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STORMWATER (NPDES) COMMITTEE AGENDA
Special Meeting
1:00 PM, Thursday, November 4, 2021

On September 16, 2021, the Governor signed AB 361, which amended certain provisions of the Ralph M. Brown Act in order to allow for local legislative bodies to conduct their meetings remotely via telephonically or by other electronic means under specified circumstances. Thus, pursuant to Government Code section 54953(e), C/CAG Committee meetings will be conducted via remote conferencing. Members of the public may observe or participate in the meeting remotely via one of the options below.

Join Zoom Meeting
Zoom link - https://us02web.zoom.us/j/83355824104?pwd=VGpkYTB2R3F2dXhZcFZnUTl3NTdjUT09
Meeting ID: 833 5582 4104
Passcode: 470042

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Meeting ID: 833 5582 4104
Passcode: 470042

Persons who wish to address the C/CAG Stormwater Committee on an item to be considered at this meeting, or on items not on this agenda, are asked to submit written comments to rbogert@smcgov.org. Oral public comments will also be accepted during the meeting through Zoom. Please see instructions for written and spoken public comments at the end of this agenda.

1.	Call to Order, Roll Call, and brief overview of teleconference meeting procedures	Bogert	No materials
2.	Public comment on items not on the Agenda (presentations limited to three minutes)	Breault	No materials
3.	ACTION – Review and provisionally approve program comment letter and attachments in response to the Municipal Regional Permit 3.0 Tentative Order	Bogert	Pages 1- 30
4.	Regional Board Report	Mumley	No Materials
5.	Executive Director's Report	Charpentier	No Materials
6.	Member Reports	All	No Materials
7.	Adjourn		

PUBLIC NOTICING: All notices of C/CAG regular Board meetings, standing committee meetings, and special meetings will be posted at the San Mateo County Transit District Office, 1250 San Carlos Ave., San Carlos, CA, and on C/CAG's website at: http://www.ccag.ca.gov.

PUBLIC RECORDS: Public records that relate to any item on the open session agenda for a regular Board meeting, standing committee meeting, or special meeting are available for public inspection. Those public records that are distributed less than 72 hours prior to a regular meeting are available for public inspection at the same time they are distributed to all members, or a majority of the members, of the Committee. The Board has designated the City/County Association of Governments of San Mateo County (C/CAG), located at 555 County Center, 5th Floor, Redwood City, CA 94063, for the purpose of making public records available for inspection. Such public records are also available on C/CAG's website at: http://www.ccag.ca.gov. Please note that C/CAG's office is temporarily closed to the public; please contact Mima Guilles at (650) 599-1406 to arrange for inspection of public records.

PUBLIC PARTICIPATION DURING VIDEOCONFERENCE MEETINGS: Persons with disabilities who require auxiliary aids or services to participate in this meeting should contact Mima Guilles at (650) 599-1406, five working days prior to the meeting date.

Written comments should be emailed in advance of the meeting. Please read the following instructions carefully:

1. Your written comment should be emailed to rbogert@smcgov.org.
2. Your email should include the specific agenda item on which you are commenting or note that your comment concerns an item that is not on the agenda.
3. Members of the public are limited to one comment per agenda item.
4. If your emailed comment is received at least 2 hours prior to the meeting, it will be provided to the C/CAG Committee members and made publicly available on the C/CAG website along with the agenda. We cannot guarantee that emails received less than 2 hours before the meeting will be able to be posted or provided to Committee members prior to the meeting, but such emails will be included in the administrative record of the meeting.

Oral comments will be accepted during the meeting through Zoom. Please read the following instructions carefully:

1. The Stormwater Committee meeting may be accessed through Zoom at the online location indicated at the top of this agenda.
2. You may download the Zoom client or connect to the meeting using an internet browser. If using your browser, make sure you are using a current, up-to-date browser: Chrome 30+, Firefox 27+, Microsoft Edge 12+, Safari 7+. Certain functionality may be disabled in older browsers including Internet Explorer.
3. You will be asked to enter an email address and name. We request that you identify yourself by your name as this will be visible online and will be used to notify you that it is your turn to speak.
4. When C/CAG Staff or the Committee Chair/Vice-Chair call for the item on which you wish to speak, click on "raise hand." C/CAG staff will activate and unmute speakers in turn. Speakers will be notified shortly before they are called on to speak.
5. When called, please limit your remarks to the time allotted.

