

C/CAG

CITY/COUNTY ASSOCIATION OF GOVERNMENTS OF SAN MATEO COUNTY

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Millbrae ■ Pacifica ■ Portola Valley ■ Redwood City ■ San Bruno ■ San Carlos ■ San Mateo ■ San Mateo County ■ South San Francisco ■ Woodside

STORMWATER (NPDES) COMMITTEE AGENDA 2:30 PM, Thursday, February 18, 2021

On March 17, 2020, the Governor issued Executive Order N-29-20 suspending certain provisions of the Ralph M. Brown Act in order to allow for local legislative bodies to conduct their meetings telephonically or by other electronic means. Pursuant to the Shelter-in-Place Orders issued by the San Mateo County Health Officer and the Governor, and the CDC's social distancing guidelines, which discourage large public gatherings, C/CAG 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 by Zoom: <https://us02web.zoom.us/j/87582952951?pwd=Q24wNG1YYmFDTWlpc0lHK1ErdHdmZz09>
Join by Phone: +1 669 900 6833 Meeting ID: 875 8295 2951 Password: 064885

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.

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| 1. 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. Stormwater Issues from Feb C/CAG Board meeting: <ul style="list-style-type: none">• Review and approve final Sustainable Streets Master Plan• Appointment of Dante Hall, Foster City, to Stormwater Committee | Fabry | No materials |
| 4. ACTION – Review and approve January 21, 2021 Stormwater Committee minutes | Breault | Pages 1-5 |
| 5. INFORMATION – Announcements on stormwater issues <ul style="list-style-type: none">• Funding opportunities• Stormwater-related legislation• Other | Fabry | No materials |
| 6. INFORMATION – Receive a presentation and provide input on the draft memorandum: “Advancing Regional Stormwater Capture Projects: Drivers and Objectives.” | Fabry | Pages 6-39 |
| 7. INFORMATION – Receive update on Municipal Regional Permit reissuance and process to review and respond to the Administrative Draft. | Fabry | Page 40 |
| 8. ACTION – Review and consider updates to ad-hoc work groups and appointees. | Fabry | Page 41 |
| 8. Regional Board Report | Mumley | No Materials |
| 9. Executive Director’s Report | Wong | No Materials |
| 10. Member Reports | All | No Materials |
| 11. 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. The length of the emailed comment should be commensurate with the two minutes customarily allowed for verbal comments, which is approximately 250-300 words.
5. 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 Manager: Matthew Fabry (mfabry@smcgov.org)

Administrative Assistant: Mima Guilles (mguilles@smcgov.org or (650) 599-1406)

C/CAG AGENDA REPORT

Date: February 18, 2021
To: Stormwater Committee
From: Matthew Fabry, Program Manager
Subject: Review and approve January 21, 2021 Stormwater Committee meeting minutes.

(For further information or questions contact Matthew Fabry at mfabry@smcgov.org)

RECOMMENDATION

That the Committee review and approve January 21, 2021 Stormwater Committee meeting minutes, as drafted.

DISCUSSION

N/A.

ATTACHMENTS

1. Draft January 21, 2021 Minutes

STORMWATER COMMITTEE
Regular Meeting
Thursday, January 21, 2021
2:30 p.m.

Draft Meeting Minutes

The Stormwater Committee met remotely via Zoom, per C/CAG's shelter-in-place policy and consistent with state and county directives to manage COVID-19. Attendance at the meeting is shown on the attached roster (note – Member Petersen joined the meeting at 3:36 p.m. and did not vote on Item 5). In addition to the Committee members, also in attendance were Matt Fabry (C/CAG Program Manager), Reid Bogert (C/CAG staff), Sandy Wong (C/CAG Executive Director), Susan Wright (County of San Mateo), Jennifer Lee (City of Burlingame), Sarah Scheidt (City of San Mateo), Raymund Donguines (City of Pacifica), Hae Won Ritchie (City of San Bruno), Kelly Carrol (CGS on behalf of the Town of Colma), Nick Zigler (CSG on behalf of City of Half Moon Bay), Makena Wong (San Mateo County Flood and Sea Level Rise Resiliency District), Scott Durbin (Lotus Water), Stephen Carter (Paradigm Environmental), Garret Ward (Paradigm Environmental), Dustin Bambic (Paradigm Environmental), and Darren Choy (RRM). Chair Breault called the meeting to order at 2:48 p.m.

