Response/Recommendation
C.17.a Permittee Requirements - iii. Reporting	(1) By September 30, 2023, the Permittees shall submit, acceptable to the Executive Officer, a best management practice report as described above. If implementation practices among Permittees in the same county are similar, or coordinated at a countywide level, Permittees may submit their report at a countywide level.	Requires additional resources to produce report. Provide an option for other methods to document BMPs and share information regionally or statewide (e.g., workshops).	Remove requirement.
C.17.a Permittee Requirements - iii. Reporting	(2) By September 30, 2023, and September 30, 2025, Permittees shall submit a map as described in Provision C.15.a.ii.(1).	Mapping requires additional resources that provide limited benefit. For some Permittees, homeless populations are not geographically stable and frequently move around throughout communities. Therefore, mapping would not be practical or useful.  Additionally, mapping populations may pose a legal issue, depending on the types of personal information being tracked/mapped.	Remove requirement.
C.17.a Permittee Requirements - iii. Reporting	(3) By September 30, 2023 and September 30, 2025, Permittees shall provide an update on implementation of best management practices and other control measures to address discharges associated with homelessness as described in Provision C.15.a.ii.(3).	Requires additional resources to produce report. Not aligned with reporting for other programs/drivers.	Minimize reporting and explicitly allow the submittal of reports developed via other drivers/programs, as applicable to reduce administrative burden.

C.20 Cost Reporting

11/16/2021

Subprovision	Description of Change from MRP 2.0 to MRP 3.0 Tentative Order	Key Issues/Concerns	Response/Recommendation
a. Task Description	New Provision. 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.21.b.(v).	Cost reporting required via the State Auditor. Will require additional resources above MRP 2.0. Work Group worked with Water Board staff to craft language included in Admin Draft. Should be clear that the purpose of cost reported is for regulators to understand cost of compliance and not to compare Permittees' costs.	Provide minor modifications to Admin Language. Add statement of purpose in Task Description and in Fact Sheet.
b. Implementation Level - i. Cost Reporting Framework	New Provision. 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.21.b.(v) as compared to costs shared with other programs or regulatory requirements, provide meaningful data to assess costs of different program areas, and allow for comparability between Permittees.	Cost reporting required via the State Auditor. Will require additional resources above MRP 2.0. Work Group worked with Water Board staff to craft language to allow development of acceptable framework rather than conforming to unacceptable State Water Board format.	Provide minor modifications to Admin Language to fix incorrect subprovision reference and delete "allow for comparability between Permittees".
b. Implementation Level - ii. Sources of Funds	New Provision. 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.	Cost reporting required via the State Auditor. Will require additional resources above MRP 2.0. Reporting of estimated future year costs expands scope of what was discussed with Work Group.	Exclude requirement to identify source of funds and reporting of estimated future year costs, as these are not required by federal regulations or to address State Auditor.
b. Implementation Level - iv. Categorization of Reporting	New Provision. Requires addressing costs associated with specific categories.	No issues. Flexibility now provided.	NA
c. Reporting - i. Cost Reporting Framework	New Provision. Submit the cost reporting framework and methodology, acceptable to the Regional Water Board Executive Officer, by December 31, 2022.	Timeframe does not allow for adequate time for development and vetting of framework.	Time frame to complete framework is inadequate. Extensions to timeframes to complete framework and begin report are needed. Recommend submittal of Framework by July 1, 2023 (One year after permit effective date). Assumes EO approval by December 31, 2023 and implementation of tracking guidance between Jan-June 2024. Begin tracking and reporting under new/approved framework in FY 2024/25, not 2023/24.
c. Reporting - ii. Fiscal Analysis	New Provision. Submit fiscal analyses annually according to the accepted cost reporting framework and methodology starting with the 2024 Annual Report.	Timeframe does not allow for adequate time for developing and implementing tracking and reporting tools.	Time frame to complete and implement framework is inadequate. Modify timeframe to begin reporting with September third (2025) AR under MRP 3.0, not 2nd AR.

C.21 Asset Management

11/16/2021

Subprovision	Description of Change from MRP 2.0 to MRP 3.0 Tentative Order	Key Issues/Concerns	Response/Recommendation
C.21.a Requirement for Asset Management (AM) Plan	Task Description – Each Permittee shall develop and implement an Asset Management Plan in order to ensure the satisfactory condition of all hard assets constructed during this and previous permit terms pursuant to Provisions C.2, C.3, C.10, C.11, C.12, C.13, C.14, C.17, C.18, and C.19. [Footnote: 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.]	The permit already has requirements in place to ensure hard assets related to water quality are in satisfactory condition. If this provision is a priority then other requirements in the permit should be de-prioritized and removed to accommodate for the additional costs and resources permittees will incur to develop this plan. This new provision is a significant and costly new effort that would require quite a bit of coordination among departments, which use different systems for management of other assets.	Limit the scope of this provision to tracking maintenance and inspection of publicly-owned stormwater treatment and hydromodification management systems, including non-LID and GI/LID treatment systems and trash full capture systems, using existing tracking systems required under other provisions. Requirements in this provision should be consistent with, and not duplicate, requirements in C.10.b, C.10.g, C.3.h, and C.3.j.v.
C.21.b.i.(1) & (2) AM Plan Development	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 cited in Provision C.21.a, including at a minimum all LID/GSI systems and trash capture devices.	Significant new effort to develop AM Plan by the end of Year 3 of the permit.	We appreciate the changes to this provision from the Administrative Draft to focus asset management on publicly-owned structural assets related to water quality. However, the requirement to develop an Asset Management Plan within 3 years represents a significant new effort and cost to Permittees.
C.21.b.i.(3)(a) AM Plan O&M Plan	(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.	Significant new effort to develop an AM O&M Plan.	See previous comment.
C.21.b.i.(3)(b) AM Plan Evaluation Process	(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.	Significant new effort to develop the AM Plan evaluation processes.	See previous comment.
C.21.b.i.(3)(b) AM Plan Evaluation Process	The process(es) shall account for:  (j) The minimum condition necessary to achieve minimum performance level(s), including an assessment of stormwater volume and pollutant load reduction, necessary to comply with applicable Permit Provisions and TMDLs.	Significant new effort to develop the AM Plan evaluation processes.	We appreciate the changes made to this provision to focus on assessment of condition rather than performance.
C.21.b.i.(3)(b) AM Plan Evaluation Process	(i) 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.	Significant new effort to develop the AM Plan evaluation processes and methods.	We appreciate the changes made to this provision to focus on assessment of condition rather than performance.
C.21.b.i.(3)(b) AM Plan Evaluation Process	(iii) Consequence of failure and likelihood of failure.	This subsection is unnecessary, as it is part of the risk-based condition assessment described in subsection (ii) above.	Delete subsection C.21.b.i.(3)(b)(iii).
C.21.b.i.(3)(c) AM Plan Cost Evaluation	(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 assets. This evaluation or forecasting may supplement Permittees' compliance with Provision C.20, Cost Reporting.	No issues other than the level of effort required to evaluate and project costs of implementation of this Provision.	No issues other than the level of effort required to evaluate and project costs of implementation of this Provision.
C.21.b.i.(4) AM Plan Reporting Strategy	(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.	No issues identified. Seems to allow use of existing cloud-based tracking systems (such as the SCVURPPP Stormwater Treatment Measure Data Portal) for (b). Additional resources will be needed to add trash full capture systems and other hard assets to this tool/database.	None.
C.21.b.ii. - iv. Implementation and O&M Plan	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.	Starts the day after the AM Plan is due to be completed (beginning of Year 4 of the permit).	None.
C.21.b.v. Climate Change Adaptation Report	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 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.	This is a significant new requirement adds additional cost to the Permit. Modification of design standards should be a statewide effort.	Make this requirement optional. Allow flexibility for development of report at the State level.
C.21.c.i. Reporting	i. The Permittees shall submit their Asset Management Plans with the 2025 Annual Reports.	No issues.	None.

C.21 Asset Management

11/16/2021

Subprovision	Description of Change from MRP 2.0 to MRP 3.0 Tentative Order	Key Issues/Concerns	Response/Recommendation
C.21.c.ii.(1) Reporting	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.	No issues.	None.
C.21.c.ii.(2) Reporting	(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; 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).	No issues.	None.
C.21.c.iii. Reporting - Climate Change Adaptation Report	iii. The Permittees shall submit the Climate Change Adaptation Report described in Provision C.21.b.v with their 2027 Annual Reports. The Permittees may submit the Climate Change Adaptation Report(s) on an all-Permittee scale or countywide scale.	Report due in Year 5 of the permit. Significant effort that will likely be done on a countywide or regional scale, and probably should be done on a statewide scale.	Allow flexibility for development of report at the State level.

**C/CAG COMMENT LETTER ON MRP 3.0 TENTATIVE ORDER**

**ATTACHMENT 3**

**REQUESTED PERMIT LANGUAGE CHANGES IN REDLINE/STRIKEOUT**

## **Requested Changes to Provision C.3**

- **Language Changes for Provisions C.3.b., C.3.e., and C.3.j.**
- **C.3 Section of Fact Sheet**
- **Regional Project Definition in Tentative Order's Glossary**

\* Note - for comprehensive program comments on Provision C.3 (as well as all other provisions), especially regarding requested complete deletions of entire sub-provision language, please see Attachment 2 and the Cover Letter.

### 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, 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 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

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

the following four types on public or private land that fall under the 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 and other construction activities in the public right-of-way 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;

**Commented [JB1]:** This requirement should be moved to the new Other Projects in the Public ROW section. The portion in the public ROW should not be included in the calculation of impervious surface created/replaced for the purpose of determining whether a project exceeds the threshold and is regulated.

**Commented [JB2]:** Move subprovisions C.3.b.ii.(1)(b)(ii)-(iv) to a new "Other Projects in the Public Right-of-Way" subprovision, and refer to that subprovision here, as applicable to parcel-based redevelopment projects.

<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, with an overlay of asphalt or concrete;
- h. Applying a bituminous surface treatment to existing asphalt or concrete pavement; and
- i. Vegetation maintenance.
- j. Projects undertaken solely to install or reinstall public utilities and do not include any additional street or road development or redevelopment activities beyond paving activities needed as a result of construction impacts on the existing roadway.
- k. Extending the pavement edge without increasing the size of the road prism, or paving graveled shoulders, for the purposes of bicycle and pedestrian access and public safety.
- ~~(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.~~
- ~~(iv)(iii)~~ The following pavement maintenance practices and construction activities in the public right-of-way are not excluded if they create and/or replace 1 acre or more of contiguous impervious surface, whether they are conducted as a stand-alone project or are part of a larger project:
- a. For pavement maintenance projects other than road reconstruction projects addressed in Provision C.3.b.ii.(5), Removing and replacing an asphalt or concrete pavement to subbase course or lower subgrade, or repairing the pavement base (including repair of the pavement base in preparation for bituminous surface treatment, such as chip seal), as these are this is considered replaced impervious surfaces;
- b. Extending the pavement edge without increasing the size of the road prism, or paving graveled shoulders, for purposes other than bicycle and pedestrian access and public safety, as these are considered new impervious surfaces; and
- c. Resurfacing by upgrading from dirt to or gravel<sup>4</sup>, to a bituminous surface treatment (e.g., chip seal),<sup>3</sup> to asphalt, or to concrete; or upgrading from gravel to a bituminous surface treatment, to asphalt, or to concrete, as these are considered

**Commented [JB3]:** Utility trenching and patching should be excluded consistent with this exclusion language from North Coast Region Phase I Municipal Stormwater Permit (R1-2015-0030)

**Commented [JB4]:** The ability for municipalities to implement bike/ped/active transportation projects without triggering treatment controls must be preserved. In MRP 1.0, the Water Board supported these projects, stating in the Fact Sheet that "Although widening existing roads with bike lanes and sidewalks increases impervious surface and therefore increases stormwater pollutants because of aerial deposition, they have been excluded from this Provision because we recognize the greater benefit that bike lanes and sidewalks provide by encouraging less use of automobiles."

**Commented [JB5]:** This language is very confusing and should be deleted. We suggest the edit directly below as an alternative.

**Commented [JB6]:** The road reconstruction threshold is 1 acre.

**Commented [JB7]:** Pavement sections typically consist of a base course and subbase course above the native soil (subgrade). When applying a surface treatment, there may be different levels of milling or grinding needed to achieve a certain surface elevation. Projects should not be regulated if this milling or grinding affects the surface of the base course.

new impervious surfaces.

d. Sidewalks and any other portions of the public right-of-way that are developed or redeveloped as part of Special Land Use, Other Development, and Other Redevelopment projects.

(v)(iv) Permittees may credit the acreage of impervious surface created or replaced by non-excluded pavement maintenance and other construction activities in the public right-of-way treated by green infrastructure towards the Numeric Implementation retrofit requirements specified in Provision C.3.j.ii.(2).

- (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).

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

<sup>4</sup>Gravel surfaces that meet the definition of pervious pavement in the Glossary\* or have been designed and installed consistent with pervious pavement specifications are considered permeable surfaces.

\*From Glossary:  
**Pervious Pavement** - Pavement that 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.

- (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).

**(2) Other Development Projects**

New development projects that create 5,000 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 parcel-based 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.

Commented [JB8]: See previous comment

**(3) Other Redevelopment Projects**

Redevelopment projects that create and/or replace 5,000 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, private roads and trails, and parcel-based 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> 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.

Commented [JB9]: See previous comment

Specific exclusions that apply to this category are listed in Provision C.3.b.ii.(1)(b).

- (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).

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

Any of the following types of road projects that create ~~5,000~~10,000 square feet or more of newly constructed contiguous<sup>4</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

<sup>4</sup> Project areas interrupted by cross streets or intersections are considered contiguous.

treatment system or in-lieu fees must address only the stormwater runoff from the added traffic lanes.

- (c) Construction of impervious<sup>5</sup> trails that are greater than or equal to 10 feet wide or are creek-side (within 50 feet of the top of bank).
- (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.
  - ~~(ii)~~(iii) Impervious trails that meet width requirements for and serve as shared-use separated paths or Class I bikeways;
  - ~~(iii)~~(iv) 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)~~(v) Sidewalks, bicycle lanes, or trails constructed with permeable surfaces.<sup>6</sup>
  - ~~(v)~~(vi) Caltrans highway projects and associated facilities.

#### (5) Road Reconstruction Projects

Road projects that involve the reconstruction of existing streets or roads,<sup>7</sup> which create and/or replace greater than or equal to one contiguous<sup>4</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.

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. Road Reconstruction Projects that have been designed and funded prior to July 1, 2022 are exempt from this provision.~~

- (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,

**Commented [JB10]:** This is very confusing. Road projects should be defined separately from pavement maintenance projects. See specific edits to the pavement maintenance section.

**Municipal Regional Stormwater Permit  
Order No. R2-2022-XXXX**

**NPDES Permit No. CAS612008  
Provision C.3.**

~~<sup>5</sup>Gravel is considered impervious.~~

<sup>6</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. Gravel surfaces that meet the definition of pervious pavement in the Glossary\* or have been designed and installed consistent with pervious pavement specifications are considered permeable surfaces.

~~<sup>7</sup>The definition of roads includes roads on levees.~~

New footnote 7: Reconstruction is defined as removing and replacing an existing asphalt or concrete pavement section down to the subbase course.

\*From Glossary:

**Pervious Pavement** - Pavement that 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.

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 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) Other Projects in the Public Right-of-Way

**(6)(7) 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)

**Commented [JB11]:** Move subprovisions C.3.b.ii.(1)(b)(ii)-(iv) here.

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).

**iii. Implementation Level** – All elements of Provision C.3.b.i-ii shall be fully implemented immediately, including 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);
- (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>8</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

<sup>8</sup> Pervious pavement systems include pervious asphalt, pervious concrete, pervious pavers, and grid pavers.

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.
- (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>9</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 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 language in a future 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

<sup>9</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.

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:

**(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>10</sup> or Regional Project<sup>11</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>11</sup> to

<sup>10</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>11</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. A Regional Project that provides multiple benefits, such as pollutant load reduction, peak flow and flood reduction, water supply, and/or climate resiliency, and is unable to infiltrate, biotreat,

**Municipal Regional Stormwater Permit  
Order No. R2-2022-XXXX**

**NPDES Permit No. CAS612008  
Provision C.3.**

or use all of the volume captured (e.g., due to lack of infiltration feasibility, lack of available demand for non-potable use, significantly constrained space, or other substantial constraints) may use media filtration as a treatment measure for some or all of the stormwater managed.

<sup>124</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.

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>42</sup> or Offsite Project. The Regional Project must achieve a net environmental benefit, through a net increase in 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.
- (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.

<sup>42</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.

- (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>13</sup>) for commercial development projects, in Dwelling Units<sup>14</sup> per Acre (DU/Ac) for

<sup>13</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>14</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.

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>15</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.
  - 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.

<sup>15</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 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:
  - (i) To qualify for 70 percent Affordable Housing Credit:

100 percent of the project's DUs must have monthly rent/mortgage rates<sup>16</sup> no greater than 30 percent of the Moderate household income level ( $\leq$  120 percent of AMI), 75 percent of the project's DUs must have monthly rent/mortgage rates<sup>14</sup> no greater than 30 percent of the Low household income level ( $\leq$  80 percent of AMI), 50 percent of the project's DUs must have monthly rent/mortgage rates<sup>14</sup> no greater than 30 percent of the Very Low household income level ( $\leq$  50 percent of AMI), and 25 percent of the project's DUs must have monthly rent/mortgage rates<sup>14</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 percent Affordable Housing Credit:

75 percent of the project's DUs must have monthly rent/mortgage rates<sup>14</sup> no greater than 30 percent of the Moderate household income level ( $\leq$  120 percent of AMI), 50 percent of the project's DUs must have monthly rent/mortgage rates<sup>14</sup> no greater than 30 percent of the Low household income level ( $\leq$  80 percent of AMI), and 25 percent of the project's DUs must have monthly rent/mortgage rates<sup>14</sup> no greater than 30 percent of the Very Low household income level ( $\leq$  50 percent of AMI), as defined for each County in Table H-2 of Attachment H.
- (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).

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<sup>16</sup> Including utilities.

- (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 the~~ Annual Report, Permittees shall report to the Water Board on ~~these tracked potential~~ Special Projects with final discretionary approval 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.

**Commented [JB12]:** Request elimination of reporting on potential projects and limit to those with final discretionary approval. This is a lot of extra work for Permittees. Projects typically change significantly during the approval process, so reporting on a potential project that may change or even go away is not productive.

- (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>17</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.

**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>18</sup> up to the pre-project 10-

<sup>17</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.

<sup>18</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

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 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

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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).

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>19</sup>

**v. Implementation Level**

- (1) For ACCWP, SCVURPPP, SMCWPPP, and FSURMP 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.

**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.
- (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

<sup>19</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.

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>20</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 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.

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.

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<sup>20</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).

- (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 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 a copy of that communication to the Water Board. 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>21</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.
  - 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>6</sup>
  - Construct bike lanes, driveways, and/or uncovered parking lots with permeable surfaces.<sup>5</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

<sup>21</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.

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 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) 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 such a Non-Regulated Project or green infrastructure/LID beyond the minimum required by Provision C.3.d for a Regulated Project 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 it may no longer be counted towards the Provision C.3.j.ii.(2) retrofit requirements listed in Table H-1 of Attachment H.

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

- (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).
- (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).
- (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.

- (j) 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. Additionally, with cause (e.g., lack of infiltration feasibility, lack of available demand for non-potable use, significantly constrained space, or other substantial constraints) and with reporting in their Annual Reports, Permittees may claim green infrastructure numeric implementation credit for the impervious surface retrofits via Regional Projects that achieve multiple benefits, such as pollutant load reduction, peak flow and flood reduction, water supply, and/or climate resiliency, and use media filtration as a treatment measure

for some or all of the stormwater managed.

**(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 countywide tracking and mapping tools ~~shall~~ may 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, or other tools may be used by individual Permittees for these purposes.
  - (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, 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.