If you have any questions about this agenda, please contact C/CAG staff:

Program Specialist: Reid Bogert (rbogert@smcgov.org)
Administrative Assistant: Mima Guilles (mguilles@smcgov.org or (650) 599-1406)

C/CAG AGENDA REPORT

Date: November 4, 2021

To: Stormwater Committee

From: Reid Bogert, C/CAG Program Specialist

Subject: Review and provisionally approve program comment letter and attachments in response to the Municipal Regional Permit 3.0 Tentative Order

(For further information or questions contact Reid Bogert at rbogert@smcgov.org)

RECOMMENDATION

That the Stormwater Committee (Committee) Review and provisionally approve program comment letter and attachments in response to the Municipal Regional Permit 3.0 Tentative Order.

BACKGROUND/DISCUSSION

The five-year term of the Municipal Regional Stormwater Permit Order No. R2-2015-0049 (MRP 2.0) issued by the San Francisco Bay Regional Water Quality Control Board (Water Board) ended on December 31, 2020. Water Board staff administratively extended the permit until reissuance and, on February 9, released an Administrative Draft for permittee review and comment. Water Board staff provided a 60-day comment period, with comments due on April 8. C/CAG submitted consolidated comments on behalf of its member agencies on the due date. Water Board staff released the public notice of the Tentative Order on September 10, triggering a 60-day public comment period. The current tentative adoption date of the Tentative Order is set for early February with an effective date for the new permit on July 1, 2022.

At the October 12 and 13 Regional Water Board hearings on the Tentative Order, representatives from the San Mateo County permittees and program staff provided testimony on priority issues for C/CAG's member agencies, including concerns regarding new roadway provisions and changes to maintenance exemptions for C.3 regulated projects, issues with respect to addressing significant revenue deficits and the cost of compliance under existing and proposed future regulations under the MRP, and encouraging more flexibility and permit phasing to align with municipal planning and budget cycles and more cost-effective, multi-benefit approaches to managing stormwater at a countywide scale. C/CAG staff and consultants have been working with permittees and engaged in follow-up discussion with Water Board staff on October 19 to further address priority issues in the Tentative Order. At the October 19 meeting with Water Board staff, program staff and members of the Ad-hoc Implementation Workgroup, OneShoreline, and the City of South San Francisco addressed the proposed numeric green infrastructure retrofit requirements with respect to regional-scale multi-benefit stormwater capture projects in San Mateo, with consideration of near term project implementation in the case of the Orange Memorial Park project, which will be completed in spring 2022, as well as future regional project opportunities through the "*Advancing Regional-Scale Stormwater Management in San Mateo County Project*."

Prior to the October 21 Committee meeting, staff distributed the preliminary draft comment matrix addressing remaining priority issues and program comments on the Tentative Order. At the meeting, due to time constraints, staff briefly summarized next steps and the schedule to revise the program comment letter and attachments from the Administrative Draft, for a planned submittal on November 16 (note – the Regional Water Board issued an extension of the public comment period from November 9 to November 16). C/CAG staff were further directed to provide a full summary of the remaining priority issues in the Tentative Order and a summary of the proposed draft comment letter and revised attachments at the November 4 Special Meeting of the Committee.

Staff will summarize the priority issues in the Tentative Order and provide an overview of the draft program comment letter documents (see attachments), with a recommended provisional approval to provide additional time for Committee Members to comment prior to the November 16 submittal.

ATTACHMENTS

1. Revised Draft Program Comment Letter on the MRP 3.0 Tentative Order
2. Attachment 1. Revised Draft Summary of Existing and Planned Stormwater Runoff Management Efforts in San Mateo County
3. Attachment 2. Revised Draft Comment Matrix – due to length, materials are available on C/CAG's Stormwater Committee website - https://ccag.ca.gov/committees/stormwater-committee/
4. Attachment 3. Redline/Strikeout Language on Provision C.3 and Fact Sheet

DRAFT October 27, 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)

Dear Mr. Montgomery:

On behalf of C/CAG's member agencies (the County of San Mateo and the 20 incorporated cities and towns), provided herein are consolidated comments on the Tentative Order of the third five-year term of the Municipal Regional Permit (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 Provision C.3 and associated Fact Sheet language. The recommended language changes are consistent with the comments provided elsewhere in this letter and its other attachments.

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 – one size truly does not fit all. MRP 3.0 needs to be visionary, building in regulatory flexibility that drives implementation yet works for all.