1. Public comment: None

2. Stormwater Issues from December and January C/CAG Board Meetings: December – Received presentation on the Draft Sustainable Streets Master Plan; approved funding agreements with Geosyntec and Craftwater for developing a business case for countywide collaboration and analysis of regional stormwater project opportunities; approved agreements with American Rivers/Corona and WaterNow Alliance to support business case for countywide collaboration stormwater management. January – Approved appointment of Azalea Mitch (Acting Public Works Director, City of San Mateo) to the Stormwater Committee and Congestion Management Technical Advisory Committee; approval of Task Order for Urban Rain Design to support GI Design Guide and green infrastructure engagement collateral.

3. ACTION – Approval of the draft minutes from the November 19, 2020, Stormwater Committee meeting. Motion: Member Donahue; second: Member Machida. Approved (13:0:3). Members Nagaya, Mitch and Donahue abstained).

4. INFORMATION – The following items were covered in announcements:

- Funding Opportunities – Matt Fabry noted an open solicitation from the California Coastal Conservancy with a focus on San Francisco Bay climate resiliency efforts, with \$5.7 million available and project maximums of \$1 million – proposals are accepted on a rolling basis starting in January, and a pre-proposal submission is required.
- Other – Fabry provided an updated on the regional stormwater project and business case for countywide collaboration on stormwater management, including the first scheduled Technical Advisory Committee (TAC) on January 22. The TAC includes representatives from the existing Ad-hoc MRP Implementation Workgroup. Fabry mentioned the first TAC will focus on the drivers and objectives of working collaboratively on regional scale stormwater projects. Fabry also mentioned progress with the Resilient San Carlos Schoolyards project, including a successful pre-proposal workshop. Proposals are due January 25. Lastly, Fabry provided a status on the

anticipated release of the Administrative Draft of MRP 3.0, which is expected to be released in early February prior to the next MRP 3.0 Steering Committee. Fabry mentioned the desire to also engage the Ad-hoc workgroup on MRP 3.0 negotiations. Member Mitch offered to participate in the Ad-hoc workgroup moving forward. Member Rose inquired about whether the Stormwater Committee would be an appropriate venue for project-specific permitting issues. Committee members discussed potentially bringing this topic back to a future meeting if desired. Member Nagaya asked that staff circulate information on the Coastal Conservancy Climate Adaptation grant opportunity.

5. ACTION – Matt Fabry presented the draft Sustainable Streets Master Plan for consideration of a recommended approval of adoption of the plan by the C/CAG Board at the February 11, 2021 meeting. Fabry summarized the Master Plan and final project deliverables, including the Master Plan and prioritized sustainable streets opportunities, climate change modeling, project concepts, catalogue of typical details, model policies, web-based mapping and tracking tool, community engagement, and associated appendices and additional technical resources for advancing sustainable streets projects in San Mateo County. Fabry reviewed the public engagement process, including designing a community engagement hub, hosting a virtual open house (December 8, 2020), and promoting a public comment period through January 6, 2021. Overall the comments were positive and supportive of the effort. A majority of comments addressed the desire to incorporate consideration of native plants in bioretention and green infrastructure designs. Several recommendations addressed site-specific needs for bike/pedestrian improvements, congestion/traffic concerns, possible additional topics to address via sustainable streets, and one set of very detailed comments about the approach and methodologies within the plan. The project team plans to identify the priority changes to the plan and areas within the chapters based on public comments. For detailed comments on specific projects, C/CAG staff will refer to the relevant member agencies for follow-up. Comments from C/CAG member agencies that were not addressed in the previous draft will also be addressed in the final draft. The matrix of public comments was included in the agenda packet. The timeline is to conclude the project by the end of February, propose adoption by the C/CAG Board in February, and plan to address additional desired work on or maintenance of the plan beyond what was scoped for the Caltrans grant, based on comments received, in future fiscal years.

Motion to recommend the C/CAG Board of Directors approve the Sustainable Streets Master Plan at the February 11, 2021 meeting.