**Commented [JB13]:** The countywide tracking and mapping tools will not necessarily be used by Co-permittees for asset management, cost, and design information, etc. Should allow flexibility for Co-permittees to comply using other tools if desired and appropriate.

- (2) In each Annual Report, Permittees shall:
- (a) 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).
  - (b) Report on progress made towards the retrofit requirements described in Provision C.3.j.ii.(2).
- (3) 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).
- (4) 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.
- (5) 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.
- (6) By no later than with the 2024 Annual Reports, the Permittees shall collectively submit a report summarizing any TWG efforts and recommendations, as specified in Provision C.3.j.ii.(4).

- (7) 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.

Tentative Order

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.

## ATTACHMENT A

### MUNICIPAL REGIONAL STORMWATER PERMIT FACT SHEET

Tentative Order

### C.3. New Development and Redevelopment

#### Legal Authority

**Broad Legal Authority:** CWA Sections 402(p)(3)(B)(ii-iii), CWA Section 402(a), CWC Sections 13377 and 13263, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F), 40 CFR 131.12, and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(1) requires “[a] description of maintenance activities and a maintenance schedule for structural controls to reduce pollutants (including floatables) in discharges from municipal separate storm sewers.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(2) requires “[a] description of planning procedures including a comprehensive master plan to develop, implement and enforce controls to reduce the discharge of pollutants from municipal separate storm sewers which receive discharges from areas of new development and significant redevelopment. Such plan shall address controls to reduce pollutants in discharges from municipal separate storm sewers after construction is completed.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(3) requires “[a] description for operating and maintaining public streets, roads and highways and procedures for reducing the impact on receiving waters of discharges from municipal storm sewer systems, including pollutants discharged as a result of deicing activities.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(4) requires “[a] description of procedures to assure that flood management projects assess the impacts on the water quality of receiving water bodies and that existing structural flood control devices have been evaluated to determine if retrofitting the device to provide additional pollutant removal from storm water is feasible.”

#### Fact Sheet Findings in Support of Provision C.3

- C.3-1** Urban development begins at the land use planning phase; therefore, this phase provides the greatest cost-effective opportunities to protect water quality in new development and redevelopment. When a Permittee incorporates policies and principles designed to safeguard water resources into its General Plan and development project approval processes, it has taken a critical step toward the preservation of local water resources for current and future generations.
- C.3-2** Provision C.3. is based on the premise that Permittees are responsible for considering potential stormwater impacts when making planning and land use decisions for new development and redevelopment, including road improvement projects, and determining how to operate and maintain streets, roads, and highways, including reducing pollutants discharged from them. The goal of Provision C.3. is for Permittees to use their planning authority to reduce

pollutant discharges and runoff flow into the storm drain system primarily through the implementation of low impact development (LID) techniques.

- C.3-3** To accomplish this goal, Permittees must require new development and redevelopment projects to implement appropriate source control, site design, and stormwater treatment measures to address both soluble and insoluble stormwater runoff pollutant discharges and prevent increases in runoff flow from these projects. Permittees are also required to implement their Green Infrastructure Plans 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. Provision C.3. is not intended to restrict or control local land use decision-making authority.
- C.3-4** Certain control measures implemented or required by Permittees for urban runoff management might create a habitat for vectors (e.g., mosquitoes and rodents) if not properly designed or maintained. Close collaboration and cooperative efforts among Permittees, local vector control agencies, Water Board staff, and the State Department of Public Health are necessary to minimize potential nuisances and public health impacts resulting from vector breeding.
- C.3-5** The Water Board recognized in its Policy on the Use of Constructed Wetlands for Urban Runoff Pollution Control (Resolution No. 94-102) that urban runoff treatment wetlands that are constructed and operated pursuant to that Resolution and are constructed outside a creek or other receiving water are stormwater treatment systems and, as such, are not waters of the United States subject to regulation pursuant to CWA Sections 401 or 404. This is consistent with the stayed 2015 Clean Water Rule exempting stormwater control features from the definition of “waters of the U.S.” (80 Fed. Reg. 37054 (June 29, 2015).) This Permit requires Permittees to ensure that constructed wetlands installed by Regulated Projects are consistent with Resolution No. 94-102 and the operation and maintenance requirements contained therein.
- C.3-6** The Permit requires Permittees to ensure that pervious pavement systems of 3,000 square feet or more, onsite, joint, and offsite stormwater treatment systems, and HM controls installed by Regulated Projects are properly operated and maintained for the life of the Projects.

**Specific Provision C.3 Requirements**

**Provision C.3.a.** (New Development and Redevelopment Performance Standard Implementation) continues the requirements related to having adequate legal authority to address storm water, development review and permitting, environmental review, training, and outreach requirements of MRP 1.

**Provision C.3.b.** (Regulated Projects) establishes the different categories of new development and redevelopment projects that Permittees must regulate under Provision C.3. These categories are defined on the basis of the land use and the amount of impervious surface created and/or replaced by the project because all impervious surfaces contribute pollutants to stormwater runoff and certain land uses contribute more pollutants. Impervious surfaces can neither absorb water nor remove pollutants as the natural, vegetated soil they replaced can. Also, urban development creates new pollution by bringing higher levels of car emissions that are aerially deposited, car maintenance wastes, pesticides, household hazardous wastes, pet wastes, and trash, which can all be washed into the storm sewer.

This permit is a 4<sup>th</sup> generation permit containing stormwater treatment requirements for development projects. Past permits have grandfathered development projects approved prior to those permits' effective dates, essentially exempting the projects and allowing them to provide no or insufficient stormwater treatment. The Water Board believes a small number of these development projects that were approved more than a decade ago have still not begun construction. A decade is sufficient time to justify requiring the Permittees to revise and update these stagnant development permits to include current LID treatment requirements. Therefore, this provision does not grandfather development projects approved with no stormwater treatment requirements and that have not begun construction. However, this provision allows exemptions for some of these previously approved projects in situations where the Permittees lack legal authority to retroactively change their previous approvals.

To confirm that the total number of projects previously approved without any Provision C.3-compliant stormwater treatment is indeed small, Provision C.3.b.iv.(1) includes a requirement for Permittees to provide in their 2023 Annual Report a complete list of these types of development projects. 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). This reporting requirement only applies to Permittees that have Projects subject to Provision C.3.b.i.(2).

Regulated Projects approved under previous permits with non-LID stormwater treatment measures in compliance with the hydraulic sizing criteria of Provision C.3.d. will continue to be grandfathered.

Provision C.3.b clarifies that sidewalks and any other portions of the public right of way that are developed or redeveloped as part of a Regulated Project must be included ~~in the total impervious surface count when evaluating whether projects meet the Regulated Project thresholds, and~~ when evaluating the area that must be treated by the Regulated Project.

**Commented [JB1]:** The portions of the right of way should not be included in the evaluation of whether a project meets the regulated project threshold. This would result in many more small projects exceeding the thresholds and take away municipalities' ability to get additional sidewalk and roadway improvements incorporated into a project as needed.

The pavement maintenance practices defined in Provision C.3.b.ii.(1)(b) are adapted from Appendix 1 of the current (effective August 1, 2019) Western Washington Phase II MS4 Permit.<sup>127</sup> These definitions clarify which rehabilitative road maintenance/reconstruction practices do and do not qualify as Regulated Projects. For additionally clarity, bituminous surface treatments have been defined in the Glossary.

- Upgrading from a bituminous surface treatment with a layer of asphalt or concrete is an excluded pavement maintenance practice because a bituminous surface treatment itself results in an impervious surface, and therefore that upgrade will not produce a new impervious surface (as long as it does not also involve the removal or replacement of the pavement to the base course or lower). For example, if there is an existing dirt or gravel surface, over which there is an existing bituminous surface treatment, then the subsequent application of a new asphalt or concrete layer above the existing bituminous surface treatment is considered an excluded pavement maintenance practice because it does not produce a new impervious surface.

~~Public right of way projects (other than public road projects) are explicitly included within the definitions for Other Development Projects and Other Redevelopment Projects. Public right of way projects (other than public road projects) do not have the same constraints and challenges that public road projects have.~~

**Commented [JB2]:** This does not make sense. We recommend that exclusions and non-exclusions for public right of way projects be moved to a new and separate subprovision.

Private road reconstruction projects are explicitly included within the definition for Other Redevelopment Projects. Permittees do not bear the burden of the design and capital construction costs of private road projects, and Permittees are able to recoup all or a significant portion of the cost of accounting for private road projects, for example, by charging project application review fees. Therefore, private road reconstruction projects are treated the same as all other types of private non-road reconstruction projects.

**Commented [JB3]:** This statement is not true. - they have many of the same constraints, such as utility conflicts, lack of space, etc.

The Regulated Project category for Road Projects has been renamed from the Previous Permit to New or Widened Road Projects, and applies to both public and private projects.

The impervious surface thresholds for Other Development Projects, Other Redevelopment Projects, and New and Widened Road Projects are set at 5,000 square feet. These thresholds are MEP for this Permit and its Permittees, because:

- (1) They align with the impervious surface area threshold of 5,000 square feet in Provision C.3.b.ii.(1) Special Land Use Categories, which has been in place since the Previous Permit term (Order No. R2-2015-0049).

<sup>127</sup> <https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Stormwater-general-permits/Municipal-stormwater-general-permits/Western-Washington-Phase-II-Municipal-Stormwater>

- (2) The 5,000 square foot threshold (or lower thresholds) for Regulated Projects is consistent with numerous other MS4 permits, including, but not limited to: the California State Water Board's NPDES Permit for WDRs for Stormwater Discharges from Small MS4s (effective July 1, 2013),<sup>128</sup> the California Regional Water Quality Control Board Central Valley Region's NPDES and WDR General Permit for Discharges from MS4s (effective October 1, 2016),<sup>129</sup> the California Regional Water Quality Control Board Los Angeles Region's Regional MS4 NPDES Permit for Los Angeles and Ventura Counties,<sup>130</sup> the California Regional Water Quality Control Board Central Coast Region's NPDES MS4 Permit for the City of Salinas (effective October 1, 2019),<sup>131</sup> the City of Portland's NPDES MS4 Permit (effective January 31, 2011),<sup>132</sup> the State of Oregon's NPDES MS4 General Permit (effective March 1, 2019),<sup>133</sup> the State of Washington's NPDES and State Waste Discharge General Permit for Discharges from Large and Medium MS4s (effective August 1, 2019),<sup>134</sup> Eastern Washington's NPDES and State Waste Discharge General Permit for Discharges from Small MS4s (effective August 1, 2019),<sup>135</sup> Western Washington's NPDES and State Waste Discharge General Permit for Discharges from Small MS4s (effective August 1, 2019),<sup>136</sup> the City of Salem's NPDES MS4 Discharge Permit (effective December 30, 2010),<sup>137</sup> the City of Chicago's Stormwater Management Plan<sup>138</sup> for the State of Illinois's General Permit for Discharges from Small MS4s (effective March 1, 2016),<sup>139</sup> U.S. EPA's NPDES Stormwater Permit for the Boise/Garden City Area (effective October 1, 2021),<sup>140</sup> the City of Eugene's

<sup>128</sup> [https://www.waterboards.ca.gov/water\\_issues/programs/stormwater/phase\\_ii\\_municipal.html](https://www.waterboards.ca.gov/water_issues/programs/stormwater/phase_ii_municipal.html)

<sup>129</sup> [https://www.waterboards.ca.gov/centralvalley/board\\_decisions/adopted\\_orders/general\\_orders/r5-2016-0040\\_ms4.pdf](https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2016-0040_ms4.pdf)

<sup>130</sup> Order No. R4-2021-0105, NPDES Permit No. CAS004004,

[https://www.waterboards.ca.gov/losangeles/water\\_issues/programs/stormwater/municipal/](https://www.waterboards.ca.gov/losangeles/water_issues/programs/stormwater/municipal/)

<sup>131</sup> [https://www.waterboards.ca.gov/centralcoast/water\\_issues/programs/stormwater/salinas.html](https://www.waterboards.ca.gov/centralcoast/water_issues/programs/stormwater/salinas.html)

<sup>132</sup> <https://www.portlandoregon.gov/bes/37485>

<sup>133</sup> <https://www.oregon.gov/deq/FilterPermitsDocs/ms4ph2genpermit.pdf>

<sup>134</sup> <https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Stormwater-general-permits/Municipal-stormwater-general-permits/Municipal-Stormwater-Phase-I-Permit#:~:text=The%20Phase%20%20Municipal%20Stormwater.populated%20areas%20in%20the%20state>

<sup>135</sup> [https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Stormwater-general-permits/Municipal-stormwater-general-permits/Eastern-Washington-Phase-II-Municipal-Stormwat-\(1\)](https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Stormwater-general-permits/Municipal-stormwater-general-permits/Eastern-Washington-Phase-II-Municipal-Stormwat-(1))

<sup>136</sup> <https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Stormwater-general-permits/Municipal-stormwater-general-permits/Western-Washington-Phase-II-Municipal-Stormwater>

<sup>137</sup> <https://www.cityofsalem.net/Pages/ms4-permits-and-annual-reports.aspx#:~:text=The%20City%20of%20Salem%20operates.directly%20to%20our%20local%20streams>

<sup>138</sup> [https://www.chicago.gov/content/dam/city/depts/water/general/Engineering/MS4/MS4\\_Stormwater\\_Plan.pdf](https://www.chicago.gov/content/dam/city/depts/water/general/Engineering/MS4/MS4_Stormwater_Plan.pdf)

<sup>139</sup> <https://www2.illinois.gov/epa/topics/forms/water-permits/storm-water/Pages/ms4.aspx>

<sup>140</sup> <https://www.epa.gov/npdes-permits/npdes-stormwater-permit-boise-garden-city-area-ms4s-idaho>

NPDES MS4 Discharge Permit (effective December 30, 2010),<sup>141</sup> U.S. EPA's Washington, D.C. NPDES MS4 Permit (effective June 22, 2018),<sup>142</sup> and the State of Maryland's NPDES General Permit for Discharges from Small MS4s (effective October 31, 2018).<sup>143</sup> The 5,000 square feet threshold is, therefore, consistent with reducing the discharge of pollutants from storm water to the MEP.

- (3) ~~The Permittees submitted a report<sup>144</sup> that the benefit provided by additionally capturing Regulated Projects in the 5,000-10,000 square foot range would likely provide similar benefit (with respect to acres of impervious surface treated) and similar cost (with respect to the burden on Permittees to review project applications and conduct inspections as well as other administrative burdens) as compared to Regulated Projects already captured, such as the 10,000-15,000-square foot range and the 15,000-20,000-square foot range.~~
- (4) According to the Permittees' 2019 Green Infrastructure Plans,<sup>145</sup> existing and future Regulated Projects and Non-Regulated, public and private, development and redevelopment projects under the Previous Permit will result in about 2 percent of impervious surface collectively retrofitted in the five Permittee counties with clean water controls by 2020, 4 percent by 2030, and 6 percent by 2040. That pace of retrofit would not address stormwater pollutants discharged from Permittees' jurisdictions to the MEP. Therefore, in combination with other changes proposed for Provision C.3, this expansion of the Regulated Project threshold provides a significant incremental step towards increasing the amount of impervious surface within Permittees' jurisdictions retrofitted by clean water controls, regionwide.
- (5) ~~Permittees are able to recoup all or a significant portion of the cost of accommodating additional Regulated Projects in the 5,000-10,000 square foot range, for example, by charging fees for project application review and inspection.~~
- (6) U.S. EPA supports the 5,000 square foot threshold for impervious surface area, as it is well understood that untreated stormwater contributes to the degradation

**Commented [JB4]:** This paragraph mischaracterizes the findings of the BASMAA 2015 White Paper and should be deleted. The findings do not support lowering the threshold to 5,000 sq.ft. The report found that lowering the threshold from 10,000 to 5,000 would regulate an additional 0.5% of impervious surface but increase the number of regulated projects by 8% and require more effort on the part of Permittees dealing with developers of small projects.

**Commented [JB5]:** This statement is not true and should not be used to justify the reduced threshold. Permittees are not able to charge development fees high enough to cover all staff costs associated with development project review, especially for smaller projects that will require more hand-holding.

<sup>141</sup> <https://www.eugene-or.gov/476/NPDES-Municipal-Stormwater-Permit>

<sup>142</sup> <https://www.epa.gov/npdes-permits/dc-municipal-separate-storm-sewer-system-ms4>

<sup>143</sup>

[https://mde.maryland.gov/programs/water/stormwatermanagementprogram/pages/npdes\\_ms4\\_new.aspx](https://mde.maryland.gov/programs/water/stormwatermanagementprogram/pages/npdes_ms4_new.aspx)

<sup>144</sup> "White Paper" on Provision C.3 in MRP 2.0," Final Report, Bay Area Stormwater Management Agencies Association, February 27, 2015

<sup>145</sup>

[https://www.waterboards.ca.gov/sanfranciscobay/water\\_issues/programs/stormwater/MRP/GIPlans2019.html](https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/stormwater/MRP/GIPlans2019.html)

of the San Francisco Bay and local creeks and streams, and dense urbanization, infrastructure, and impervious surfaces ring San Francisco Bay and contribute to an increase of contaminants that degrade receiving waters.<sup>146,147</sup>

The Road Reconstruction Projects category (projects creating or replacing greater than or equal to one contiguous acre of impervious surface) is distinct from the New and Widening Road Projects category (which addresses only new road projects) because it addresses the significant reconstruction of existing public roads (reconstruction of private roads is addressed separately, in the Other Development Projects category). The definition of contiguous includes project areas interrupted by cross streets or intersections. Provision C.3.b.ii.(1)(b) distinguishes which public road reconstruction projects are and are not excluded.

- The treatment requirements for Road Reconstruction Projects are consistent with other MS4 permits, including, but not limited to:<sup>148</sup> the City of Portland's NPDES MS4 Permit (effective January 31, 2011),<sup>132</sup> the State of Oregon's NPDES MS4 General Permit (effective March 1, 2019),<sup>133</sup> the State of Washington's NPDES and State Waste Discharge General Permit for Discharges from Large and Medium MS4s (effective August 1, 2019),<sup>134</sup> Eastern Washington's NPDES and State Waste Discharge General Permit for Discharges from Small MS4s (effective August 1, 2019),<sup>135</sup> Western Washington's NPDES and State Waste Discharge General Permit for Discharges from Small MS4s (effective August 1, 2019),<sup>136</sup> the City of Salem's NPDES MS4 Discharge Permit (effective December 30, 2010),<sup>137</sup> the City of Chicago's General Permit for Discharges from Small MS4s (effective March 1, 2016), U.S. EPA's NPDES Stormwater Permit for the Boise/Garden City Area (effective October 1, 2021),<sup>140</sup> the City of Eugene's NPDES MS4 Discharge Permit (effective December 30, 2010),<sup>141</sup> U.S. EPA's NPDES MS4 Permit for Washington, D.C. (effective June 22, 2018),<sup>142</sup> and the State of Maryland's NPDES General Permit for Discharges from Small MS4s (effective October 31, 2018).<sup>143</sup>

The Road Reconstruction Regulated Projects category – in addition to the Numeric Implementation retrofit requirements in Provision C.3.j.ii.(2) – is intended to address the significant pollutant loading and hydrologic impact to receiving waters from Permittees' existing public roads and to clarify the amount of road reconstruction that is

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<sup>146</sup> SFEI, Wu, J., Trowbridge, P., Yee, D., McKee, L., and Gilbreath, A., 2018.

<sup>147</sup> Regional Monitoring Program Small Tributaries Loading Strategy: SFEI, McKee et al., 2006.

<sup>148</sup> The California Regional Water Quality Control Board, Los Angeles Region's Tentative Regional MS4 NPDES Permit, Order No. R4-2021-0105, NPDES Permit No. CAS004004, ([https://www.waterboards.ca.gov/losangeles/water\\_issues/programs/stormwater/municipal/index.html](https://www.waterboards.ca.gov/losangeles/water_issues/programs/stormwater/municipal/index.html)) proposes very similar requirements for Road Reconstruction Projects, but is not included here as an example; although it was recently adopted, the Final Order is not yet available.

redevelopment justifying an investment of resources to retrofit the road with clean water controls.