Your staff has indicated on multiple occasions that permittee proposals on MRP 3.0 provisions were welcomed. However, Water Board staff believes permittee proposals to-date have primarily focused on maintaining status quo under current MRP 2.0 requirements. Water Board staff has indicated 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. As a result, we believe Water Board staff has proposed unachievable objectives in the Tentative Order and removed flexibility that fosters innovation while meeting the overall objective of improving water quality. In contrast, we submit that the "status quo" of strong yet flexible drivers in MRP 2.0 has resulted in San Mateo County permittees going beyond the permit's mandates. Furthermore, the vision underlying the San Mateo County status quo informs an approach that strives to integrate water quality goals with other community priorities (e.g., climate resiliency, flood control, water supply augmentation, and transportation improvements) during MRP 3.0 and future permit terms.

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 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 to advance regional stormwater capture projects, and pro-bono support from American Rivers, Corona Environmental, and WaterNow Alliance to explore innovative and market-based funding and financing strategies.
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 driver, funding, planning), it becomes much more challenging to continue advancing progressive stormwater management. 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. And 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.

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 jurisdiction, <u>with an emphasis on meaningful planning that will advance implementation</u>. 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 addition, these prescriptive requirements take away the ability of Permittees to implement "reach" codes for private development that go beyond permit requirements to achieve water quality goals using private funding.
- 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 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 to do so, and prescriptive regulatory requirements is not the right approach 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 deficits in street maintenance and ADA improvement funds already exist), discourages bicycle and pedestrian access and safety projects, and causes needed repair or upgrade projects to be delayed or cancelled.
- 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. In addition, the reissued permit should clearly specify that voluntary projects implemented during MRP 2.0 will result in credit towards any targets for acres greened via GI retrofits included in MRP 3.0.
- 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.

To provide that flexibility, Attachment 3 provides 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 permittee to use a Regional Project in its jurisdiction as offsite compliance (Option 1) and to have the ability to contribute 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 in the Tentative Order 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 a shift in monitoring goals compared to MRP 2.0. Implementation of Provision C.8 is already a large cost for C/CAG, and regionwide monitoring expenditures to comply with the MRP rival those of the San Francisco Estuary Regional Monitoring Program (RMP) (i.e., approximately $4 million/year). The monitoring requirements described in the Tentative Order would increase the overall monitoring costs to C/CAG by at least 50% compared to MRP 2.0, with trash monitoring costs increasing by roughly a factor of five.
- 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 as preparation of the FY 2021/22 Annual Report. These tasks must also be completed by staff with specialized expertise in monitoring programs, which would pose a serious staffing capacity issue for C/CAG.

- Some of the monitoring requirements described in the Tentative Order may not be feasible. For example, the focus on storm monitoring presents serious staffing capacity concerns. 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 requires sample collection at 48 sites (upstream and downstream of 24 outfalls) targeted during four storm events each year. This level-of-effort is estimated to require 128 labor hours immediately before each storm event and 128 labor hours immediately after each event. It is not feasible for C/CAG to have available the number of specially trained staff needed to conduct this episodic storm monitoring. Even if C/CAG and its contractors had qualified staff available to conduct this level of storm monitoring, it is unlikely that enough qualifying storms would occur. Analysis of rainfall measured at the San Francisco (SFO) and San Jose (SJC) airports 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 four events in WY 2020 and three in WY 2021. Climate change has also caused storms to be more intense which poses a 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 C/CAG'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 Tentative Order.
- Provision C.8.d. (LID Monitoring) requires analysis of samples for an extensive list of constituents that are not appropriate for many potential monitoring designs. The list includes several contaminants of emerging concern (CECs) for which there are no standardized EPA analytical methods and no standard sample collection protocols. 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. It is uncertain whether 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.
- Based on estimated costs to implement the various monitoring elements, the Tentative Order prioritizes 1) trash monitoring, 2) LID effectiveness monitoring, and 3) POC monitoring. C/CAG recommends 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, POC monitoring should be the top priority. C/CAG recommends reconsidering the trash monitoring requirements. 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 Attachment 2.

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 not be made, since they would significantly diminish Permittee leadership, the extensive environmental benefits of local 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. The source control credits allowed in MRP 2.0 should continue to be allowed in MRP 3.0.
- 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.

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 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, sediments with PCBs are originating 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 and/or 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 (≥ 0.5 mg/kg PCBs in sediments). We are proposing to explore extending these efforts to areas with more moderate PCBs concentrations in sediments (0.2 – 0.5 mg/kg).
    - Pilot test new techniques including 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 adaptive implementation of 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 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 entire provision should be modified to reduce administrative tasks and it should be incorporated into provision C.5 - Illicit Discharge Detection and Elimination.
- Remove the requirement for permittees to submit a map that identifies the location of unsheltered individuals. This requirement is an unneeded 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.