Motion: Member Ovadia; second: Member Porter. Approved (16:0:0).

After the roll-call vote on the above motion, Dustin Bambic provided an overview of the GI Tracking Tool, which is being developed under the Master Plan. Bambic's summary focused on the main notable improvements to the user interface, on both the public-facing and the member agency specific version of the site, and also the back-end development to prepare for project data uploads and downloads. Bambic surveyed the project metrics and search/filter features, including the custom view for unique dashboards that can be saved by users for future reference. Bambic also provided an overview of the project upload process and linkages to the cloud engine of the tool, which simulates stormwater management metrics for average annual runoff and under climate change scenarios. The reporting feature/project download provides a vast number of outputs for filtered/selected projects for looking at performance metrics for different design storms under current and future storm conditions. Fabry mentioned C/CAG would continue to engage the New Development Subcommittee to further advance the tracking tool beyond the grant project. The tool will be submitted to Caltrans via a link on the

www.flowstobay.org website - <https://www.flowstobay.org/data-resources/plans/sustainable-streets-master-plan/>.

6. Regional Board Report: None.

7. Executive Director's Report: Executive Director, Sandy Wong, announced her planned retirement from C/CAG. Wong stated she anticipates remaining in her current role through the recruitment process.

8. Member Reports: Member Tan reported the City of San Bruno is currently pursuing a stormwater fee increase via a Prop 215 process. The City has recognized significant ongoing gaps in capital funding for stormwater infrastructure and the City has moved forward with proposing a new stormwater fee, including having contracted with a consultant for services to conduct a fee study. The anticipated fee increase would be from \$46 per single family home to \$154 annually, plus consumer price index (CPI) adjustments. Notices will be distributed by the City on January 22, followed by a protest period and protest hearing. If the 50 percent plus 1 threshold for protesting properties is not achieved during the protest process, the City would proceed with the ballot measure. Member Mitch also stated agency interest in advancing stormwater funding studies. Matt Fabry mentioned C/CAG's ongoing budget reserve for reinitiating a countywide fee initiative, given several member agencies showing interest. Members also discussed the option of an alternative process using SB 231 as the legal basis for instating a new stormwater fee as a utility fee under "sewer," and the need for a test case to get through opposition from the Jarvis Taxpayers Association.

Chair Breault adjourned the meeting at 3:54 p.m.

2020-21 Stormwater Committee Attendance			July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June
Agency	Representative	Position												
Atherton	Robert Ovidia	Public Works Director	X	X		X	X		X					
Belmont	Peter Brown	Public Works Director	X	X		O	X		X					
Brisbane	Randy Breault	Public Works Director/City Engineer	X			X	X		X					
Burlingame	Syed Murtuza	Public Works Director	X	X	C	X	X	C	X					
Colma	Brad Donohue	Director of Public Works and Planning	X	X	A	X	O	A	X					
Daly City	Richard Chiu	Public Works Director	X	X	N	X	X	N	X					
East Palo Alto	Kamal Fallaha	City Engineer			C			C						
Foster City	Norm Dorais	Public Works Director	X	X	E	X	X	E						
Half Moon Bay	Maziar Bozorginia	City Engineer	X	X	L	X	O	L	X					
Hillsborough	Paul Willis	Public Works Director	X	O	E	X	X	E	X					
Menlo Park	Nikki Nagaya	Public Works Director	X		D	X		D	X					
Millbrae	Andrew Yang	Senior Engineer	X	X		X	X		X					
Pacifica	Lisa Petersen	Public Works Director/City Engineer	O			X	X		X					
Portola Valley	Howard Young	Public Works Director		X		X	X		X					
Redwood City	Saber Sarwary	Supervising Civil Engineer	X			X	X							
San Bruno	Jimmy Tan	Public Works Director	X	X		X	X		X					
San Carlos	Steven Machida	Public Works Director	X	X		X	X		X					
San Mateo	Brad Underwood	Public Works Director	X	X		X	X		X					
South San Francisco	Eunejune Kim	Public Works Director												
Woodside	Sean Rose	Public Works Director	X			X	X		X					
San Mateo County	Jim Porter	Public Works Director	X	O		X	X		X					
Regional Water Quality Control Board	Tom Mumley	Assistant Executive Officer												

"X" - Committee Member Attended
 "O" - Other Jurisdictional Representative Attended

C/CAG AGENDA REPORT

Date: February 18, 2021

To: Stormwater Committee

From: Matthew Fabry, Program Manager

Subject: Receive a presentation and provide input on the draft memorandum: “Advancing Regional Stormwater Capture Projects: Drivers and Objectives.”