In subsequent Permits, the Water Board may consider removing or revising Provision C.3.b.ii.(5)(c), which allows the Permittees to use alternative sizing criteria for Road Reconstruction Projects, as well as Provision C.3.b.ii.(5)(d), which allows the Permittees to 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).

The Large Detached Single-Family Home Projects category for Regulated Projects captures such projects that create and or replace 10,000 square feet or more of impervious surface, collectively over the entire project site, and that are not part of a larger development or redevelopment plan. This Regulated Project category coincides with Provision C.3.i, which prescribes site design measures for small detached single-family home projects which create and/or replace 2,500-10,000 square feet of impervious surface. This category for Regulated Projects is necessary and MEP because:

- (7) Large Detached Single-Family Home Projects can cause the same urban runoff pollutant and hydromodification impacts that projects of similar sizes in any of the other Regulated Projects categories can produce, because of the created/replaced impervious surface, because those surfaces are similar in nature to other pollutant-generating surfaces in the urban environment, and because aerially deposited urban pollutants are deposited and discharged from those projects to the MS4. Additionally, when flows from these projects flow on-land (e.g., along public streets, ditches and gutters) prior to entering the MS4 system and discharging to receiving waters, they can mobilize stormwater pollutants from those surfaces, eventually transporting them to receiving waters.
- (8) In certain Permittees' jurisdictions, a significant portion of development and redevelopment projects consists of large detached single-family home projects because a significant portion of those Permittees' land use is large lot single-family residential.<sup>149</sup> Therefore, this new category has been added to control the

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<sup>149</sup> For example: The City of Los Altos' zoning map is dominated by residential zoning, and within that residential zoning, the majority of lots have a minimum lot size of 20,000 to 40,000 square feet: ([https://www.losaltosca.gov/sites/default/files/fileattachments/community\\_development/page/39021/los\\_altos-land\\_use\\_final\\_w\\_labels-24x36-20181026.pdf](https://www.losaltosca.gov/sites/default/files/fileattachments/community_development/page/39021/los_altos-land_use_final_w_labels-24x36-20181026.pdf)); the Town of Los Altos Hills's zoning map is dominated by residential zoning, and all residential lots have a minimum lot size of one acre: ([http://www2.lynxgis.com/Html5Viewer/Index.html?configBase=http://www2.lynxgis.com/Geocortex/Essentials/REST/sites/Los\\_Altos\\_Hills/viewers/LAH/virtualdirectory/Resources/Config/Default](http://www2.lynxgis.com/Html5Viewer/Index.html?configBase=http://www2.lynxgis.com/Geocortex/Essentials/REST/sites/Los_Altos_Hills/viewers/LAH/virtualdirectory/Resources/Config/Default)); the Town of Atherton's zoning map (other than park space) is dominated by residential zoning, and within that residential zoning, the majority of lots have a minimum lot size of one acre, and the remainder have a

pollutant discharges associated with this category of development and redevelopment.

~~(9) Permittees are able to recoup all or a significant portion of the cost of accommodating this new category of Regulated Projects, for example, by charging project application review and inspection fees.~~

**Commented [JB6]:** This statement is not true. See previous comment.

~~(10)~~(9) There are many other MS4 Permits that consider it MEP to include analogous treatment requirements for large detached single-family home projects, including, but not limited to:<sup>150</sup> the City of Portland's NPDES MS4 Permit (effective January 31, 2011),<sup>132</sup> the State of Oregon's NPDES MS4 General Permit,<sup>133</sup> the State of Washington's NPDES and State Waste Discharge General Permit for Discharges from Large and Medium MS4s (effective August 1, 2019),<sup>134</sup> Western Washington's NPDES and State Waste Discharge General Permit for Discharges from Small MS4s (effective August 1, 2019),<sup>136</sup> the City of Salem's NPDES MS4 Discharge Permit (effective December 30, 2010),<sup>137</sup> the City of Eugene's NPDES MS4 Discharge Permit (effective December 30, 2010),<sup>141</sup> U.S. EPA's NPDES MS4 Permit for Washington, D.C. (effective June 22, 2018),<sup>142</sup> and the State of Maryland's NPDES General Permit for Discharges from Small MS4s (effective October 30, 2018).<sup>143</sup> The 10,000 square foot threshold for this category is, therefore, consistent with reducing the discharge of pollutants from stormwater to the MEP.

**Commented [JB7]:** To our knowledge, this is precedent setting in California as no other municipal permits in the State are regulating single family homes in all locations at this threshold.

~~(10)~~(10) U.S. EPA Region 9 supports the expansion of these Regulated Project categories, as it is well understood that untreated stormwater contributes to the degradation of the San Francisco Bay and local creeks and streams, and dense urbanization, infrastructure and impervious surfaces ring San Francisco Bay and contribute to an increase of contaminants that degrade receiving waters.<sup>146,147</sup>

minimum lot size of 10,000-15,000 square feet: (<https://www.ci.atherton.ca.us/209/Maps>); the Town of Woodside's zoning map (ignoring conservation areas and park space) is dominated by residential zoning, and within that residential zoning, the majority of lots have a minimum lot size of one or three acres, and the remainder have a minimum lot size of 20,000 square feet: (<https://www.woodsidetown.org/planning/town-woodside-zoning-map>); the Town of Portola Valley's zoning map is dominated by residential zoning, and within that residential zoning, the majority of lots have a minimum lot size of at least one acre, and the remainder have a minimum lot size of 15,000-20,000 square feet: (<https://www.portolavalley.net/home/showpublisheddocument/6770/635634073606070000>; [https://library.municode.com/ca/portola\\_valley/codes/code\\_of\\_ordinances](https://library.municode.com/ca/portola_valley/codes/code_of_ordinances)); and the Town of Hillsborough's zoning map is dominated by a single residential zone, which has a minimum lot size of half an acre: (<https://isd.smcgov.org/gis-data-download>).

<sup>150</sup> The Los Angeles Regional Water Board's Regional MS4 NPDES Permit, Order No. R4-2021-0105, NPDES Permit No. CAS004004, ([https://www.waterboards.ca.gov/losangeles/water\\_issues/programs/stormwater/municipal/index.html](https://www.waterboards.ca.gov/losangeles/water_issues/programs/stormwater/municipal/index.html)) proposes very similar requirements for Large Detached Single-Family Home Projects, but is not included here as an example; although it was recently adopted, the Final Order is not yet available.

**Provision C.3.c** (Low Impact Development (LID)) recognizes LID as a cost-effective, beneficial, holistic, integrated stormwater management strategy.<sup>151</sup> 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 preserving undeveloped open space, rain barrels and cisterns, green roofs, pervious pavement systems, and biotreatment through rain gardens, bioretention units, bioswales, and planter/tree boxes. This is a standard, current, ordinary, and regular practice being implemented in numerous jurisdictions in California, the U.S., and internationally, including: the Permittees' jurisdictions, Los Angeles, San Diego, San Francisco, Portland, OR, Seattle, Minneapolis, Milwaukee, Kansas City, Chicago, New York City, Philadelphia, Auckland, New Zealand, Chinese "sponge cities" such as Wuhan and Changde, and others.

This Provision sets forth a three-pronged approach to LID with source control, site design, and stormwater treatment requirements. The concepts and techniques for incorporating LID into development projects, particularly for site design, have been extensively discussed in BASMAA's Start at the Source manual (1999) and its companion document, Using Site Design Techniques to Meet Development Standards for Stormwater Quality (May 2003), as well as in various other LID reference documents.

- **Provision C.3.c.i.(1)** lists source control measures that must be included in all Regulated Projects as well as some that are applicable only to certain types of businesses and facilities. These measures are recognized nationwide as basic, effective techniques to minimize the introduction of pollutants into stormwater runoff.
- **Provision C.3.c.i.(2)(a)** lists site design elements that must be implemented at all Regulated Projects. These design elements are basic, effective techniques to minimize pollutant concentrations in stormwater runoff as well as the volume and frequency of discharge of the runoff. One design element requires each Regulated Project to include at least one site design measure from a list of six that includes recycling of roof runoff, directing runoff into vegetated areas, and installation of pervious pavement systems instead of traditional paving. All these measures serve

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<sup>151</sup> U.S. EPA, *Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices* (Publication Number EPA 841-F-07-006, December 2007).  
[http://water.epa.gov/polwaste/green/upload/2008\\_01\\_02\\_NPS\\_lid\\_costs07uments\\_reducingstormwatercosts-2.pdf](http://water.epa.gov/polwaste/green/upload/2008_01_02_NPS_lid_costs07uments_reducingstormwatercosts-2.pdf)

to reduce the amount of runoff and its associated pollutants being discharged from the Regulated Project.

- **Provision C.3.c.i.(2)(b)** requires the Permittees to implement design specifications for pervious pavement systems. Design specifications are necessary because improperly designed and engineered pervious pavement systems may cause flooding and the discharge of insufficiently treated stormwater runoff.
- **Provision C.3.c.i.(2)(c)** requires each Regulated Project and all projects implemented pursuant to Provision C.3.j to treat 100 percent of the Provision C.3.d. runoff with LID treatment measures onsite or with LID treatment measures at a joint stormwater treatment facility.
- **Provision C.3.c.i.(2)(c)(i)** defines LID treatment measures as harvesting and use, infiltration, evapotranspiration, or biotreatment.

The Permittees completed a “White Paper” on Provision C.3. on February 27, 2015.<sup>152</sup> The White Paper concluded that the pollutant removal performance of biotreatment facilities, overall and on average, is equivalent or better than the likely real-world performance of harvest and use facilities and as good as the likely performance of infiltration facilities when considered over the long term. The White Paper also noted that biotreatment facilities require less maintenance and are less prone to failure than harvest and use facilities, and in some cases, are also preferable to direct infiltration facilities.

- **Provision C.3.c.i.(2)(c)(ii)** requires biotreatment systems to meet minimum performance specifications in order to be considered as LID treatment. This subprovision also requires biotreatment soil media to meet the current minimum specifications developed and included in MRP 1.<sup>153</sup> However, this subprovision recognizes that the current soil media specifications may need to be modified because of variability in climate, rainfall, and compost composition among the different counties. Therefore, this subprovision allows for the Permittees to collectively (on an all-Permittee scale or countywide scale) develop and adopt revisions to the current soil media minimum specifications, subject to the Executive Officer’s approval.

**Provision C.3.d** (Numeric Sizing Criteria for Stormwater Treatment Systems) sets forth the hydraulic sizing design criteria that the stormwater treatment systems installed for Regulated Projects must meet. These criteria ensure that stormwater treatment systems will be designed to treat the optimum amount of relatively smaller-sized runoff-

<sup>152</sup> BASMAA, February 27, 2015. “White Paper” on Provision C.3 in MRP 2.0: Final Report.

<sup>153</sup> Attachment L of Board Order No. R2-2009-0074, adopted October 14, 2009, and revised November 27, 2011.

generating storms each year. That is, the treatment systems will be sized to treat the majority of rainfall events generating polluted runoff but will not have to be sized to treat the few very large annual storms as well. For many projects, such large treatment systems become infeasible to incorporate into the projects.

- **Provision C.3.d.iii.** defines infiltration devices and establishes limits on the use of stormwater treatment systems that function primarily as infiltration devices. The intent of the Provision is to ensure that the use of infiltration devices, where feasible and safe from the standpoint of structural integrity, must also not cause or contribute to the degradation of groundwater quality at the project sites.
- **Provision C.3.d.iv** is optional and allows the Permittees to collectively submit a proposal which evaluates the benefit of runoff reduction associated with trees and treatment control sizing of tree-based stormwater treatment in combination with structural soils and suspended pavement systems (or other methods which provide tree rooting volume), which will be considered for incorporation into a subsequent permit. This proposal is intended to learn from the findings of the ongoing Health Watersheds, Resilient Baylands project,<sup>154</sup> a San Francisco Estuary Partnership-led U.S. EPA Water Quality Improvement Fund (WQIF) project that is investigating similar criteria, and which has a technical action committee (TAC) that Water Board staff and Permittee representatives are participating in, to support the Permittees' submittal, and to ensure it has regional application. The purpose of this subprovision is to characterize the stormwater treatment and hydrologic benefit that new tree-based treatment systems provide when designed and maintained to a defined standard, not to credit existing trees that provide little water quality and hydrologic benefit because of the capacity and manner of treatment provided.

This subprovision clarifies the status of the Permittees' collectively-submitted 2011 Feasibility/Infeasibility Criteria Report, submitted pursuant to Provision C.3.i.(2)(b)(iv) of MRP 1 (Order No. R2-2009-0074), in which the Permittees proposed to grant Interceptor Tree Credits for Regulated Projects. The credits would have allowed Regulated Projects to reduce the calculated amount of impervious surface that has to be treated by LID, thus reducing treatment control sizing. Interceptor Tree Credits are not allowed during the current Permit term because the 2011 Feasibility/Infeasibility Criteria Report did not sufficiently justify them, because they have not yet been sufficiently studied, and because the Water Board has not approved their use. In addition, this subprovision allows the Permittees to submit a report on this issue as described above that could be incorporated into a subsequent permit.

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<sup>154</sup> <https://www.sfei.org/projects/healthy-watersheds-resilient-baylands>

**Provision C.3.e** (Alternative or In-Lieu Compliance with Provision C.3.b.) recognizes that not all Regulated Projects may be able to install LID treatment systems onsite because of site conditions, such as existing underground utilities, right-of-way constraints, and limited space.

- **Provision C.3.e.i.** This Provision allows any Regulated Project to provide LID treatment for up to 100% of the required Provision C.3.d. stormwater runoff at an [Offsite Project or Regional Project](#) ~~offsite location~~ or pay equivalent in-lieu fees to provide LID treatment at an [Offsite Project or Regional Project](#), as long as the ~~Offsite Project~~ [Offsite Project](#) or Regional Project is in the same watershed as the Regulated Project and constructed within three years of the end of construction of the Regulated Project. The three years of additional time are allowed because more time may be required to complete construction of [Offsite Projects](#) and [Regional Projects](#) because of administrative, legal, and/or construction delays. The Water Board acknowledges, in some instances, an even longer time may be required to complete construction of Regional Projects because they may involve a variety of public agencies and stakeholder groups and a longer planning and construction phase. Therefore, the timeline for completion of a Regional Project may be extended up to 5 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 Regional Project, such as having funds encumbered and applying for the appropriate regulatory permits.

Provision C.3.e.i language noting that Offsite Projects or Regional Projects must comply with Provision C.3.g “as appropriate” means that those projects (either Provision C.3.e.i.(1) or Provision C.3.e.i.(2)) must comply with Provision C.3.g if the original site seeking alternative compliance would otherwise be required to comply with Provision C.3.g.

To increase the flexibility available to Permittees, Provision C.3.e.i.(1) alternative compliance projects may provide 100 percent of the amount of runoff identified in Provision C.3.d for the Regulated Project’s drainage area at Offsite Projects [or Regional Projects](#) in the same watershed. Likewise, Provision C.3.e.i.(2) alternative compliance projects may provide 100 percent of the amount of runoff identified in Provision C.3.d for the Regulated Project’s drainage area at Offsite Projects or Regional Projects through payment to an in-lieu fee program. However, Provision C.3.e.i.(1) and Provision C.3.e.i.(2) qualify that by requiring Permittees to include as much LID onsite as possible, to the MEP.

[The Water Board recognizes that a Regional Project that provides multiple benefits, such as pollutant load reduction, peak flow and flood reduction, water supply, and/or climate resiliency, and is unable to infiltrate, biotreat, or use all of the volume captured \(e.g., due to lack of infiltration feasibility, lack of available demand for non-potable use, significantly constrained space, or other substantial constraints\), may use media filtration as a treatment measure for some or all of the stormwater managed since that project is providing a broad range of environmental benefits and is meeting the overall water quality and flow objectives of the MRP.](#)

**Municipal Regional Stormwater Permit  
Order No. R2-2022-XXXX**

**NPDES Permit No. CAS612008  
Attachment A: Fact Sheet**

During the Permit term, the Permittees may submit new information for an alternative compliance program for exchanges of impervious surface treatment credits at the regional, county, and/or municipal level, resulting in offsite treatment or payment for equivalent offsite compliance for 100 percent of the required Provision C.3.c-d stormwater runoff (and Provision C.3.g, as appropriate).

Any such program should include at least the following: a clear organizational framework; demonstration of equivalent or increased water quality benefit (e.g., through the equivalent or net increase in impervious surface treated, and the equivalent or net reduction in flow and/or pollutant load, but not necessarily in the same watershed); an accounting and reporting system; a process for collection and timely use of funds; compliance with Provisions C.3.c-d and C.3.f-h; program oversight by an entity or entities; and expectations for timing and location. If or when such a program proposal is submitted, the Water Board will consider the new information and may consider amending the Permit to include a third option in Provision C.3.e.i that formally recognizes and allows the program specified in the proposal. This is in part a response to the City of San Pablo-led U.S. EPA Water Quality Improvement Fund (WQIF)-funded Regional Compliance for a Sustainable Bay project, which is investigating such a program that would facilitate alternative compliance exchanges between Permittees within Contra Costa County, but may be of interest in other counties and regionally.

As Permittees implement Provision C.3.e.i – which increases the flexibility available to Permittees when planning LID required by Regulated Projects – over the course of this Permit term, they will further incorporate their implementation of it into their municipal administrative and planning processes. Over the course of the Permit term, as Permittees become more accustomed to using Provision C.3.e.i, the Permittees will not be as reliant on Provision C.3.e.ii during their planning processes. Therefore, the Water Board will consider removing Provision C.3.e.ii in the subsequent Permit term, whose utility will be replaced by the Permittees' increased implementation of Provision C.3.e.i.

**Provision C.3.e.ii. (Special Projects)** When considered at the watershed scale, certain types of smart growth and high density, and transit-oriented development can either reduce existing impervious surfaces, or create less “accessory” impervious areas and auto-related pollutant impacts, to the extent they replace or reduce development projects that do not have those characteristics. Incentive LID Treatment Reduction Credits approved by the Water Board may be applied to these types of Special Projects.

This Provision includes specific criteria for determining which types of Regulated Projects may be considered Special Projects and establishes different categories of Special Projects based on size, land use type, and density. Except for Category A, which represents the smallest Special Projects, Category B and C also use location, density, and parking criteria to establish a tiered approach for determining the total LID Treatment Reduction Credit available for any given Special Project.

Category C additionally includes affordable housing criteria for determining the total LID Treatment Reduction Credit available for Category C Special Projects. Affordable housing criteria are included in Category C, for two primary reasons. First, affordable housing projects typically have high DUs/acre (as further

incentivized by the Density Credits) and are typically located near public transportation (as further incentivized by the Location Credits), and thus they likely produce less automobile traffic (i.e., less pollutant loading to the MS4) compared to other development and redevelopment projects that do not have those characteristics. Second, affordable housing credited by this Provision will help reduce unsheltered homelessness, which will reduce pollutant discharges (e.g., of trash and sewage) from homeless encampments and other sources (e.g., RVs) into MS4s.<sup>155</sup> The Water Board recognizes that whether to allow for affordable housing is entirely within the Permittee's land use and zoning authority and discretion. Since such development can reduce pollutants from MS4 systems, the Affordable Housing Credits are provided in the Permit. It will benefit the unhoused population, as follows: The affordable housing criteria are structured in such a way that significant portions of the allowable rent/mortgage rates are capped for the Extremely Low income households (0-30% of AMI), Very Low income households (31-50% of AMI), and Low income households (51-80% of AMI), rather than allowing all affordable housing units to qualify even if they only are affordable for Moderate income households (81-120% of AMI). The link to water quality improvement is expected to decline as rent/mortgage rates increase, as rent/mortgage rates as high as the Moderate level are likely to reduce unsheltered homelessness and its associated impacts at a much lower rate.