Other Provisions

- Certain proposed provisions may not provide concrete water quality benefits and are too costly to implement in the short-term, especially considering the economic ramifications of the COVID-19 pandemic. These requirements, which would take away resources from higher priority efforts and effectively derail our long-term vision and approach described in Attachment 1, should be postponed until future permit terms. Notwithstanding any additional detailed comments about these provisions provided in Attachment 2, the following key requirements should not be included in MRP 3.0:
    - C.15.b.iii Discharge Type – Emergency Discharges of Firefighting Water and Foam
    - C.21. Cost Reporting
    - C.22. Asset Management

We appreciate the opportunity to offer these 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
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 Provision C.3 and associated Fact Sheet language

cc:

C/CAG Stormwater Committee:

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
Dante Hall, Assistant City Manager/Acting Parks & Recreation and Public Works Director, City of Foster City
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
Jimmy Tan, Public Works Director, City of San Bruno
Steven Machida, Public Works Director, City of San Carlos
Azalea Mitch, Interim 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
Jim Porter, Public Works Director, County of San Mateo

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

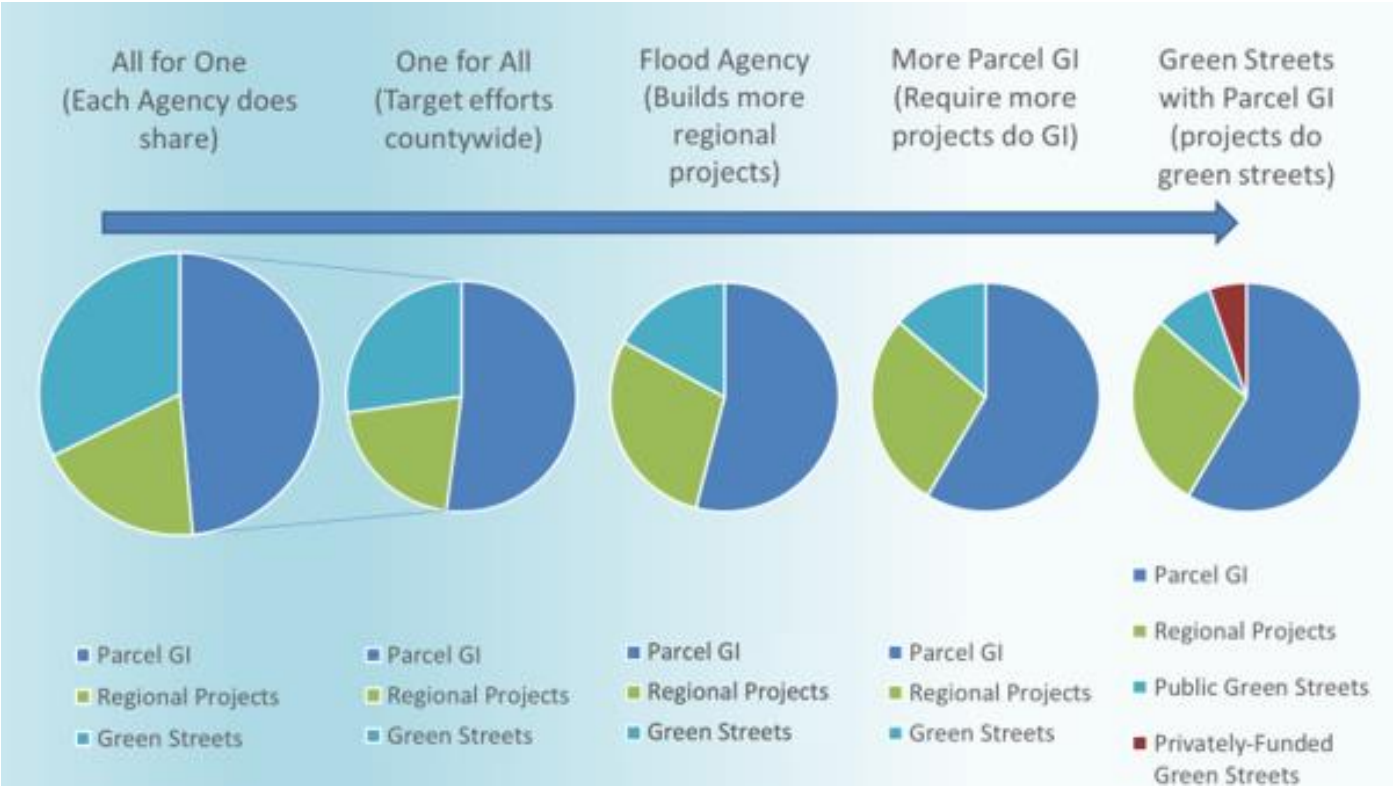
As required under Provisions C.11 and C.12, C/CAG developed a countywide pollutant transport/hydrology model coupled with Green Infrastructure (GI) scenario modeling to provide permittees with quantitative details on how much GI would be needed spatially to meet the MRP goal for pollutant load reduction 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 partners, which now include OneShoreline as the lead, are currently finalizing a Request for Proposals for design 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 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 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 extention/bulbouts w/underdrain, three crossing improvements	1.95	$349,663	$157,190	$396	$507,249	$179,314.36	$260,127.69
Brisbane	Six curb extention/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
						Average:	**$301,134.04**	**$588,249.85**