The other Category C credits (location, density, and parking criteria) are maintained from the Previous Permit, but reduced so that Affordable Housing Credits are the dominant credit for Category C projects while still recognizing the benefits provided by location, density, and parking criteria, and so that the total possible credit available for Category C Special Projects remains 100 percent. Category C of the Previous Permit primarily credited transit-oriented development (via Location Credits) and resulted in the treatment of approximately 324 acres of impervious surface by non-LID measures region-wide, most of which is attributable to projects for which the Permittees' reporting did not clearly demonstrate that it would have been infeasible to incorporate onsite LID or contribute to offsite LID, as allowed by Provision C.3.e.i. Therefore, Category C has been revised to solely target affordable housing development and redevelopment projects, as Provision C.3.e.i in this Permit already provides sufficient flexibility for other non-affordable housing development and redevelopments that would have qualified as Category C Special Projects in the Previous Permit.

The Area Household Median Income (AMI) data in Table H-2 of Attachment H were made available by the Metropolitan Transportation Commission (MTC) in advance of

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<sup>155</sup> Batko, Oneto, and Shroyer, Dec. 2020. Unsheltered Homelessness: Trends, Characteristics, and Homeless Histories. Urban Institute, pp. 12-13.

being uploaded to MTC's Vital Signs website.<sup>156</sup> These are the most current available AMI data (2019) for the San Francisco Bay Area.

The definitions included in Category C for affordable housing are adapted from the MTC<sup>157</sup> the Association of Bay Area Governments (ABAG),<sup>158</sup> the East Bay Housing Organizations (EBHO),<sup>159</sup> and the Federal Department of Housing and Urban Development (HUD).<sup>160</sup> For example, HUD defines Affordable Housing as housing for which rent or mortgage costs (including utilities) are no greater than 30 percent of total household income;<sup>161,162</sup> for metropolitan areas, HUD defines Moderate household incomes as 81-120 percent of area median household income (AMI), Low household incomes as 51-80 percent of AMI, Very Low household incomes as 31-50 percent of AMI, and Extremely Low household incomes as 0-30 percent of AMI.<sup>163,164,165,166</sup> Furthermore, Affordable Housing is defined by the Metropolitan Transportation Commission (MTC) as housing with deed restrictions running at least 55 years.<sup>167,168</sup>

To be considered a Category C Special Project, the Regulated Project must be primarily a residential development project, achieve at least a gross density of 40 DU/acre, and the project's DUs must comply with the criteria outlined in Provision C.3.e.ii.(5)(c), which are: for 70 percent Affordable Housing Credit, 100 percent of the DUs within a Category C Special Project must have rent/mortgage rates (including utilities) no greater than 30 percent of the Moderate household income level ( $\leq 120$  percent of AMI), 75 percent of the DUs must have rent/mortgage rates (including utilities) no greater than 30 percent of the Low household income level ( $\leq 80$  percent of AMI), 50 percent of the DUs must have rent/mortgage rates (including utilities) no greater than 30 percent of the Very Low household income

<sup>156</sup> <https://www.vitalsigns.mtc.ca.gov/income>

<sup>157</sup> <https://mtc.ca.gov/whats-happening/news/mtc-offers-cities-counties-big-carrot-spur-affordable-housing>

<sup>158</sup> [https://abag.ca.gov/sites/default/files/rhna\\_methodology\\_technical\\_documentation.pdf](https://abag.ca.gov/sites/default/files/rhna_methodology_technical_documentation.pdf)

<sup>159</sup> <http://ebho.org/resources/what-is-affordable-housing/>

<sup>160</sup> [https://www.hud.gov/topics/rental\\_assistance](https://www.hud.gov/topics/rental_assistance)

<sup>161</sup> <https://archives.hud.gov/local/nv/goodstories/2006-04-06glos.cfm#:~:text=Affordable%20Housing%3A%20Affordable%20housing%20is,Reference%3A%20www.hud.gov>

<sup>162</sup> [https://www.hud.gov/program\\_offices/administration/hudclips/acts/nah-ac](https://www.hud.gov/program_offices/administration/hudclips/acts/nah-ac)

<sup>163</sup> <https://www.ffiiec.gov/>

<sup>164</sup> <https://www.spur.org/news/2018-06-21/what-we-talk-about-when-we-talk-about-affordable-housing-primer>

<sup>165</sup> <https://www.planbayarea.org/2050-plan/plan-bay-area-2050-blueprint/plan-bay-area-2050-final-blueprint-documents>

<sup>166</sup> [https://abag.ca.gov/sites/default/files/rhna\\_methodology\\_technical\\_documentation.pdf](https://abag.ca.gov/sites/default/files/rhna_methodology_technical_documentation.pdf)

<sup>167</sup> <https://mtc.ca.gov/whats-happening/news/mtc-offers-cities-counties-big-carrot-spur-affordable-housing>

<sup>168</sup> <https://mtc.ca.gov/our-work/fund-invest/investment-strategies-commitments/focused-growth/affordable-housing/housing>

level ( $\leq 50$  percent of AMI), and 25 percent of the DUs must have rent/mortgage rates (including utilities) no greater than 30 percent of the Extremely Low household income level ( $\leq 30$  percent of AMI). Likewise, for 35 percent Affordable Housing Credit, 75 percent of the affordable housing DUs must have rent/mortgage rates (including utilities) no greater than 30 percent of the Moderate household income level ( $\leq 120$  percent of AMI), 50 percent must have rent/mortgage rates (including utilities) no greater than 30 percent of the Low household income level ( $\leq 80$  percent of AMI), and 25 percent must have rent/mortgage rates (including utilities) no greater than 30 percent of the Very Low household income level ( $\leq 50$  percent of AMI). These criteria, when implemented for Category C Special Projects, will reduce pollutant discharges from unhoused peoples into MS4s when they are housed by the newly-provided affordable housing.

Table H-2 of Attachment H lists 30 percent of AMI for each of the five Permittee Counties, for each affordable housing AMI threshold. The data in the table is from 2019 (units are 2019 dollars), which is the most recent year that this data was available for from MTC.

Density Credits for Category C may only use DU/acre, whereas in MRP 2 they could also use FAR. This is because Category C may only be used by primarily residential projects rather than also by nonresidential and mixed development projects.

In MRP 1 and MRP 2, applicable Category C Special Projects were required to first qualify for Location Credits before qualifying for any Density Credits or Minimized Surface Parking Credits. In the current Permit Term, applicable projects must first qualify for Affordable Housing Credits before qualifying for any Location Credits, Density Credits, or Minimized Parking Credits. This is because the primary credit by which Category C Special Projects are allowed to qualify is the Affordable Housing Credit – if a project does not meet any of the criteria required to achieve one of the Affordable Housing Credits, it does not qualify as a Category C Special Project.

The gross density required for 5 percent Density Credit for Category C Special Projects has been reduced from 45 DU/ac to 40 DU/ac, to match the required minimum density included for Category C Affordable Housing Projects.

Definitions of Gross Density and Floor Area Ratio are included in Provision C.3.b.ii to facilitate consistent implementation of this Provision by all Permittees. Gross Density is defined as 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. Floor Area Ratio (FAR) is defined as 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. Gross Density and FAR have been purposely defined to include public rights-of-way, recreational, civic, commercial, and other non-residential uses so as to raise the bar for Regulated Projects to qualify for the LID Reduction Credits allowed in Provision

C.3.e.ii. That is, these more conservative Gross Density and FAR values may result in some Regulated Projects qualifying for less LID Reduction Credits or not qualifying at all.

The reporting data for Special Projects under the Previous Permit showed that “lack of space to provide full LID stormwater treatment” is among the most frequent reason invoked for why 100 percent LID treatment onsite is infeasible. Therefore, it is appropriate that the space reserved for public rights-of-way, recreation, civic, commercial, and other non-residential uses are included in the calculations for gross density and FAR, especially since many of these areas may be used for installation of LID treatment measures.

Density LID Treatment Reduction Credits are allowed for mixed use development projects, which consist of a mix of residential and commercial land uses, based on density measured by either DU/acre or FAR for Category B Special Projects and by DU/acre for Category C Special Projects. A prior permit (R2-2009-0074) did not accommodate this variability and penalized dense mixed-use projects that are mostly residential by restricting density LID Treatment Reduction Credits to only floor area ratio criteria.

The total available LID Treatment Reduction Credit may be used to reduce the amount of stormwater runoff that must be treated with LID stormwater treatment systems. The remaining amount of stormwater runoff must be treated with one or a combination of the following two specific non-LID treatment systems:

- (1) Tree-box-type high flowrate biofilters
- (2) Vault-based high flowrate media filters

An additional reporting requirement has been added to Provision C.3.e.v.(3) and to Table 3.1 Standard Tracking and Reporting Form for Potential Special Projects, 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). The purpose of this additional reporting requirement is to better characterize the extent and lost opportunity (regarding no or reduced LID treatment) of Special Projects.

To reduce the burden of reporting, the semi-annual reporting of Special Projects that are being considered by Permittees prior to the Permittees granting final planning approval has been reduced to annual, within the Annual Report. Although the frequency of reporting has been reduced, the current reporting requirements for this Provision are not diminished because the data is necessary for Water Board staff to validate the Permittees’ analysis of the number and size of potential Special Projects that may be approved during this permit term, and to ensure Permittees are taking all reasonable steps to ensure that the Special Projects Provision is only used when they certify that neither onsite nor offsite LID are feasible. The Water Board intends

**Commented [JB8]:** The burden of reporting has not be significantly reduced since Permittees are still required to report on potential projects. The Water Board can use the data from one-time reporting on approved Special Projects to make its determinations.

to use the data collected in the reporting requirements to revise the Special Projects criteria as appropriate for the next permit term.

The narrative summaries included in Permittees' Annual Reports generally have not properly justified the need for the Category C Special Projects Provision as it existed in MRP 2, because those narrative summaries have not sufficiently demonstrated the infeasibility of onsite or offsite LID. This further supports the change that has been made to Category C.

Provision C.3.e.ii Special Projects is temporarily retained in this Permit term, and will be considered for removal in subsequent permit terms. This is because Permittees will have had three Permit terms (Order Nos. R2-2009-0074, R2-2015-0049, and R2-2022-XXXX) to develop the alternative compliance programs allowed by Provision C.3.e.i. Provision C.3.e.ii Special Projects is intended to serve as an interim measure while Permittees further develop their Provision C.3.e.i alternative compliance programs, because Provision C.3.e.i is capable of providing the flexibility needed to accommodate the technical infeasibility of onsite LID for Regulated Projects, without foregoing the water quality and hydrologic benefits provided by LID. The non-LID treatment measures allowed by Provision C.3.e.ii Special Projects do not provide those benefits to the same degree, although that reduction may be somewhat offset by the water quality benefits associated with avoidance of or potential reductions in unsheltered homelessness.

**Provision C.3.f.** (Alternative Certification of Stormwater Treatment Systems) allows Permittees to have a third-party review and certify a Regulated Project's compliance with the hydraulic design criteria in Provision C.3.d. Some municipalities do not have the staffing resources to perform these technical reviews. The third-party review option addresses this staffing issue. This Provision requires Permittees to make a reasonable effort to ensure that the third-party reviewer has no conflict of interest with regard to the Regulated Project being reviewed.

**Provision C.3.g.** (Hydromodification Management) requires that certain new development projects manage increases in stormwater runoff flow and volume so that post-project runoff shall not exceed estimated pre-project runoff 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.

Based on Hydrograph Modification Management Plans prepared by the Permittees, the Water Board adopted hydromodification management (HM) requirements for Alameda Permittees (March 2007), Contra Costa Permittees (July 2006), Fairfield-Suisun Permittees (March 2007), Santa Clara Permittees (July 2005), and San Mateo Permittees (March 2007). Those HM requirements are stated in Provision C.3.g., and Attachment C includes maps prepared by the Alameda, Santa Clara, San Mateo, and Fairfield-Suisun Permittees showing areas where HM requirements apply.

The Alameda, Santa Clara and San Mateo Permittees have adapted the Western Washington Hydrology Model<sup>169</sup> for modeling runoff from development project sites, sizing flow duration control structures, and determining overall compliance of such structures and other HM control structures (HM controls) in controlling runoff from the project sites to manage hydromodification impacts as described in the Permit. The adapted model is called the Bay Area Hydrology Model (BAHM).<sup>170</sup> All Permittees may use the BAHM if its inputs reflect actual conditions at the project site and surrounding area, including receiving water conditions. As Permittees gain experience in designing and operating HM controls, the Programs may make adjustments in the BAHM to improve its function in controlling excess runoff and managing hydromodification impacts. Notification of all such changes shall be given to the Water Board and the public through such mechanism as an electronic email list.

The Contra Costa Permittees have developed sizing charts for the design of flow duration control devices. MRP 1 allowed the Contra Costa Permittees to conduct a monitoring program to verify the performance of these devices and to identify whether streams to which Contra Costa Permittees discharge may have a different susceptibility to HM impacts, thus justifying a different threshold for control of flows resulting in those impacts. The Contra Costa Permittees submitted an IMP Monitoring Report,<sup>171</sup> which found that Contra Costa HM measures generally, but not entirely, met MRP 1's HM requirements for the Alameda, Santa Clara, and San Mateo Permittees, and the City of Vallejo. The Contra Costa Permittees did not submit information showing that Contra Costa creeks had a different susceptibility to erosion. That is, they did not submit a justification for using erosion thresholds different than those accepted for the Alameda, Santa Clara, and San Mateo Permittees, and the City of Vallejo. Under MRP 1, the Water Board had accepted a higher threshold for control of HM effects (i.e., controlling the range of flows beginning at 20 percent of the 2-year pre-project peak flow, as opposed to 10 percent of the 2-year pre-project peak flow). Because this additional information was not submitted, and Contra Costa streams are generally similar to other Bay Area streams, MRP 2 extended the 10 percent standard to Contra Costa, and included requirements for Contra Costa to complete modifications to its HM approach to ensure that projects implement that consistent approach within a specified time.

Pursuant to Provision C.3.g.iii of MRP 2, the Contra Costa Permittees submitted a HM Technical Report<sup>172</sup> with the 2017 Annual Report, which suggested changes to sizing

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<sup>169</sup> <https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Stormwater-permittee-guidance-resources/Stormwater-manuals/Western-Washington-Hydrology-Model>

<sup>170</sup> See [www.bayareahydrologymodel.org](http://www.bayareahydrologymodel.org), Resources.

<sup>171</sup> Contra Costa Clean Water Program, September 15, 2013. IMP Monitoring Report: IMP Model Calibration and Validation Project.

<sup>172</sup> Contra Costa Clean Water Program Hydromodification Technical Report. September 29, 2017.

factors for an array of HM controls used by Contra Costa Permittees to comply with the HM Standard in Provision C.3.g.ii. Water Board staff's review of the 2017 HM Technical Report<sup>173</sup> and subsequent discussion with the Contra Costa Permittees culminated in modifications to Provision C.3.g.iii of this Permit, which requires the Contra Costa Permittees to revise their 2017 HM Technical Report so that HM Projects comply with the HM Standard of Provision C.3.g.iii, by excluding data that are not representative and assumptions that are not supported, and by producing a complete suite of sizing factors that are protective of all likely site and watersheds characteristics within Contra Costa County, for all types of HM controls that may be used in the County and for sites with Hydrologic Soil Group A, B, C, and D soils.

The CCCWP Permittees are required to use a base case sizing factor of 6.5 percent for the complete suite of sizing factors, which is a conservative sizing factor 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 2017 HM Technical Report. In developing the complete suite of sizing factors, the CCCWP Permittees are required to justify deviations from the base case as conditions of exception that could allow alternative sizing while still being protective (adhering to the HM Standard of maintaining  $EP \leq 1$ ) – for different soil types and different applicable geographic characteristics.

This requirement in Provision C.3.g.iii is attached to the reporting requirement in Provision C.3.g.vi.(2).

Provision C.3.g.v. of MRP 1 required the City of Vallejo to complete a hydrograph modification management plan (HMP) by July 1, 2013, in lieu of complying with that order's Provision C.3.g.i-iv. The City submitted its Final HMP on April 24, 2013,<sup>174</sup> and the HMP was subsequently accepted by Board staff. The Final HMP incorporates the same requirements as for the Alameda, Santa Clara, and San Mateo Permittees. The Permit requires the City to comply with those requirements.

The Fairfield-Suisun Permittees are required to comply with the HM criteria established in this Permit. However, they have a threshold for control of erosive flows that is greater than the other Permittees: 20 percent of the 2-year peak flow. This criterion, which is greater than the criterion allowed for other Bay Area Stormwater Countywide Programs, is based on data collected from Laurel and Ledgewood Creeks and technical analyses of these site-specific data.

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<sup>173</sup> Lichten, March 19, 2021. Response to CCCWP's Hydromodification Management Memo of November 4, 2020, and next steps. SF Bay Water Board.

<sup>174</sup> City of Vallejo (Geosyntec), April 2013. Final Hydromodification Management Plan (HMP).

The Water Board recognizes that the collective knowledge of management of erosive flows and durations from new and redevelopment is evolving, and that the topics listed below are appropriate topics for further study. Such a study may be initiated by Water Board staff, or the Executive Officer may request that all Bay Region municipal stormwater Permittees jointly conduct investigations as appropriate. Any future proposed changes to the Permittees' HM provisions may reflect improved understanding of these issues:

- (1) Potential incremental costs, and benefits to waterways, from controlling a range of flows up to the 35- or 50-year peak flow, versus controlling up to the 10-year peak flow, as required by this Permit;
- (2) The allowable low-flow (also called  $Q_{cp}$  and currently specified as 10–20 percent of the pre-project 2-year runoff from the site) from HM controls;
- (3) The effectiveness of self-retaining areas for management of post-project flows and durations; and/or
- (4) The appropriate basis for determining cost-based impracticability of treating stormwater runoff and controlling excess runoff flows and durations.

**Provision C.3.g.i.** defines the subset of Regulated Projects that must install hydromodification controls (HM controls). This subset, called HM Projects, are Regulated Projects that create and/or replace one acre or more of impervious surface and are not specifically excluded by the conditions expressed in C.3.g.i.(1)-(3). Those conditions identify areas where the potential for single-project and/or cumulative development hydromodification impacts to creeks is minimal, and thus HM controls are not required. Such areas include creeks that are concrete-lined or significantly hardened (e.g., with concrete) from point of discharge and continuously downstream to their outfall into San Francisco Bay; underground storm drains discharging to the Bay; and construction of infill projects in highly developed watersheds.<sup>175</sup> The Alameda, Santa Clara, San Mateo, and Fairfield-Suisun Permittees have developed maps showing where HM controls are required (Attachment C).

This Provision requires Permittees that have not previously submitted an HM Applicability Map or equivalent information to prepare and submit that information, acceptable to the Executive Officer, consistent with the requirements of Provision C.3.g. This targets the Contra Costa Permittees, who submitted a HM Applicability

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<sup>175</sup> Within the context of Provision C.3.g., "highly developed watersheds" refers to catchments or sub-catchments that are 70 percent impervious or more.

Map<sup>176,177</sup> with the 2017 Annual Report, which was not satisfactory because it included areas that were not yet resolved (whether or not projects in those areas would be HM Projects), and it claimed certain channels are not hardened, which are in fact hardened. This requirement is attached to the reporting requirement in Provision C.3.g.vi.(1), which requires submittal of new or revised HM Applicability Maps by no later than with the 2023 Annual Report.

- **Provision C.3.g.ii.** establishes the standard HM controls that all HM Projects must meet. The HM Standard is based largely on the standards proposed by Permittees in their Hydrograph Modification Management Plans. The method for calculating post-project runoff in regards to HM controls is standard practice in Washington State and is equally applicable in California.
- **Provision C.3.g.iii.** provides a procedure for the Permittees to propose an additional method for demonstrating compliance with HM requirements. This method would directly simulate erosion potential, and would be required to ensure that projects implementing HM controls with this method, if accepted by the Executive Officer, meet the Permit's HM criteria. This provision requires submittal of appropriate analyses (with the 2023 Annual Report, pursuant to the reporting requirement in Provision C.3.g.vi.(2)) demonstrating that the method will substantively comply with HM requirements; it may not be implemented on projects until accepted by the Executive Officer.
- **Provision C.3.g.iv.** identifies and defines three methods of hydromodification management.
- **Provision C.3.g.v.** establishes the timeframes for meeting the HM Standard defined in Provision C.3.g.ii.
- **Provision C.3.g.vi.** describes the information required to be collected and/or submitted in the Permittees' Annual Reports regarding HM Projects. This Provision also describes specific required information for Contra Costa Permittees to submit with the 2023 Annual Report, which follows from the requirements in Provision C.3.g.i (HM Applicability Map) and in Provision C.3.g.iii (revised HM Technical Report).

**Provision C.3.h.** (Operation and Maintenance of Stormwater Treatment Systems) establishes permitting requirements to ensure that proper maintenance for the life of the

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<sup>176</sup> Attachment 3.1 to 2017 CCCWP Annual Report: Hydromodification Applicability Mapping Methodology Technical Memorandum. September 11, 2017.

<sup>177</sup> Attachment 3.2 to 2017 CCCWP Annual Report: Hydromodification Applicability Map. September 28, 2017.

Regulated Project is provided for all pervious pavement systems of 3,000 square feet or more; onsite, joint, and offsite stormwater treatment systems; and HM controls installed.

This Provision adds a requirement for Permittees to include pervious pavement systems of 3,000 square feet or more in their Operation and Maintenance Agreements, database of Regulated Projects, and inspection checklists. Pervious pavement systems serve as site design measures that directly reduce the amount of impervious surface area and therefore, the size of the stormwater treatment system(s) required to comply with Provision C.3.d. Adequate routine maintenance of pervious pavement systems is essential because clogged systems become impervious and may result in untreated stormwater runoff or additional load on stormwater treatment systems that result in inadequately treated stormwater runoff. To lessen the burden of inspecting so many pervious pavement systems, only those of 3,000 square feet or more are required to be inspected and patios for private-use at single-family homes, townhomes, or condominiums are specifically excluded. In the case of large subdivisions where the total pervious pavement system area is equal to or greater than 3,000 square feet, but the pervious pavement installations are on individual driveways that are less than 3,000 square feet, inspection of a representative number of driveways will suffice.

- **Provision C.3.h.ii.(6).** MRP 1 required Permittees to inspect at least 20 percent of all stormwater treatment systems annually, at least 20 percent of all vault-based systems annually, and every treatment system at least once every 5 years. Permittees have indicated that each inspection of a Regulated Project routinely includes inspection of pervious pavement systems, stormwater treatment systems and HM controls installed at the Project. Therefore, this Provision requires the inspection frequency requirements such that the minimum number of inspections required annually is tied to a percentage of the total number of Regulated Projects, instead of the total number of individual treatment systems and HM controls. This lessens the tracking burden for the Permittees and better reflects the way actual inspections are conducted.

This Provision requires each Permittee to inspect all its Regulated Projects at least once every 5 years and inspect an average of 20 percent, but no less than 15 percent of the total number of Regulated Projects annually. This requirement serves to prevent failed or improperly maintained pervious pavement systems, stormwater treatment systems, or HM controls from going undetected until the 5th year. Neither of these inspection frequency requirements interferes with the Permittees' current ability to prioritize their inspections based on factors such as types of maintenance agreements, owner or contractor-maintained systems, maintenance history, past compliance problems at certain Projects, etc.

- **Provision C.3.h.ii.(6)(d)** This Provision allows Permittees to accept third party inspection reports for vault-based stormwater treatment systems in lieu of conducting Permittee inspections, but only if the third party inspections are conducted at least annually, which is the normal frequency for maintenance of these

systems. Each third party inspection must be included in the database or tabular format required in Provision C.3.h.ii.(4) and (5) and clearly identified as a third party inspection. Each third party inspection report must document the third party inspection company, date of inspection, condition of the treatment unit(s) at the time of inspection, maintenance activities performed, and appearance of the inside of the vault units (with photos) before and after maintenance.

- **Provision C.3.h.ii.(7)** As the number of Regulated Projects grows, the Permittees' O&M inspection programs must grow as well. Therefore, this Provision requires each Permittee to develop and implement an Enforcement Response Plan (ERP) for O&M inspections. The ERP serves as a reference document for inspection staff so that consistent enforcement actions can be taken to bring development projects into compliance. This Provision establishes minimum requirements for the ERPs. One of these requirements is that corrective actions must be implemented within 30 days after a problem is identified by an inspector. Thirty days is more than adequate time, considering that many of the problems identified in past O&M inspection reports have been lack of maintenance service or build-up of sediment or debris. The correction of such deficiencies should not take more than 30 days. This Provision also allows for greater than 30 days to complete permanent corrective actions, such as installing additional curb cuts and making grading or vegetation improvements.
- **Provision C.3.h.iv.** This Provision requires Permittees to ensure that pervious pavement systems that total 3,000 square feet or more, stormwater treatment systems, and hydromodification controls are appropriately operated and maintained for the life of those systems and controls, which maintenance is necessary to ensure the systems and controls are operating effectively and protecting water quality consistent with their designs. It recognizes situations where maintenance may be delayed due to the need to obtain certain federal or state permits (e.g., special status species take authorization from a state or federal agency), and sets expectations regarding how Permittees should proceed. Specifically, Permittees should ensure a system's or controls' responsible party is working in good faith to obtain those authorizations. It directs Permittees to abide by the expectations set in the Water Board's Resolution No. 94-102 for applicable systems, including the maintenance thereof.
- **Provision C.3.h.v.** As in MRP 1 and MRP 2, this Provision requires the Permittees to maintain a database or equivalent tabular format with detailed information on each O&M inspection and any necessary enforcement actions against Regulated Projects. To lessen the burden of reporting, this Provision only requires summary data on inspections conducted each fiscal year to be reported in the Annual Report, instead of detailed information on each O&M inspection. However, upon request by the Executive Officer, detailed information from the database or tabular format must be submitted.

**Provision C.3.i.** (Required Site Design Measures for Small Projects and Detached Single-Family Homes Projects) contains requirements for detached single-family home projects that create and/or replace  $\geq 2,500$  ft<sup>2</sup> to  $<10,000$  ft<sup>2</sup> of impervious surface and small development and redevelopment projects that create and/or replace  $\geq 2,500$  ft<sup>2</sup> to  $<5,000$  ft<sup>2</sup> of impervious surface (collectively over the entire project). A detached single-family home project is defined as 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. Projects with new or replaced impervious surface of this size transport storm water pollutants that can be controlled through basic site design measures.

This Provision requires these projects to select and implement one or more stormwater site design measures from a list of six. These site design measures are basic methods to reduce the amount and flowrate of stormwater runoff from projects and provide some pollutant removal treatment of the runoff that does leave the projects. Under this Provision, only projects that already require approvals and/or permits under the Permittees' current planning, building, or other comparable authority are regulated. Hence this Provision does not require Permittees to regulate small development and single-family home projects that would not otherwise be regulated under the Permittees' current ordinances or authorities. Water Board staff recognizes that the stormwater runoff pollutant and volume contribution from each one of these projects may be small relative to other types of development and redevelopment projects; however, the cumulative impacts are likely to be significant. This Provision serves to address some of these cumulative impacts in a simple way that will not be too administratively burdensome on the Permittees.

**Provision C.3.j.** (Green Infrastructure Planning and Implementation) MRP 2 required Permittees to complete and begin implementation of a Green Infrastructure Plan (GI Plan) 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. In particular, green infrastructure sited in the public right of way that collects stormwater from adjacent tributary parcels can be a more efficient use of public and private resources than treatment of individual parcels, and can also result in additional treatment compared to parcel-based treatment.<sup>178</sup> As such, Permittees have used green infrastructure

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<sup>178</sup> For example, see:

WEF, Dec. 2, 2015. *The Real Cost of Green Infrastructure*. WEF Stormwater Report. Web. July 24, 2021.  
McGlynn, Dec. 2019. *Clock Ticking for Cities to Commit to Urban Greening*. Estuary News, the San Francisco Estuary Partnership.  
CCAG, January 2021. *San Mateo Countywide Sustainable Streets Master Plan*.  
Clary et al., 2020. *International Stormwater BMP Database: 2020 Summary Statistics*. The Water Research Foundation.

approaches when siting treatment systems for Regulated Projects, such as for Provision C.3.e.i Alternative Compliance projects.

Public Law 115-436 Water Infrastructure Improvement Act approved on January 14, 2019, established section 402(s) of the CWA authorizing integrated plans that address both municipal wastewater and stormwater management as a potential compliance path that may be incorporated into an NPDES permit. Integrated planning is designed to help municipalities identify efficiencies in implementing requirements that arise from distinct permitting programs, particularly how best to make capital investments (Integrated Municipal Stormwater and Wastewater Planning Approach Framework, U.S. EPA, June 5, 2012). Under this law, an integrated plan can be used to implement any requirements relating to a combined sewer overflow, sanitary sewer collection system, municipal stormwater discharge, municipal wastewater discharge, and a water quality-based effluent limitation to implement an applicable wasteload allocation in a total maximum daily load. The integrated planning approach does not relax or change regulatory permitting standards, but rather recognizes existing flexibilities in the CWA to sequence and schedule compliance projects that may be relevant to multiple permitting programs (33 U.S.C. § 1342(s)(5)). Notably, Congress recognized the value of green infrastructure in meeting CWA requirements in allowing green infrastructure in integrated plans (*Id.* at subd. (s)(3)(b)(ii)). While this Order is not an integrated plan under CWA section 402(s), it shares the same principle of promoting integrated planning in meeting various regulatory requirements, especially with regard to green infrastructure.

The GI Plan is 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) 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. For MRP 2, the development of the GI Plan was in lieu of expanding the definition of Regulated Projects prescribed in Provision C.3.b.ii to include all new and redevelopment projects that create or replace 5,000 square feet or more of impervious surface areas and road projects that just replace existing impervious surface area. However, this Permit includes (and subsequent Permits may further include) different impervious surface thresholds or other criteria for Regulated Projects. The GI Plan also provides a mechanism to

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Sustainable Business Network, May 2021. *Green Stormwater Infrastructure (GSI): A Tool for Economic Recovery and Growth in Pennsylvania*.  
Sustainable Business Network, 2021. *Excellence in GSI Awards*, Philadelphia, PA.  
Stutz, Bruce, March 29, 2018. *With a Green Makeover, Philadelphia is Tackling Its Stormwater Problem*.  
Yale Environment 360.

establish and implement alternative or in lieu compliance options for Regulated Projects.

Over the long term, the GI Plan is 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.

The GI Plan also identifies means and methods to prioritize particular areas and projects within each Permittee's jurisdiction, at appropriate geographic and time scales, for implementation of green infrastructure projects. Further, it includes means and methods to track the area within each Permittee's jurisdiction that is treated by green infrastructure controls and the amount of directly connected impervious area. As appropriate, it incorporates plans required elsewhere within this Permit, and specifically plans required for the monitoring of and to ensure appropriate reductions in trash and PCBs, mercury, and other pollutants. Permittees may comply with the requirements of this Provision through collaborative efforts.

MRP 2 specified minimum elements that each GI Plan must contain to ensure that each GI Plan is robust and appropriately identifies the means and methods that each Permittee will employ to implement green infrastructure over time. These minimum elements are not overly prescriptive, so as to allow Permittees flexibility in developing their GI Plans. They are repeated here, to guide the Permittees' ongoing updates and addenda to their Plans as prescribed by Provision C.3.j.ii.(1):

- (1) A mechanism to prioritize and map areas for potential and planned projects, both public and private, on a drainage-area specific basis. Implementation of these projects is required to be projected over the same timeframes as specified in Provisions C.11. and C.12. for assessing mercury and PCB load reductions because green infrastructure and projects are an acknowledged means of pollutant load reductions. Each Permittee has flexibility in choosing the mechanism as long as it includes criteria for prioritization and outputs that can be incorporated into its long-term planning and capital improvement processes.
- (2) Targets for the amount of impervious surface, from public and private projects, within the Permittee's jurisdiction to be retrofitted over the same timeframes as specified in Provisions C.11. and C.12. for assessing mercury and PCB load reductions. These self-determined targets represent the green infrastructure work that each Permittee has proactively identified will be completed beyond what would be completed in its community anyway.

- (3) A process for tracking and mapping completed projects, public and private, and making the information publicly available. Again, each Permittee has flexibility in what they use to comply with this Provision.
- (4) General guidelines and standard specifications for overall streetscape and project design and construction to ensure that projects have a unified, complete design that implements the range of functions associated with the projects. These guidelines and standard specifications, while crucial to a Green Infrastructure Plan, already exist in many reference documents for green infrastructure design and are readily available.
- (5) Requirement(s) that projects be designed to meet the treatment and hydromodification sizing requirements in Provisions C.3.c. and C.3.d. In recognition of space and drainage constraints that may occur for public green infrastructure road projects not subject to Provision C.3.b.ii (i.e., non-Regulated Projects), this Provision allows Permittees to collectively propose a single approach for how to proceed should project constraints preclude fully meeting the C.3.d. sizing requirements. The single approach can include different options to address specific issues, constraints, or scenarios.
- (6) A summary of the planning documents the Permittee has updated or otherwise modified as well as how the Permittee will ensure that green infrastructure requirements will be included in future plans. The purpose of this element is to show that each Permittee is considering green infrastructure in all aspects of its urban planning.
- (7) A workplan to complete prioritized projects identified as part of a Provision C.3.e Alternative Compliance program or part of Provision C.3.j Early Implementation.
- (8) An evaluation of prioritized project funding options, including, but not limited to: Alternative Compliance funds; grant monies, including transportation project grants from federal, state, and local agencies; existing Permittee resources; new tax or other levies; and other sources of funds.

In addition to the development of the GI Plans, MRP 2 required each Permittee to:

- (1) Prepare a framework or workplan that describes specific tasks and timeframes for developing its GI Plan. The framework or workplan was required to be approved by each Permittee's governing body, mayor, city manager, or county manager by June 30, 2017. This approval process provided assurance to the Water Board that Permittees are committed to the development and implementation of the GI Plan and green infrastructure.
- (2) Document in its 2017 Annual Report that the framework or workplan for development of its GI Plan was approved by June 30, 2017, as required by Provision C.3.j.i.(1) of MRP 2. This Provision also required each Permittee to

submit its GI Plan and documentation of the legal mechanisms to implement the GI Plan with the 2019 Annual Report.

- (3) Prepare and maintain a list of green infrastructure projects, public and private, that are already planned for implementation during the permit term and infrastructure projects planned for implementation that have potential for green infrastructure measures.

The Permittees were required to submit the list with each Annual Report along with 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 under Provision C.3.b.ii. This Provision also required each Permittee to 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, the Permittee was required to submit a brief description of the project and the reasons green infrastructure measures were impracticable to implement.

The purpose was to ensure that each Permittee is proactively developing green infrastructure projects and including green infrastructure elements into already planned infrastructure projects as much as possible, both while the GI Plan was being developed, and subsequent to its development.

This requirement is retained in the Permit, in Provision C.3.j.iii, No Missed Opportunities.

- (4) Individually or collectively, to track processes, assemble and submit information, and provide information, materials, and presentations as needed to assist relevant regional, state, and federal agencies to plan, design, and fund green infrastructure measures in local infrastructure projects, including public transportation projects.
- (5) Individually or collectively, to develop and implement regionally consistent methods 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 GI Plans were completed during MRP 2; therefore, the focus of Provision C.3.j in the Permit shifts from planning to implementation. U.S. EPA supports the Permit's movement from planning to implementation of green infrastructure on a more regional basis.<sup>179</sup> Provision C.3.j.i. Task Description requires the Permittees to (continue to) implement their GI Plans, as may be updated and supplemented to comply with this Order.

Provision C.3.j.ii Implementation Level, prescribes programmatic requirements, numeric requirements, and design criteria that Permittees must comply with when implementing their GI Plans during the Current Permit Term.

Provision C.3.j.ii.(1) describes the Programmatic Implementation requirements requiring Permittees to update and supplement their GI Plans to ensure that municipal processes and ordinances allow and appropriately encourage implementation of green infrastructure, and incorporate lessons learned, by:

- (1) Revising the implementation mechanisms in the GI Plans 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.

This is necessary because Permittees may need to update their implementation mechanisms as certain processes are refined or adapted to better support green infrastructure implementation. Cooperation with non-municipal entities like school districts is required to be considered or reconsidered because schools can offer excellent opportunities for green infrastructure implementation for a number of reasons, including their likely coverage under the California Small MS4 General Permit, which is expected to clarify the clean water role they can play going forward; their role in climate change adaptation planning efforts; their often substantial impervious surface coverage; and the ability of municipalities to regulate discharges from schools into their MS4s.<sup>180</sup> Often, schools have some of the most-available area for green infrastructure implementation, along with budget needs that can facilitate cooperation when municipalities or others contribute sources of funding. Because of the opportunities for implementation, funding, and shared need, GI Plans should be revised to include, in their

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<sup>179</sup> U.S. EPA provides many resources at a national level that document the multiple benefits that green infrastructure can have on water quality and community well-being: <https://www.epa.gov/green-infrastructure/benefits-green-infrastructure>

<sup>180</sup> For example, L.A. Unified School District: Storm Water Management and Low Impact Development. <http://learninggreen.laschools.org/stormwater-management.html>. Accessed July 26, 2021. Sharon Danks, *A vision for green schoolyards across California*. Green Technology Magazine, Web. accessed July 26, 2021. <https://www.green-technology.org/magazineneeds/a-vision-for-green-schoolyards-across-california/>

prioritization approaches, green infrastructure projects that may be implemented in a joint or cooperative manner, including not only those coordinated with schools, but also those coordinated with Bay Area Rapid Transit (BART), Caltrans, and others as appropriate.

- (2) 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 the Permittees in their GI Plans. Upon request by Water Board staff, Permittees are required to provide justifications for planning documents that they assert do not need to be updated to further support green infrastructure implementation.

This is necessary because not all Permittees sufficiently updated their planning documents as required in the Previous Permit term to demonstrate that they are considering green infrastructure in all aspects of urban planning. In many cases, it was unclear how the planning documents supported green infrastructure implementation. Water Board staff's complete review of the GI Plans, which provides guidance on this and other facets of Provision C.3.j.ii.(1), is detailed in an October 2020 memo.<sup>181</sup>

GI Plans that identify overarching policy or planning documents are worthwhile for other Permittees to consider. For example, San Mateo County references the City/County Association of Governments of San Mateo County's (C/CAG's) Sustainable Streets Master Plan, which prioritizes locations to integrate green infrastructure into street rights of way and considers how those projects may contribute to climate change resilience. This opportunity to more legibly consider and coordinate the multiple benefits of green infrastructure could facilitate implementation over time.

Several GI Plans reference specific plans, neighborhood plans, street master plans, or similar documents, which can allow municipalities to focus their green infrastructure implementation in an intentional and targeted manner. Examples include the City of El Cerrito's 2014 San Pablo Avenue Specific Plan, which, among other things, charges private development with impact fees to fund frontage improvements on San Pablo Avenue, and the City of Berkeley's 2019 Adeline Corridor Specific Plan, which has identified several promising green infrastructure opportunities. Master planning efforts like those framed in specific plans have long been tools for effective green infrastructure implementation.

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<sup>181</sup> Water Board Staff's Review of the 2019 Green Infrastructure Plans. October 1, 2020.