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.

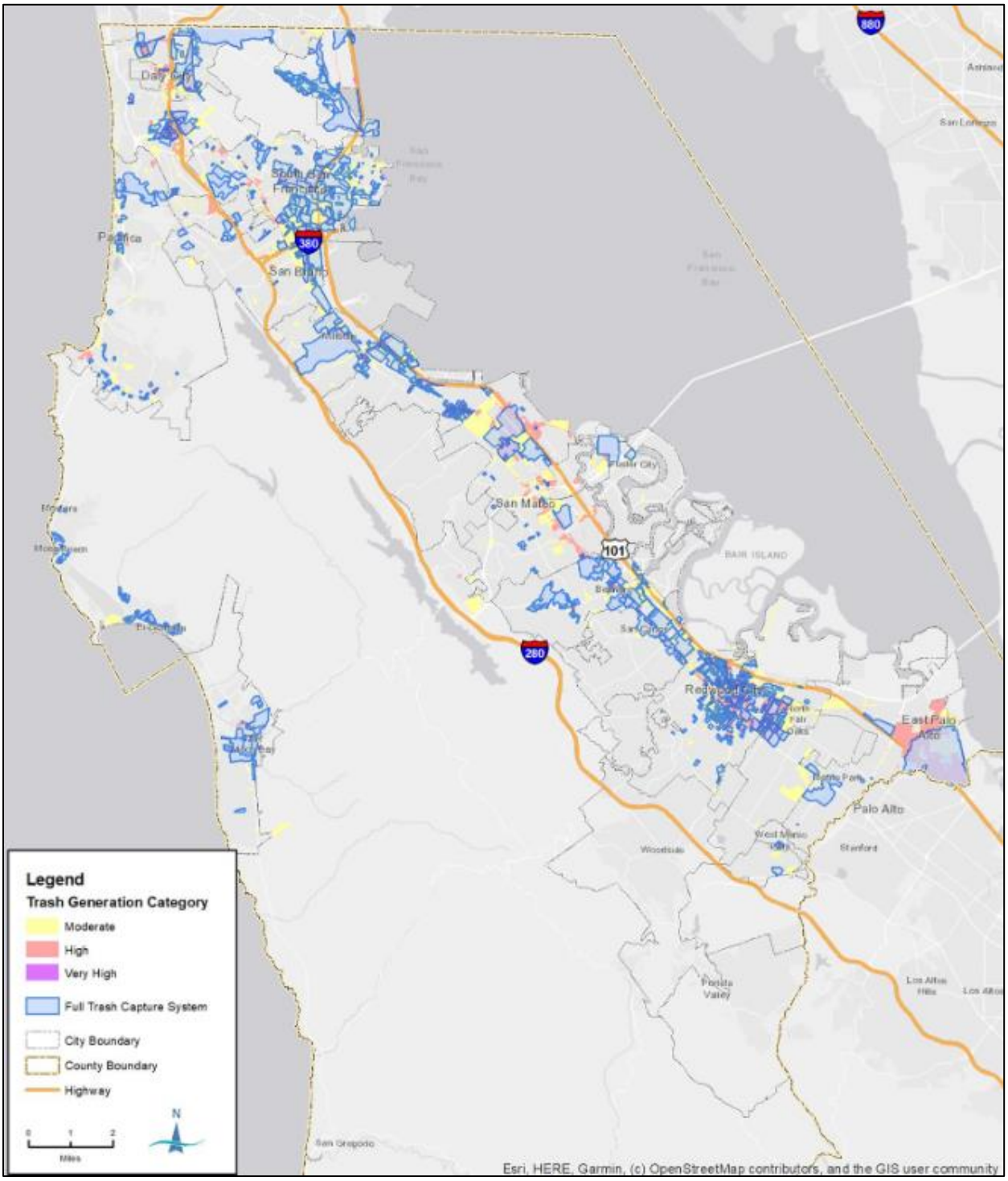


Figure 3. Full Trash Capture Systems in San Mateo County

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, twelve 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. 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
Total Industrial Area (acres)	3,043	14,034	12,833	16,039
Average Industrial Parcel Size (acres)	1.25	2.03	7.55	3.00