More than twenty years ago, Fremont's plan for the 840-acre Pacific Commons site enabled comprehensive district-scale stormwater planning and expectation setting in advance of development of parcels within the district. The Water Board supports the use of specific plans and related plans to facilitate green infrastructure implementation, and as part of a range of green infrastructure implementation tools that should be applied throughout Permittee jurisdictions.

The expectation of this Provision is that Permittees continue to update existing plans to include, as appropriate, and to incorporate into new plans, low impact development and green infrastructure expectations, including implementation. Similar to El Cerrito's and Berkeley's approaches, Permittees' updated and new specific plans and similar documents should incorporate green infrastructure requirements for the plan areas. For example, the City of Campbell's GI Plan noted several neighborhood and street master plans that could be updated to incorporate and coordinate green infrastructure expectations, and referenced development by this year of a schedule to complete those updates. That was similar to other municipality plans in western Santa Clara County, and is a reasonable model for addressing updates during the Permit term.

- (3) Developing funding and funding mechanisms identified in the GI 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.

The most common existing funding sources identified in the GI Plans are State grants and internal revenues. Many GI Plans commit to incorporating consideration of green infrastructure into the Permittees' Capital Improvement Plans (CIP) so that green infrastructure funding may be tied to CIP projects where incorporation of green infrastructure has been identified as otherwise feasible. Given existing funding constraints, most Permittees are prioritizing maintenance of existing infrastructure over addressing pollutant discharges (from yet-untreated impervious surfaces) with clean water controls.

To overcome this challenge, the GI Plans describe widespread interest in establishing new long-term funding sources, such as alternative compliance programs, Prop. 218- and SB 231-compliant stormwater utility fees, and permit fees. A few GI Plans describe existing stormwater utility fees enacted prior to Prop. 218, and others note how these fees are currently being pursued. Oakland's GI Plan includes a useful summary letter (App. F, Oakland 100RC Stormwater Program Financing Memo) that describes a range of available funding opportunities, in addition to citing BASMAA's 2018 Roadmap of Funding

Solutions for Sustainable Streets.<sup>182</sup> Nearly every GI Plan that expressed hesitance in pursuing such fees now stresses 1) the risk associated with legal challenges, and 2) the need to wait for another Permittee to be the legal test subject for this approach.

Permittees such as the Cities of San Mateo and Redwood City are leading the way by more fully recognizing the extent of development project urban runoff impacts and requiring developers to fund green infrastructure that is either beyond the Permit's minimum requirements or based on a reinterpretation of the Permit's requirements as a condition of approval.

During the Permit term, Permittees with regulated projects should evaluate opportunities to pursue approaches similar to those being implemented by the Cities of San Mateo and Redwood City.

Funding approaches that the Water Board did not see broadly considered in the GI Plans include: impervious surface fees targeting all impervious surface, including single- and multi-family residential parcels, tied to the operation and maintenance of the storm drain system; and maintaining or increasing development application review and post-construction green infrastructure operation and maintenance inspection fees to a level sufficient to allow for a self-sustaining program. The Water Board welcomes opportunities to discuss and support Permittees' funding approaches.

There are some interesting countywide proposals unique to certain counties. For example, the GI Plans for Permittees within Contra Costa County include a discussion of legislative constraints to the use of Contra Costa Transportation Authority Sales Tax Revenue for green infrastructure implementation, and of pursuing a ruling from MTC on the Highway User Gas Tax Account. The GI Plans for Permittees within San Mateo County include a discussion of the planned Flood and Sea Level Rise Resiliency Agency, which would help fund regional green infrastructure projects. The Water Board looks forward to working with the Permittees to support these and any other new or similar countywide efforts. Most GI Plans also, appropriately, reference BASMAA's 2018 Roadmap of Funding Solutions for Sustainable Streets.<sup>182</sup>

- (4) 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

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<sup>182</sup> [https://basmaa.org/wp-content/uploads/2021/01/roadmap\\_funding\\_solutions\\_sustainable\\_streets\\_final.pdf](https://basmaa.org/wp-content/uploads/2021/01/roadmap_funding_solutions_sustainable_streets_final.pdf)

reviewing and updating general guidelines and standard specifications as appropriate.

The primary goal of this requirement is to ensure that there are no barriers to green infrastructure implementation based on the availability and status of guidance documents and standard specifications and details during the Permit term. In addition, some Permittees did not demonstrate that it adapted guidance documents to local considerations in the Previous Permit.<sup>181</sup>

- (5) Continuing to implement the tools developed during the Previous Permit to track and map completed public and private green infrastructure projects, and making the information publicly available.

Nearly all GI Plans reference tracking tools currently in development by the County stormwater programs, with a statement that the tools include or will include components to make certain information publicly available. However, some GI Plans suggest that green infrastructure implementation information submitted in tabular format in Annual Reports satisfies this subprovision. It does not. The tools in development generally appear appropriate to meet this Provision, but additional information is needed as discussed below. Each GI Plan that references a County stormwater program's tracking tool, many of which are based on ArcGIS online or AGOL, and a few of which utilize GreenPlan-IT, appropriately commits to contributing data to it once the tool is ready, and many GI Plans discuss local tracking tools that will likely be discontinued once the County tracking tools are ready. However, most GI Plans do not say when the respective County tracking tool will be completed, or whether or how the tools will be available to the public, and if yes, what information will be made available. Some GI Plans say only that the tools have or will have mapping capabilities accessible at least by Permittee staff, but not necessarily by the public. Some plans say that "non-regulated project installations of green infrastructure are tracked as feasible in the same manner as regulated projects."

The requirements for the tracking tool during the Current Permit term are further specified in Provision C.3.j.v. (see below).

- (6) Continuing to adopt or amend policies, ordinances, and/or other appropriate legal mechanisms to ensure implementation of the Plan in accordance with the requirements of this Provision, as necessary.

This requirement ensures implementation of green infrastructure and is based on the need to reduce the discharge of pollutants in storm water in a more resilient, sustainable way as described above.

- (7) Continuing to conduct outreach and education.

Education and outreach, both internally and externally, are important to realizing green infrastructure projects to reduce the discharge of pollutants in storm water.

Provision C.3.j.ii.(2) describes the Numeric Implementation requirements, which are summarized below followed by a rationale for the requirements:

- (1) By June 30, 2027, the Permittees are required to implement, or cause to be implemented, green infrastructure retrofit projects within their jurisdictions in the acreages set forth in Table H-1 of Attachment H. The retrofit acreages cannot encompass Regulated Projects under Provision C.3.b.

For Table H-1 of Attachment H, Permittees were assigned three acres of non-Regulated Project impervious surface retrofit per 50,000 population using the 2019 U.S. Census Bureau Population Estimate, prorated, with a minimum requirement of 0.2 acres and a maximum requirement of ten acres. That retrofit expectation, to be accomplished during the Permit term as described in Provision C.3.j.ii, is far below the ultimate need for retrofit in the Permittees' jurisdictions, considering drivers such as the need to accomplish TMDL wasteload allocations and to reduce the discharge generally of urban runoff pollutants through the MS4. However, the retrofit requirement ensures each Permittee builds capacity by completing or meaningfully participating in at least one project. Permittees are expected to use their GI Plans to help inform the selection of retrofit projects. In addition, the retrofit requirement uses population as a rough proxy for Permittee capacity to complete retrofit work. In combination with the acreage maximum of ten acres, the retrofit requirement is intended to be a flexible and doable goal during this Permit term. The minimum retrofit requirement ensures that each Permittee uses that experience to build its institutional capacity for implementing green infrastructure within its jurisdiction. The maximum retrofit requirement reduces the retrofit requirements only for a handful of the larger Permittees, one of which (the City of San Jose) will likely exceed 10 acres of non-Regulated Project retrofit in any case because of its consent decree with San Francisco Baykeeper, as discussed in the subsequent paragraph. These retrofit assignments, when summed regionally for the Permittees will result in about 270 acres of non-Regulated Project impervious surface retrofitted by the expiration date of the Permit, which will make a significant incremental step towards addressing the otherwise unaddressed adverse stormwater quality impacts of Permittee's rights of way, particularly those smaller public streets projects that are not otherwise subject to the same clean water controls as Provision C.3.b. Regulated Projects.

- (2) The retrofit acreages are required to address pollutants discharges from MS4s because the Permittees have substantial areas of impervious surface—comprised in large part of their existing public roads and parking areas—that discharge urban runoff pollutants to the MS4, but on which projects are not being completed that fall into Regulated Project categories. As such, they are

unlikely to be retrofitted with clean water controls and will continue to discharge urban runoff pollutants in the absence of a retrofit requirement. Regulated Projects addressed in Provision C.3.b are only a fraction of the thousands of acres of impervious surfaces in the area covered by this Order. All impervious surfaces contribute pollutants to stormwater runoff, with those in higher density land uses contributing more pollutants. Accordingly, in order to reduce the discharge of storm water pollutants from MS4s to the maximum extent practicable and help attain TMDL wasteload allocations, additional impervious surface areas must be addressed beyond the Regulated Projects. As explained below, other jurisdictions in the State of California and elsewhere in the United States have MS4 NPDES Permits with similar non-Regulated Project numeric retrofits requirements that supplement their retrofit requirements for Regulated Projects.

- (3) Pursuant to its consent decree with San Francisco Baykeeper (effective August 11, 2016),<sup>183</sup> and through projected rates of public and private development and redevelopment, as reported in its GI Plan,<sup>184</sup> the City of San Jose will retrofit (or cause to be retrofitted) roughly 3,750 acres of impervious surface between 2020 and 2030, and roughly 10,000 acres of impervious surface between 2030 and 2040, much of which will necessarily be comprised of non-Regulated Projects. Therefore, San Jose alone is likely to satisfy 100 percent of the Santa Clara County Permittees' Provision C.3.j.ii.(2) Numeric Implementation retrofit requirement.
- (4) The San Mateo County Permittees' Orange Memorial Park Regional Project is located in the City of South San Francisco, and will address runoff from over 6,500 acres of land from six neighboring jurisdictions: portions of the City of Colma, the City of Daly City, the City of Pacifica, South San Francisco, Caltrans ROW, and Unincorporated San Mateo County.<sup>185</sup> Likewise, this regional project alone may satisfy 100 percent of the San Mateo County Permittees' Provision C.3.j.ii.(2) Numeric Implementation retrofit requirements.
- (5) A study in Washington State found that imperviousness could serve as a proxy for aquatic system health.<sup>186</sup> It found that ten percent impervious area was a threshold at or above which there was demonstrable, and probably irreversible,

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<sup>183</sup> [https://baykeeper.org/sites/default/files/press\\_release/Baykeeper-San%20Jose%20Stormwater%20suit%20settlement%20agreement.pdf](https://baykeeper.org/sites/default/files/press_release/Baykeeper-San%20Jose%20Stormwater%20suit%20settlement%20agreement.pdf)

<sup>184</sup> <https://www.sanjoseca.gov/your-government/environment/our-creeks-rivers-bay/green-infrastructure>

<sup>185</sup> <https://www.ssf.net/departments/public-works/engineering-division/capital-improvement-program/orange-memorial-park-regional-storm-water-capture-project>

<sup>186</sup> Consequences of Urbanization on Aquatic Systems – Measured Effects, Degradation Thresholds, and Corrective Strategies. Derek B. Booth and Lorin E. Reinelt. King County Surface Water Management Division, Seattle, WA. 1993.

loss of aquatic system function, reflected by measured changes in channel morphology, fish and amphibian populations, vegetation succession, and water chemistry. Even lower levels of urban development were observed to cause significant degradation in sensitive waterbodies and a reduced, but less well quantified, degree of loss throughout the system as a whole. This suggests that successful corrective measures must not simply protect or restore the structure of individual stream or wetland elements; buffers around waterbodies must be combined with watershed-level restrictions on the rate and duration of stormwater discharge, as loss of instream fish habitat cannot be repaired by in-stream engineered structures alone. The study did not establish an imperviousness threshold for degradation of San Francisco Bay Area streams. However, in finding significant degradation of waters in Washington State at levels of imperviousness that are well below those of many Bay Area watersheds, the study suggested that there is a need for substantial reductions over time from current levels of directly connected impervious surface. This adds support for the Permit's requirements to implement measures to control discharges from both existing and new impervious surfaces, including public roads.

Many Permittees jurisdictions have impervious area cover that is substantially larger than ten percent. The Permittees' GI Plans' projected retrofit by Regulated Projects and non-Regulated Projects by 2020 (the existing condition), 2030, and 2040, demonstrate that this amount is expected to continue during this and future Permit terms. Therefore, the requirements included in Provision C.3.j.ii.(2) are intended to increase the pace at which Permittees address the pollutant loading and hydromodification impacts from their impervious surfaces.

- (6) The Permittees' existing commitments for green infrastructure implementation in GI Plans are insufficient to address the problem associated with impervious surfaces. With few exceptions, the GI Plans do not commit to accelerate the existing rate of green infrastructure implementation, or to retrofit existing impervious surfaces (particularly, in the public right of way), with clean water controls to address urban runoff discharges, beyond what the Permit already requires for Regulated Projects using an LID approach. Consequently, the GI Plans are limited in the extent to which they would reduce the adverse water quality impacts of urban runoff on receiving waters over time.

For example, one Permittee's Capital Improvement Plan indicates consideration of numerous projects with potential for green infrastructure implementation, including miles of street projects, but its GI Plan sets a retrofit target of only 0.8 acres of public impervious surface by 2040, for both Regulated and non-Regulated public projects. Another Permittee's GI Plan sets a retrofit target of only one acre of public impervious surface by 2040.

These outcomes represent a missed opportunity, in that the Previous Permit's green infrastructure planning requirement was included as an alternative to expanding the Regulated Project definitions to include all new and redevelopment projects that create or replace 5,000 square feet of impervious surface, and road projects that just replace existing impervious surface area. That is, in the Previous Permit, green infrastructure planning was included in part to provide municipalities the opportunity to evaluate and account for smaller area regulated projects and road replacement projects as part of their GI Plans, and develop commitments to implementation that would be more efficient and effective for them than a Permit requirement to include all such projects.

- (7) Many GI Plans do include some public projects in their green infrastructure retrofit targets, but among those public projects, most are Regulated Projects. One GI Plan, the City of San Jose's, includes substantial public non-Regulated Project green infrastructure implementation, but as described previously, that is largely an outcome of San Jose's 2016 consent decree with the San Francisco Baykeeper, demonstrating that municipal commitment of funding to green infrastructure retrofit has the potential to result in substantial implementation. Overall, the contribution to the retrofits targets presented in the GI Plans by non-Regulated (public) Projects is small relative to the contribution by Regulated (private) Projects.
- (8) When the green infrastructure retrofit targets as presented in the GI Plans are summed and considered against estimates of county and regional impervious surface cover, the resulting data describes the relative retrofit that is projected to take place through 2040 at the regional scale. According to the GI Plans, based on the Regulated Project definitions from the Previous Permit and without the numeric implementation requirements included in this Provision in the Permit, for private and public, Regulated and non-Regulated, parcel based, green streets and regional projects, the projected retrofits by 2020, 2030, and 2040 by county stormwater programs are summarized in Table A-4:

**Table A-4. GI Plan-estimated retrofit**

<b>Permittees</b>	<b>2020</b>	<b>2030</b>	<b>2040</b>
Alameda	2%	3%	3%
Contra Costa	1%	2%	3%
San Mateo	1%	2%	4%
Santa Clara	2%	5%	12%
Solano	6%	8%	10%
Total	2%	4%	6%

GI Plan Long-Term Retrofit. The numbers in each County's row in this table have the respective County's total impervious surface as a denominator, based on the NLCD 2016 Developed Imperviousness Descriptor (CONUS).<sup>187</sup> The numbers in the final row of this table, Total, has the five Counties' total impervious surface as a denominator; since these numbers are percentages of the total five-County impervious surface, they do not sum the above columns.

This shows that despite the opportunity given to flexibly capture smaller projects in GI Plans in lieu of a numeric permit requirement in MRP 2, the Permittees have not committed to accelerating the existing rate of green stormwater infrastructure implementation, or to retrofit existing impervious surfaces with clean water controls to address urban runoff pollutant discharges from existing impervious surfaces, beyond what MRP 2 already required for Regulated Projects.

- (9) The inclusion of numeric retrofit acreages is consistent with other relevant NPDES Stormwater Permits, which include similar non-Regulated Project numeric retrofits requirements that supplement their retrofit requirements for Regulated Projects.

The City of Portland's MS4 NPDES Discharge Permit (effective January 31, 2011)<sup>132</sup> requires each co-permittee to implement one non-regulated public right-of-way project before the end of the permit term. Analogous requirements for the completion of at least one public retrofit project are included in the City of Salem's NPDES MS4 Discharge Permit (effective December 30, 2010)<sup>137</sup> and the City of Eugene's NPDES MS4 Discharge Permit (effective December 30, 2010).<sup>141</sup>

The State of Washington's NPDES and State Waste Discharge General Permit for Discharges from Large and Medium MS4s (effective August 1, 2019)<sup>134</sup> requires Permittees to achieve 300 Structural Stormwater Control (SSC) Program Points (225 points from projects in the design stage and 75 points from completed projects) by the third year of the permit term. Appendix 12<sup>188</sup> of that permit provides instructions regarding which types of projects are qualifying, and regarding how to calculate the SSC Program Points that those projects are worth (starting with Table 3 of Appendix 12).

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<sup>187</sup> <https://www.mrlc.gov/data>

<sup>188</sup> Accessed on July 30, 2021, from:

<https://apps.ecology.wa.gov/paris/DownloadDocument.aspx?id=279051>

The points system offers a flexible approach to retrofit. It requires implementation of retrofit actions that are beyond work that would otherwise be required under that permit. However, it allows implementation of a range of actions to protect and improve water quality, such as new LID BMPs, retrofit of existing controls to expand capacity, permanent removal of impervious surfaces, and landscape restoration to reduce hydromodification impacts.

Similar to the State of Washington's NPDES and State Waste Discharge General Permit for Discharges from Large and Medium MS4s,<sup>134</sup> in U.S. EPA's Draft NPDES Stormwater Permit for the City of Tacoma's MS4,<sup>189</sup> the permittee is required to implement a Structural Stormwater Controls Program to prevent or reduce impacts to receiving waters caused by discharges from the MS4 that are not adequately controlled by other existing actions required by the permittee's Stormwater Management Program (SWMP) Plan,<sup>190</sup> towards that end the permittee's SWMP Plan requires it to achieve 300 SSC Program Points by December 31, 2022, to address impacts that are not adequately controlled by the other required actions of the SWMP Plan. Structural stormwater control program points are calculated per Appendix 12<sup>188</sup> of the State of Washington's NPDES and State Waste Discharge General Permit for Discharges from Large and Medium MS4s.<sup>134</sup>

Likewise, in U.S. EPA's Draft NPDES Stormwater Permit for Pierce County's MS4,<sup>191</sup> the permittee is required to implement a Structural Stormwater Controls Program to prevent or reduce impacts to receiving waters caused by discharges from the MS4 that are not adequately controlled by other existing actions required by the permittee's Stormwater Management Program (SWMP) Plan,<sup>192</sup> towards that end the permittee's SWMP Plan requires it to achieve 300 SSC Program Points by December 31, 2022 (225 design-stage retrofit incentive points; 75 complete or maintenance stage incentive points), to address impacts that are not adequately controlled by the other required actions of the SWMP Plan. Structural stormwater control program points are calculated per Appendix 12<sup>188</sup> of the State of Washington's NPDES and State Waste Discharge General Permit for Discharges from Large and Medium MS4s.<sup>134</sup>

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<sup>189</sup> U.S. EPA NPDES Permit No. WAS026689, accessed on July 30, 2021, from:

<https://www.epa.gov/npdes-permits/draft-npdes-stormwater-permit-city-tacoma-ms4-washington>

<sup>190</sup> City of Tacoma, Stormwater Management Program (SWMP) Plan, March 2021. Accessed on July 30, 2021, from:

[https://www.cityoftacoma.org/UserFiles/Servers/Server\\_6/File/cms/Surfacewater/SWMPUpdates/Final%20Draft%20SWMP%20Update\\_2021.pdf](https://www.cityoftacoma.org/UserFiles/Servers/Server_6/File/cms/Surfacewater/SWMPUpdates/Final%20Draft%20SWMP%20Update_2021.pdf)

<sup>191</sup> <https://www.epa.gov/npdes-permits/proposed-stormwater-permit-pierce-county-ms4>

<sup>192</sup> Pierce County, Stormwater Management Program Plan, 2020. Accessed on July 30, 2021, from: <https://www.piercecountywa.gov/DocumentCenter/View/92121/2020-SWMP?bidId=>

The State of Maryland's NPDES General Permit for Discharges from Small MS4s (effective October 31, 2018)<sup>143,143</sup> makes progress towards the nutrient and sediment load reductions required to address the Chesapeake Bay TMDL, as specified in Maryland's Watershed Implementation Plan, by requiring its permittees to commence restoration efforts for twenty percent of existing developed lands that have little or no stormwater management by 2025, such as by requiring its permittees to perform watershed assessments, identify water quality improvement opportunities, secure appropriate funding, and develop an implementation schedule to show the twenty percent impervious area restoration requirement will be achieved by 2025. Such restoration efforts may include the use of environmental site design practices, structural stormwater BMPs, retrofitting, stream restoration, or other alternative restoration practices. The actions taken by those Maryland permittees to address the Chesapeake Bay TMDL are similar in nature to actions the Permittees could take to achieve wasteload allocations for pollutants including mercury and PCBs. Though it is likely that the Permittees will implement actions similar to those in Maryland because they are reasonable and cost effective given the suite of available options, they have alternative options, such as diversion to the sanitary sewer.

Driven by Chesapeake Bay and Anacostia River TMDLs, the 2010 MS4 permit issued to Montgomery County by the State of Maryland required the County to retrofit 20 percent (4,292 acres) of its "older, untreated, or poorly-treated impervious surfaces by 2015."<sup>193,194</sup> Those retrofits may consist of the use of environmental site design and other nonstructural techniques, structural stormwater practice retrofitting, and stream channel restoration. The permit's retrofit requirement was primarily a TMDL-driven goal. Provision C.3.j.ii.(2)'s retrofit requirement is based both on reducing pollutants to the MEP and achieving the Hg and PCBs TMDL WLAs (see, e.g., Provisions C.11.e and C.12.f). Montgomery County's permit indicates a level of retrofit effort that exists elsewhere, which is far above what Provision C.3.j cumulatively requires (273.58 acres) for multiple jurisdictions.

U.S. EPA's NPDES Permit for Washington, D.C. (effective June 22, 2018)<sup>142</sup> requires the permittee – in order to achieve pollutant reductions, demonstrate progress toward achieving applicable TMDL WLAs by achieving a collective reduction in all TMDL pollutants of concern in stormwater other than trash per the permit's retention requirements, and meeting other water quality objectives – to implement a total of 1,038 new Acres Managed by the end of the Permit term

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<sup>193</sup> <https://www.montgomerycountymd.gov/water/stormwater/ms4.html>

<sup>194</sup> Cameron, et al., 2011. *Green Stormwater Retrofits: Objectives and Costing*. In *Low Impact Development Technology: Design Methods and Case Studies*, ASCE, Clar et al., eds.

beyond the existing Acres Managed at the time of the Permit effective date, divided between three major basins, of which at least 62 acres must be located in public rights of way. One "Acre Managed" is one acre of land treated by stormwater control measures to the applicable standard established in the permittee's stormwater regulations or consistent with the relevant voluntary program. Further explanation of this concept is provided in the Washington, D.C., NPDES MS4 Permit. For example, a development project required to meet the 1.2 inch retention standard for development and redevelopment greater than or equal to 5,000 square feet, which will implement 1.2 inches of retention across five acres through any combination of onsite and/or offsite retention controls, is equivalent to five "Acres Managed." The permittee is also required to install 350,000 square feet of new green roofs by the end of the permit term, and plant 6,705 trees annually during the permit term. Like the Montgomery County permit, the Washington D.C. permit also indicates a level of retrofit effort that exists elsewhere, which is far above what Provision C.3.j cumulatively requires (273.58 acres) for multiple jurisdictions.

Provision C.3.j.ii.(2)(b)-(c) allows Permittees to meet the retrofit requirements in Table H-1 of Attachment H on a countywide basis or outside their jurisdictions, but requires them provide no less than 0.20 acres of green infrastructure within their jurisdictions, or contribute substantially to such a green infrastructure project outside of their jurisdictions (but within their County). A substantial contribution could mean that Permittees are providing a significant portion of project funding, including in-kind funding or staff services such as development of designs, provision of land, or contracting for project implementation. [A substantial contribution could also be met by financial contributions or in-kind resources dedicated to ongoing operations, monitoring, and maintenance.](#)

This affords Permittees flexibility in meeting the retrofit acreages, and ensures that a minimum amount of green infrastructure is implemented in the Permittees' jurisdictions to address storm water pollutants. It also ensures that Permittees build the institutional capacity necessary to implement green infrastructure projects within their jurisdictions. There is also a requirement to ensure that countywide total retrofit acreages are met.

Provision C.3.j.ii.(2)(d) allows non-Regulated Projects and green infrastructure beyond the minimum required by Provision C.3.d for a Regulated Project to be counted towards the numeric requirements in Table H-1 of Attachment H. If any such project is later used as a part of an Alternative Compliance exchange to offset the treatment required by a Regulated Project pursuant to Provision C.3.e.i, then it may no longer be counted towards the retrofit acreage requirements in Table H-1 of Attachment H. This allows Permittees to benefit from requiring more than the minimum requirements to achieve cleaner storm water.

Provision C.3.j.ii.(2)(e)-(f) provides the timeframe for counting projects for the acreage requirements in Table H-1. Including projects completed after January 1, 2021, accounts for and encourages early green infrastructure projects completed by

Permittees. June 30, 2027, is used as the end of the timeframe because that is when the Permit expires. For project not yet completed by this date, funding them by this date provides the necessary assurance of their completion; in the subsequent permit term, the Water Board may consider requiring such projects to be completed by the end of that permit term.

Provision C.3.j.ii.(2)(g) explains that Numeric Implementation pursuant to Provision C.3.j.ii.(2) can be counted towards analogous Provision C.12 numeric implementation retrofit requirements for old industrial areas, as long as they satisfy other aspects of the Provision C.12 requirement. This ensures that the Permittees get credit for work done under Provision C.3.j.

Provision C.3.j.ii.(2)(h) allows Permittees to credit the acreage of impervious surface created or replaced as part of Provision C.3.b.ii.(5) Road Reconstruction Projects to count towards the Provision C.3.j.ii.(2) Numeric Implementation retrofit requirements.

This allowance is temporary, for this Permit term, as by the end of the Permit term, the Permittees will have further developed the institutional capacity necessary for continued green infrastructure implementation and, as such, may have a future-looking plan that will incorporate regulated road projects into the Permittees' broader retrofit expectations.

Provision C.3.j.ii.(2)(i) recognizes the unique challenges inherent in the implementation of green infrastructure in small rural Permittee jurisdictions by allowing those Permittees to collectively submit an optional proposal for pilot projects investigating alternative green infrastructure techniques. If approved (or conditionally approved) by the Executive Officer, this proposal will allow (or conditionally allow) Permittees with small rural jurisdictions to meet part or all of their Provision C.3.j.ii.(2) Numeric Implementation retrofit requirements via alternative green infrastructure techniques.

Provision C.3.j.ii.(2)(j) allows Permittees to submit reports pursuant to Provision C.3.j.v.(5) estimating the benefit provided by new or existing ordinances that require Regulated Projects to treat significantly more impervious surface than the minimum required by Provision C.3, where such additional treatment may count towards the Provision C.3.j.ii.(2) Numeric Implementation retrofit requirements. Permittees whose reports are approved by the Executive Officer may use the benefit estimated for the current Permit term in the reports to offset up to 25 percent – but by no more than 1 acre – of their individual Provision C.3.j.ii.(2) Numeric Implementation retrofit requirements.

The offset is a one-time credit and its purpose is to help Permittees complete the planning and policy work sufficient to leverage private development and redevelopment projects within their jurisdictions to assist Permittees with achieving compliance with the Provision C.3.j.ii.(2) Numeric Implementation retrofit requirements. The Provision C.3.j.ii.(2)(j) offset is temporary, for this Permit term.

Provision C.3.j.ii.(3) describes the Design and Other Criteria that all green infrastructure projects built pursuant to Provision C.3.j must comply with Provisions C.3.c and C.3.e-h because they represent the Water Board's determination of maximum extent practicable-compliant designs that appropriately address identified water quality impacts.

All green infrastructure projects built pursuant to Provision C.3.j are also required to 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 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 the 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<sup>195</sup> as allowed by Provision C.3.j.i.(2)(g) of the Previous Permit, to size non-Regulated green streets projects (green infrastructure projects sited in the public road right of way). If they do so, the Permit requires Permittees to comply with the Water Board's June 21, 2019, conditional approval of that submittal,<sup>196</sup> which provides qualifiers to, and the conditions under which, the alternative sizing criteria may be used for non-Regulated green streets projects.

Some Permittees, such as those in San Mateo County, are seriously evaluating investment in Regional Projects to more cost-effectively meet water quality improvement and pollutant load reduction requirements as well as provide multiple benefits, including peak flow and flood reduction, water supply augmentation, and climate resiliency benefits. In order to achieve these benefits, regional projects are often sited in urbanized areas that are in the lower portion of watersheds (i.e., near the Bay margins) and have poorly infiltrating soils, high groundwater levels, and space constraints. Under these conditions (e.g., lack of infiltration feasibility, lack of available demand for non-potable use, significantly constrained space, or other substantial constraints) and with reporting in their Annual Reports, Permittees may claim green infrastructure numeric implementation credit for the impervious surface retrofits via regional projects that achieve multiple benefits and use media filtration as a treatment measure for some or all of the stormwater managed.

Provision C.3.j.ii.(4) describes a Technical Working Group (TWG) that Water Board encourages Permittees to participate in, along with staff and impartial science experts, to discuss and recommend long-term green infrastructure goals, targeting, in particular, Permittees' public streets. The goals will likely inform subsequent Permit terms, with the idea that each subsequent Permit term would make significant progress towards the goals. The purpose of this Provision is therefore to, over the long-term, address pollutant loading and hydrologic impact from areas of Permittees' jurisdictions that are not otherwise addressed by Provision C.3.b Regulated Projects. The goals will likely inform changes to Provision C.3.j.ii.(2) Numeric Implementation retrofit requirements.

The long-term goal may include consideration of crediting public and private projects that implement non-bioretenion stormwater controls which provide water quality and

<sup>195</sup>*Guidance for Sizing Green Infrastructure Facilities in Street Projects with companion Analysis: Green Infrastructure Facility Sizing for Non-Regulated Street Projects.* BASMAA, June 2019.  
[https://www.ccleanwater.org/userfiles/kcfinder/files/BASMAA\\_Guidance%20for%20Sizing%20Green%20Infrastructure%20Facilities%20in%20Street%20Projects%20with%20companion%20Analysis%20June%202019.pdf](https://www.ccleanwater.org/userfiles/kcfinder/files/BASMAA_Guidance%20for%20Sizing%20Green%20Infrastructure%20Facilities%20in%20Street%20Projects%20with%20companion%20Analysis%20June%202019.pdf). Accessed on July 27, 2021. Or: <https://basmaa.org/wp-content/uploads/2021/08/BASMAA-Guidance-for-Sizing-Green-Infrastructure-Facilities-in-Street-Projects-with-Companion-Analysis.pdf>; accessed on August 8, 2021

<sup>196</sup>*Conditional Acceptance of Guidance for Sizing Green Infrastructure Facilities in Street Projects.* June 21, 2019.

hydrologic benefit that are reasonably comparable to the Permit's expectations in Provisions C.3.c-d and C.3.g. The long-term goal may include consideration of other LID practices such as those proposed pursuant to Provision C.3.d.iv.

Provisions C.3.j.iii-iv. (No Missed Opportunities and Participate in Processes to Promote Green Infrastructure) are required to ensure green infrastructure projects remain a critical part of the Permittees' storm water control and outreach efforts.

Provision C.3.j.v. (Tracking and Reporting Progress) is necessary to track the progress of green infrastructure projects and Permit compliance. It requires Permittees to track and map non-Regulated green infrastructure projects built pursuant to Provision C.3.j, in the same manner as Regulated Projects, using the tracking and mapping tools developed during the Previous Permit. This Provision requires that the tools must 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 Provision lists the minimum level of detail that must be provided by the tracking and mapping tool for each project built pursuant to Provision C.3.j. If the tools contain additional information which has not been made available to the public such as detailed design information, incurred or planned operation and maintenance costs and operation and maintenance frequency, condition, and pollutant loads treated, that information is required be made available to Water Board staff upon request. The tracking and mapping tools were required to be completed in the Previous Permit, and therefore the Permit requires the Permittees to certify in the 2023 Annual Reports that the tracking and mapping tools have been completed and are being implemented. Reporting by the Permittees on the implementation of non-Regulated Projects may inform modifications to Provision C.3.j in future permits.

## Glossary

<b>Regional Project</b>	A regional or municipal stormwater treatment facility that <u>captures runoff from a drainage area larger than the parcel on which it is located. If used as alternative compliance for a Regulated Project per Provision C.3.e.i., it</u> discharges into the same watershed that the Regulated Project does.
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## **Requested Changes to Provision C.4**

## 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~~;
  - (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 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 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- ~~and M~~ore 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) ~~Number of each type of enforcement action, as listed in each Permittee's ERP, issued;~~
- (f) Number of enforcement actions, ~~including or~~ discrete number of potential and actual discharges fully resolved within 10 ~~working-business~~ days or otherwise deemed resolved in a longer, but still timely manner<sup>1</sup>; and
- (g) Frequency of potential and actual non-stormwater discharges by business category.
- (h~~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 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

- iv. **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.
- v. **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.

<sup>1</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.

vi. **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) Total number and percentage of industrial and commercial site inspectors attending training; and
- (6) Total number and percentage of illicit discharge detection and elimination inspectors attending training.

Tentative

## **Requested Changes to Provision C.5**

## 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 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 backwashwater;

(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 to the MS4.

- (4) Permittees shall have adequate legal authority to hold mobile businesses, and the businesses, property managers, property owners, ~~and or~~ 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 and 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 internal Permittee's staff and the public. The Permittee's website shall be one of the places the central contact point is publicized. The contact information on the Permittee's website shall be kept up-to-date, and updated at least annually, as needed. 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, unless an appropriate rationale is documented.

**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.

**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 if Permittee does not otherwise track resolution of discharge in their jurisdiction;
    - (d) Type of pollutant;
    - (e) ~~Identify the~~ entered storm drain and/or receiving water; 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** – (1) Permittees shall provide the following information in the Annual Report:
- (~~1~~a) Number of discharges reported;
  - (~~2~~b) Number of discharges reaching storm drains and/or receiving waters; and
  - (~~3~~c) Number of discharges resolved in a timely manner.
  - (~~4~~2) 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.

- (53) 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) ~~Regularly 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.
- (e) Inspection of mobile businesses as needed.

(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) 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) 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) 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 have MS4 map(s) of the storm sewer system in their jurisdiction. shall make the MS4 map(s) of its MS4 major outfalls shall be made available to the public ~~upon request.~~

Permittees shall maintain current MS4 maps and databases for internal use. These internal maps shall have information necessary to assist with illicit discharge investigations and maintenance of storm sewer system such as component locations, size, and identifying types of components (e.g. open channels or underground pipes). 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 of major outfalls – Permittees shall make maps of the MS4 major outfalls 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 for internal use – 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 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)(a) \_\_\_\_\_ Develop a plan and schedule for updating the Permittee's storm sewer system information. Permittees or countywide storm water programs may work with the Oakland Museum of California to develop a plan and schedule for updating existing information, maps, drawings, and databases. The updated storm sewer system information may be used internally by Permittee's for illicit discharge investigations and cleanup and maintaining the MS4 These updates internal maps and/or information systems will may include the identification of all storm sewer system component locations, size or specifications, materials of construction, and condition type of component (e.g., open channels or underground pipes). Permittee's shall identify in the plan the information that is available and the minimum component size(s) documented.~~

## ii. Reporting

(1) In the 2024 Annual Report, Permittees shall discuss how they make MS4 maps of major outfalls 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 for internal use with current available data. These maps may be made available to the Regional Water Board upon request.

## **Requested Changes to Provision C.8**

## 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>26</sup> such as:

- Are chemical concentrations in the Estuary potentially at levels of potential concern and are associated impacts likely?

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<sup>26</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 concentrations and masses of contaminants in the Estuary and its segments?
- 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 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, 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~~ which of the two management questions will be addressed by the study(s), how the management question(s) will be addressed, and propose monitoring questions necessary to address the management question(s).
- (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 an equal or greater number of total ~~and/or annual~~ monitoring events than the minimum required in Table 8.d.2.

~~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.~~

- (e) Describe the data ~~evaluation~~ methods, such as statistical analyses to test whether differences in concentrations are statistically significant.
- (f) Include study-specific Quality Assurance Project Plan (QAPrP)s for the studies, 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.~~

(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

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LID Monitoring Plans, the Permittees shall form and ~~convene~~ a Technical Advisory Group (TAG) to review and make ~~recommendations~~ regarding the

LID Monitoring Plans (including their study design, analysis methods, results, and conclusions) prior to submission of the 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-May~~ 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**

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

**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 LID Monitoring Plans for Executive Officer approval by ~~March-July~~ 1, 2023.

**Table 8.d.1 LID Monitoring Methods**

<b>Management Question</b>	<b>Monitoring Methods</b>
1 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>Monitoring methods to investigate pollutant removal benefits include:</p> <ul style="list-style-type: none"> <li>· Collection and analysis of the parameters listed in Table 8.d.2 below, in stormwater runoff and/or sediment, at the component, facility, site, and/or on a watershed scale; or</li> <li>· Other technically sound and accepted monitoring methods designed to investigate pollutant removal benefits.</li> </ul> <p>Monitoring methods to investigate hydrologic performance (flow) include:</p> <ul style="list-style-type: none"> <li>· Measurement of stormwater runoff quantity and/or flow at the component, facility, site and/or on a watershed scale; or</li> </ul>

	<ul style="list-style-type: none"> <li>· Measurement of stream flow to evaluate watershed scale benefits; <u>or</u></li> <li>· Development of runoff hydrographs; <u>or</u></li> <li>· Water balance monitoring/<u>modeling</u>; <u>or</u></li> <li>· Collection and analysis of infiltration rates or water depth at the facility and/or site scale; or</li> <li>· Other 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>
<p>2 What are the minimum levels of O&amp;M necessary to avoid deteriorated LID facilities, systems, and components that reduce pollutant removal and hydrologic benefit performance?</p>	<p>Monitoring methods assigned to Management Question 1 above, applied at the component, facility, system, and/or site scale; and Condition assessments at the component, facility, system, and/or site scale, <u>and/or analysis of existing data or maintenance records.</u></p>

<sup>28</sup> Each collected 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 or LID control site due to the characteristics of the tributary drainage area facility, or matrix, 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>29</sup> Data must be SWAMP comparable.