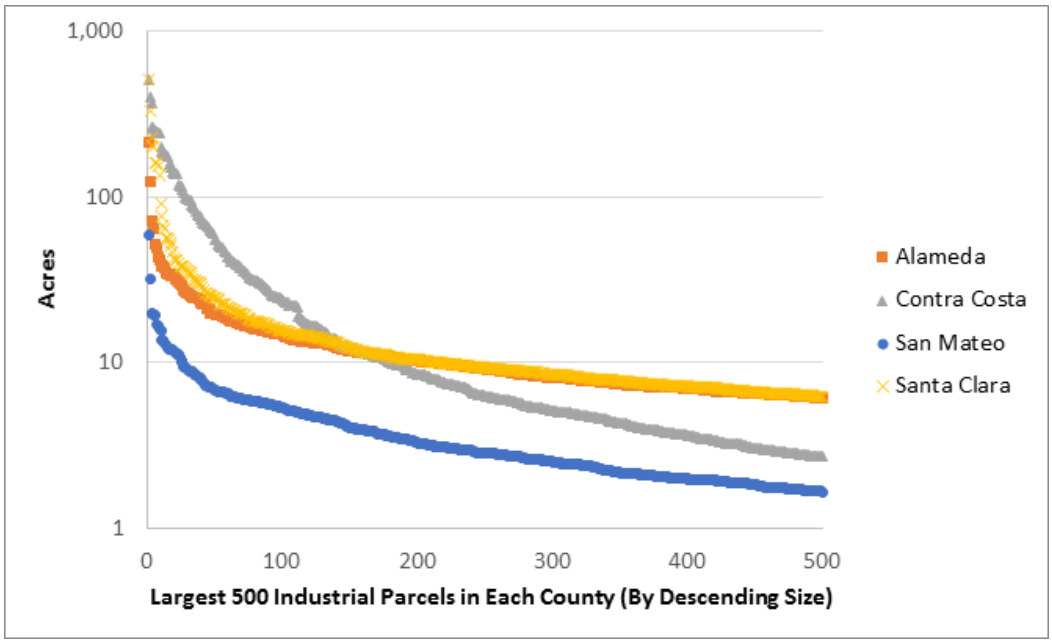


Figure 3. Area of 500 Largest Industrial Parcels in Most Populous MRP Counties

ATTACHMENT 3

To Allow More Flexibility for Regional Projects, Recommended Language Changes (in Redline/strikeout) to Selected Parts of Provision C.3 and Associated Fact Sheet Language

C.3.e.i.(1) Alternative Compliance

(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[10] or Regional Project[11] 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[11][12]to treat the remaining portion of the Provision C.3.d runoff (and comply with Provision C.3.g, as appropriate) with LID treatment measures at a Regional Project[12] or Offsite Project. The Regional Project must achieve a net environmental benefit, through a net increase in imperious surface treated, and/or a net reduction in flow and/or pollutant load.

Footnotes:

[10]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.

[11]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, 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.

[12][11]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.

~~12 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.~~

C.3.j.ii. Green Infrastructure Numeric Implementation

(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.

Glossary

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. If used as alternative compliance for a Regulated Project per Provision C.3.e.i., it discharges into the same watershed that the Regulated Project does.

Fact Sheet

Page A-123 -- Alternative Compliance

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 location~~Offsite Project or Regional Project or pay equivalent in-lieu fees to provide LID treatment at an Offsite Project or Regional Project, as long as the O~~o~~ffsite 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 O~~o~~ffsite and Regional P~~p~~rojects 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...

…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 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.

Page A-155 – Design and Other Criteria

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 2019195 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,196 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.

Page A-155 – Long term goal Technical Working Group

"…The long-term goal may include consideration of crediting public and private projects that implement non-bioretention stormwater controls which provide water quality and hydrologic benefit that are reasonably comparable to the Permit's expectations in Provisions C.3.c-d and C.3.g…"