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

Countywide Stormwater Program	Anticipated Type(s) of LID Facilities	Total Minimum Number of Water/Sediment	Parameters <sup>28,29,30,31</sup>
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	Monitored	Quality Samples Collected During Permit Term- (Annual Minimum) <sup>27</sup>	
Alameda	High flow rate tree well filters and/or a combination of several LID measures.	36 <del>(7)</del>	<u>Water samples: TSS/SSC, Total Hg, Total PCBs, PFAS</u> <u>Sediment samples: Total Hg, Total Hg, TSS/SSC, PFAS, Other Emerging Contaminants,<sup>30</sup> TPH, Total and Dissolved Copper, Flow, and Other Ancillary Parameters.<sup>31</sup></u>
Contra Costa	Bioretention and/or other infiltration-based LID measures.	30 <del>(6)</del>	
San Mateo	Regional multi-benefit stormwater capture facility(s).	28 <del>(5)</del>	
Santa Clara	Bioretention and/or other LID measures.	36 <del>(7)</del>	
Solano	Bioretention and/or other LID measures.	12 <del>(2)</del>	

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

Trash Monitoring is intended to: 1) verify whether Permittees’ trash control actions to-date have effectively prevented trash present at significant ~~from~~ levels in 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 or full capture equivalency achieved via other actions (as verified with on-land visual trash

<sup>27</sup> This column indicates the total minimum number of samples that must be collected during the Permit term, ~~and the minimum number of samples that must be collected during each year of the Permit term.~~ The LID Monitoring Plans shall propose how to address the Management Questions, by suggesting 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. The exact number of samples and parameters may be adjusted as long as the overall level-of-effort in the final Monitoring Plan is equivalent and is supported by the TAG to the level-of-effort included in this provision.

<sup>30</sup> ~~Other Emerging Contaminants may include but are not limited to: microplastics and tire compounds such as 6PPD-quinone.~~ All studies shall include the collection of discrete and/or continuous flow and/or volume measurements to adequately address the applicable Management Question(s) identified in the Monitoring Plan(s). A combination of modeling and monitoring may be used to assess the hydrology of GSI facilities.

~~<sup>31</sup> Other Ancillary Parameters may include, but are not limited to: 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).~~

All water samples shall be analyzed for SSC or TSS, total PCBs, total mercury, and PFAS. All sediment samples shall be analyzed for total PCBs and total mercury. An alternative list of parameters could be analyzed as long as the overall level-of-effort in the final Monitoring Plan is equivalent to the level-of-effort included in this provision.

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 in discharging stormwater discharges to receiving waters~~ from their jurisdictions?
- Are discharges of trash from areas within Trash Management Areas controlled by full trash capture systems and/or via other actions to a full capture equivalent levels (i.e., 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 in and discharging into stormwater discharges and within receiving water s in areassegments~~ that receive MS4 runoff stormwater discharges 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 waters correlate strongly correlate with the ~~conditions levels in stormwater discharges and the levels of trash generated and controlled in~~ the tributary drainage area of the MS4 stormwater discharge point?

#### 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 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>32</sup> These steps should be repeated for all methods, 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

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<sup>32</sup> <https://sites.google.com/sfei.org/trash/>

- (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/Types**

The Permittees shall implement or cause to be implemented the monitoring methods below. To the extent possible, Permittees should use comparable assessment methods to allow for regional consistency.

- (1) Stormwater Discharge Monitoring - Permittees shall collect and analyze the amount of trash discharged from MS4 outfalls that drain tributary drainage areas controlled to ~~via full trash capture systems and/or the~~ Low trash generation level. ~~Sampling of MS4 outfalls may include 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 the level of trash in stormwater discharges (i.e., volume, type, and size). In areas where~~ If monitoring at the outfall cannot be performed ~~due to technical infeasibility or safety concerns~~, Permittees shall ~~sample the receiving water no further than 150 feet downstream of the outfall~~ address the monitoring requirements described in this subprovision by using the direct (in-stream) assessment methods as described in Provision C.8.e.ii (2) or the Indirect sampling of the receiving water via shoreline and/or streambank assessments (on-land) described in Provision C.8.ii (3).
- (2) Direct(In-stream) Assessment – If using the direct (in-stream) assessment method, Permittees shall collect and analyze the amount of trash at locations targeted to isolate the discharges from MS4 outfalls that drain tributary drainage areas controlled to via full trash capture systems and/or Low trash generation level. Sampling the receiving water directly (in-stream) may include the use of 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, during storm events that may result in discharges of trash through the MS4 system. Data collection in-stream shall include collection of data on the level of trash in stormwater discharges (i.e., volume, type, and size). ~~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 150 300 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 150 300 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 150 300 feet upstream of the outfall and extending 300 feet from the starting point.~~

~~Sampling of MS4 outfalls may include 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).~~

~~Sampling the receiving water directly (in-stream) may include the use of 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, during storm events that may 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).~~

(3) Indirect (In-stream) Assessment - If using the indirect (in-stream) assessment method, Permittees shall collect and analyze the amount of trash at locations targeted to isolate the discharges from MS4 outfalls that drain tributary drainage areas controlled to via full trash capture systems and/or Low trash generation level. Indirect sampling (in-stream) assessment method of the receiving water via shall include the shoreline and/or streambank assessments (on-land) may include the use of the riverine volumetric

method, riverine quantitative tally method,<sup>32</sup> or other equivalent methods, ~~with no fewer than two 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 riverine qualitative visual assessment method and the unoccupied aerial system (UAS) method may be merited but require additional study, refinement, and calibration, and their use is subject to the Executive Officer's approval.

Use of the riverine volumetric method shall be accompanied by collection of data on material type. For example, the volume of cigarette butts collected, and the volume of single use plastic bags collected.

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

- (1) Permittees shall conduct monitoring ~~annually~~, starting ~~October~~ July 1, 2022~~2023~~, at no less than the number of sites and number of events over the permit term below.

**Outfall Monitoring**

County	Minimum Number of Sites	<del>Minimum Total</del> Number of Wet Weather Monitoring Events <u>at each site during the permit term at, and upstream of, the Outfall</u>
Alameda	3	<del>39</del>
Contra Costa	2	<del>39</del>
Solano	1	<del>39</del>
San Mateo	2	<del>39</del>
Santa Clara	3	<del>39</del>

~~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) Permittees should monitor storm events that are forecast to trigger trash discharge and transport trash through the MS4, and that are preceded by at least 48 hours of limited or no trash discharge from the tributary drainage area. Permittees should ~~sample~~target 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) during the permit term.

- (4) Permittees are exempt from outfall and receiving water sampling during dangerous and unsafe weather conditions. -If the total required number of storms this size do not occur during the permit term, Permittees may sample fewer than the minimum number of wet weather monitoring events listed in the Table above.

#### 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.
- (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; and
  - (e) Recommendations for alternative approaches to answering the management and monitoring questions.

#### v. Reporting

- (1) **Initial Trash Monitoring Plan** - Permittees shall ~~collectively~~ submit an Initial Trash Monitoring Plan by ~~September 30, 2022~~ May 1, 2023, that includes the following:
  - (a) Selected site locations, including maps and characteristics (e.g., type of outfall, receiving water);
  - (b) 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;
  - (c) Description of factors that were considered when selecting monitoring sites and events, including spatial and temporal representativeness;

- (d) For each site, a description of the monitoring methods and protocols that will be used;
- (e) Provide a monitoring schedule, which shall include the timing, 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 of total/annual monitoring sites/events – than the minimum required in Provision C.8.e.iii.

~~This shall include a power analysis to ensure the number, type and frequency 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.~~

The number of monitoring sites and events shall be in accordance with the monitoring schedule provided in the Initial Trash Monitoring Plan.

- (f) Opportunities provided for input and participation by interested parties other than those participating in the TAG; and
  - (g) Input, feedback, and recommendations from the TAG on the capacity of the Initial Trash Monitoring Plan to answer the management and monitoring questions.
- (2) **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.
- (3) **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 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.

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

ii. **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>

Monitoring Type	Information Need	Monitoring Methods
3	Effective-ness 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> <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	<p>Monitoring methods to provide information on POC loads, concentrations, or presence/absence shall include:</p> <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	<p>Monitoring methods to provide information on trends in POC loads and concentrations over time shall include methods described for Monitoring Type #1 or #2</p>

**iii. 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**

<b>Pollutant of Concern</b>	<b>Total Samples<sup>a</sup> Collected /Analyzed (yearly minimum) for each Countywide Program: Alameda, Contra Costa, Santa Clara, and San Mateo</b>	<b>Minimum Number of Samples for each Monitoring Type<sup>b</sup></b>
Polychlorinated Biphenyls (PCBs)	80 (8) Alameda, Santa Clara 70 (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 50 (8) Contra Costa, San Mateo	8 samples minimum for monitoring types 1-5
	Mateo	
<p>Copper</p> <p><b>Emerging Contaminants<sup>c</sup></b> Must include but not limited to:</p> <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> </ul>	<p>10</p> <p>25 See footnote c</p>	<p>all samples for monitoring type 4</p> <p>all samples for monitoring type 4</p> <p>See footnote c</p>
<p>· ethoxylated surfactants</p> <p><b>Ancillary Parameters<sup>d</sup>:</b></p> <ul style="list-style-type: none"> <li>· Total organic carbon</li> </ul>	<p>as necessary to address management questions for other POCs – see footnote d</p>	
<ul style="list-style-type: none"> <li>· Suspended sediments (SSC)</li> <li>· Hardness</li> </ul>		

<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

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minimum number of samples that must be collected, across all applicable

monitoring types, during each of the five years of the permit. For example, 80 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 70 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 ~~2550~~ 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.

- iv. **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.

**Table 8.3 POC Analytes and Analytical Methods**

Pollutant of Concern	Matrix	Analyte(s) or Test Species	Laboratory Analytical Methods
<b>Polychlorinated Biphenyls (PCBs)</b>	Water	Total PCBs	U.S. EPA 1668 (RMP 40)
		Total Organic Carbon	
	Bedded Sediment	Suspended sediments (SSC)	
		Total PCBs	As appropriate to address the management information need: U.S. EPA 1668 (RMP 40), 8082A, or 8270D modified by Method 1625
<b>Mercury</b>	Water	Total organic carbon	
	Bedded Sediment	Total Mercury	
<b>Copper</b>	Water	Total Mercury	
		Total Copper	
		Dissolved Copper	
		Hardness	

**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>33</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

<sup>33</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.

Fairfield-Suisun & Vallejo

1 each by the end of water year  
2023-24

**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>34</sup> EPA 833-R-10-003 <sup>35</sup>
Ceriodaphnia dubia (Freshwater Crustacean)	Survival <sup>a</sup>	Pass or Fail, % Effect <25% Passes, >25% Fails	EPA-821-R-02-013 EPA 833-R-10-003
Ceriodaphnia dubia (Freshwater Crustacean)	Reproduction	Pass or Fail using TST, % Effect	EPA-821-R-02-013 EPA 833-R-10-003
Selenastrum capricornutum (Green Algae)	Growth	Pass or Fail using TST, % Effect	EPA-821-R-02-013 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>36</sup> EPA 833-R-10-003
Chironomus dilutus (midge)	Survival	Pass or Fail using TST, % Effect <sup>b</sup>	EPA-821-R-02-012 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

<sup>34</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>35</sup> National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA 833-R-10-003) 2010.

<sup>36</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.

the percent survival in the receiving water is equal to or greater than 90 percent.

**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>Hyaella 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>37</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 *Hyaella* 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.

<sup>37</sup> *Methods for Measuring the Toxicity and Bioaccumulation of Sediment-associated Contaminants with Freshwater Invertebrates* (EPA 600/R-99-064) Second Edition. March 2000.

- (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 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
Fairfield-Suisun & Vallejo	1 each 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:

<b>Permittees</b>	<b>Minimum Number of Sample Sites</b>
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
Fairfield-Suisun & Vallejo	1 each 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>38</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>38</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. Pesticides and Toxicity. Data that CEDEN cannot accept are exempt from this requirement.
- (1) Data shall be submitted in ~~SWAMP-CEDEN~~ 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 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.
  - (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) 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** – 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.

**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 and shall contain the following:

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

A summary of the LID Monitoring methods and study designs used in all preceding water years, at each sampled LID component, facility or system. 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) For POCs, methods, data, calculations, load estimates, and source estimates for each POC parameter, as applicable;
  - (5) A budget summary for each monitoring requirement (for each year of the Permit term); and
  - (6) 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, 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.

## **Requested Changes to Provision C.10**

## 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~~2025; and

- (2) 100 percent by June 30, ~~2025~~2027.

The 90 percent reduction is not a mandatory deadline; rather, it shall be used as a performance guideline to meet the mandatory 100% reduction compliance benchmark by July 1, 2027. Permittees that do not attain the 90 percent ~~compliance benchmark performance guideline~~ by June 30, ~~2023~~2025, 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~~2027.

- 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 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~~2027, Permittees shall ensure that lands > 10,000 ft<sup>2</sup> draining to storm drain inlets that they do not own or operate, 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 shall be assessed with visual assessments in accordance with Provision C.10.b.ii. If there is a full trash capture device downstream of these lands that is designed, operated, and maintained to control trash discharges from that land area, no other trash control is required. Permittees may propose a programmatic approach to address trash from these private land areas over time for Water Board EO approval.

#### **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, 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.10.b.ii.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 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.~~

~~(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.~~

Partial Trash Reduction – Curb Inlet Screens – Studies conducted by the Permittees during the previous permit term (Order No. R2-2015-0049, as amended) 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. Based on the results of these assessments, curb inlet screens that meet specific criteria and conditions consistently achieve the low trash generation goal established in provision C.10.a.ii.a. Land areas and curb inlet screen installation and maintenance that meet the following criteria and conditions will be deemed to achieve the trash reduction goal of low trash generation rate or better:

- Screens are installed on inlets receiving drainage from land areas with no greater than moderate trash generation, as verified through a visual assessment, consistent with methods described in provision C.10.b.iii.b;
- Screens have openings no greater than ¾ inches in length or diameter and cover the entire curb inlet opening, and only open under peak flow conditions that are equal to or greater than the full trash capture conditions described in provision C.10.a.iii; and
- Are accompanied by street sweeping that is conducted at a minimum frequency of two times per month with sufficient controls to allow effective sweeper access to the street curb within the area draining to the screen.

a. Inspection and Maintenance – The purpose of inspection and maintenance is to ensure that the curb inlet screen is operating appropriately, consistent with the requirements of this Provision. The inspection and maintenance of each curb inlet screen shall be at a frequency sufficient to prevent plugging, including plugging of the screen leading to opening of the screen under flows less than those described

above or flooding. At a minimum, all curb inlet screens shall be inspected and maintained once per year. In High and Very High trash generation areas, all screens shall be inspected and maintained at least twice per year, with the inspections spaced at least three months or more apart. If this frequency of inspection is found excessive after two consecutive inspections, the inspection frequency can be reduced to once per year.

b. 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 condition of the device at the time of inspection and, any special problems such as flooding, screen blinding or plugging from leaves, plastic bags, or other debris causing opening, 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 screens maintained that exhibited a plugged or otherwise suboptimal condition upon inspection or maintenance.

**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.ii.~~

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	1 trash boom or 2 outfall capture devices (minimum 2 ft. diameter outfall) or equivalent measures

Vallejo Sanitation and Flood District	1 trash boom or 2 outfall capture devices or equivalent measures (minimum 2 ft. diameter outfall)
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**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~~2025. If that reduction is less than 90 percent, then Permittees shall develop and implement an updated Trash Load Reduction Plan. The Trash Load Reduction Plan shall include detailed implementation actions and a schedule to attain a 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, ~~2027~~2025. Permittees shall submit their updated Trash Load Reduction Plans with their ~~2025~~2023- Annual Report.
- iii. Permittees unable to attain 100 percent trash load reduction, relative to 2009 baseline conditions, by June 30, ~~2027~~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~~2030, 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 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 that may be implemented to reduce trash loads to the maximum extent practicable (“alternative controls”). 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. 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: 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.

A Permittee 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, ~~2023–2025 guideline and June 30, 2027~~ 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:

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

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~~2026.

Permittees with an existing DDCP approved during the Previous Permit shall submit an updated DDCP for approval no later than ~~September 1~~March 31, 2023~~2~~, 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 unsheltered homelessness, such as RV safe parking areas and pump out services, ~~and social services such as health care, means to provide food, and job training.~~

~~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~~<sup>27</sup>, 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. 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. Permittees unable to attain the 90 percent ~~mandatory trash reduction compliance benchmark guideline~~ by June 30, ~~2023~~2025, via full trash capture, or equivalent, shall, by ~~June 30, 2023~~March 31, 2026, submit a ~~notice of noncompliance, pursuant to Provision C.23.c and an~~ updated Trash Load Reduction Plan as described in Provision C.10.d.ii.
- ~~viii. 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. Permittees unable to attain 100 percent trash load reduction, relative to 2009 baseline conditions, by June 30, ~~2025~~2027, while accounting for credits from new source control (as described in Provision C.10.b.v) shall, by June 30, ~~2025~~2027, 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~~2030, 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. By March 31, ~~2023~~2024, 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. 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. 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 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 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.

**Requested Changes to Provision C.15.b.iii. -  
Emergency Discharges of Firefighting Water and Foam**

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 Groundwater General Permit.

- (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 the Working Group at least twice per year.

- (ii) ~~Assess~~ Discuss the adequacy of existing BMPs and standard operating procedures (SOPs) for containment and cleanup of firefighting water and foam discharged during emergencies, including coordination within and between municipal departments, districts and jurisdictions, coordination between firefighting personnel and containment and cleanup crews, and coordination with contracted staff, 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, r~~ Identify ~~r~~ recommended model BMPs and SOPs.

- (iii) ~~Assess the adequacy of~~ Discuss 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, to facilitate containment and cleanup.

(iv) Investigate which firefighting foams are the least environmentally harmful, 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. Distribute those outreach materials by September 30, 2024.~~

~~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 information with, and invite to participate in the Working Group, 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 BMPs, SOPs, and the least environmentally harmful firefighting foams.

(b) Reporting – ~~The Permittees shall collectively submit a Preliminary Report by September 30, 2024, and a Final Report by September 30, 2026, that describe 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).~~ In each Annual Report, Permittee's shall report on participation in and any outcomes of the regional Workgroup. Permittees' annual reports may refer to the countywide or regional reports for this information.

(3) Ongoing Implementation Practices

~~(a) When the Preliminary 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 these recommendations are different.~~

~~(b)~~(a) 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 in public right of way, after emergency firefighting operations are completed.

~~(c)~~(b) 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 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)~~(c) By June 30, 2026, Permittees shall provide training for ~~require~~ all-municipal staff ~~and contracted staff hired by Permittees~~ that participate in the containment and cleanup of discharges of firefighting water and foam associated with firefighting activities within their jurisdictions ~~to attend at least one training~~ on containment and cleanup BMPs and SOPs. Trainings may be region-wide, program wide, or Permittee-specific. ~~Trainings may be made available to contractors hired by private parties.~~

~~(e)~~(d) Reporting

- (i) In their Annual Reports, Permittees shall report on the implementation of Provision C.15.b.iii.(3).(a) ~~(e)~~.
- (ii) In the 2026 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~~ However, the BMPs ~~does~~ should not interfere with immediate emergency response operations or impact public health and safety. BMPs may include, but are not limited to, the following:

- (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)(iv) Avoiding the use of firefighting foam when it is not necessary;~~

~~(vi)(v) Use of the proper firefighting foam depending on the type of fire;~~

~~(vii)(vi) When firefighting foam is used, limiting the amount used;~~

~~(viii)(vii) 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.~~

- (b) During emergency firefighting situations, priority of efforts shall be directed toward life, property, and the environment (in descending order). Permittees ~~staff, contractors,~~ or firefighting personnel shall control the pollution threat from their activities during emergency firefighting ~~situations~~ operations to the extent that time and resources allow.

(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>43</sup>.~~

~~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.~~

~~(b)~~(a)      Otherwise, Reporting requirements will be determined by Water Board staff on a case-by-case basis, such as for fire incidents at chemical plants.

#### 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 algaecide, filter backwash or other pollutants to storm drains or to waterbodies. Such polluted discharges from pools, hot tubs, spas, and fountains shall be

~~<sup>43</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.~~

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>44</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.
  - (e) The Permittees shall implement the Illicit Discharge Enforcement Response Plan from Provision C.5.b for polluted (contains chlorine, copper algacide, 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;

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<sup>44</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.

- (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.

Tentative Order