(For further information or questions contact Matthew Fabry at mfabry@smcgov.org)

RECOMMENDATION

That the Committee receive a presentation and provide input on the draft memorandum: “Advancing Regional Stormwater Capture Projects: Drivers and Objectives.”

DISCUSSION

Using grant funding from the Natural Resources Agency to advance planning for multi-benefit regional-scale stormwater management, C/CAG is working with Geosyntec Consultants and Craftwater Engineering to develop key drivers and objectives, a business case, and collaborative framework for countywide coordination on regional-scale stormwater management and to screen, prioritize, and conceptualize regional stormwater capture opportunities, respectively. These efforts are integrated, with the drivers and objectives for regional-scale stormwater management informing the project opportunity screening and prioritization process, and the modeled benefits of identified opportunities feeding back into the business case and collaborative framework.

The first step of this process is identifying the key drivers for pursuing regional-scale stormwater management and objectives that can be achieved with such an approach. C/CAG staff and Geosyntec worked with a project Technical Advisory Committee (TAC) to review preliminary drivers and objectives. The TAC includes members of the ad-hoc Permit Implementation work group of this Committee and representatives from the Bay Area Water Supply and Conservation Agency, Silicon Valley Clean Water, the Flood and Sea Level Rise Resiliency District, and the Regional Water Quality Control Board. Input from the TAC was incorporated into the attached draft “Advancing Regional Stormwater Capture Projects: Drivers and Objectives” memorandum.

Staff will provide a brief presentation summarizing the memorandum for Committee discussion and feedback. Comments on the memorandum are requested by March 5.

ATTACHMENTS

1. Draft “Advancing Regional Stormwater Capture Projects: Drivers and Objectives” memorandum

REVISED DRAFT Memorandum

Date: February 11, 2021

To: Matt Fabry, P.E., and Reid Bogert, City/County Association of Governments of San Mateo County

Copies to: Kim Springer and John Allan, County Office of Sustainability, Makena Wong, San Mateo County Flood and Sea Level Rise Resiliency District

From: Kelly Havens, P.E., Senior Engineer, Lisa Austin, P.E., Principal, and Lisa Welsh, Ph.D., Scientist, Geosyntec Consultants

Subject: Advancing Regional Stormwater Capture Projects: Drivers and Objectives
Geosyntec Project Number: CWR0650

1. INTRODUCTION

Geosyntec Consultants, Inc. (Geosyntec) is assisting the City/County Association of Governments of San Mateo County (C/CAG) with a project focusing on advancing regional stormwater capture projects in San Mateo County (County) through a regionally collaborative approach (the Project).

The Project involves a multi-stage process to identify:

1. **What** can be addressed and achieved through regional-scale stormwater management, by defining key drivers and objectives for the County;
2. **Why** jurisdictions across the County should collaborate to address stormwater management drivers and objectives, through development of a business case; and
3. **How** County jurisdictions can collaborate regionally, by establishing a regional collaboration framework.

The focus of the Project is advancing implementation of multi-benefit regional stormwater capture projects, though the regional collaboration framework could include applications for smaller scale distributed green stormwater infrastructure (GSI). It is intended that C/CAG member agencies, the San Mateo County Flood and Sea Level Rise Resiliency District (FSLRRD), and other potential stakeholders would jointly collaborate on stormwater management through the regional collaboration framework.

In parallel with this Project, C/CAG and the County are working with Craftwater Engineering (Craftwater) to identify and prioritize multi-benefit regional stormwater capture facility locations and facility concepts that can achieve the drivers and objectives identified herein. With consideration of the drivers and objectives, Geosyntec will work collaboratively with Craftwater to develop the approach for the business case demonstration, and Craftwater will conduct modeling and analyses to develop quantitative output to support the business case. C/CAG is receiving additional pro-bono support from American Rivers/Corona Environmental Consultants and WaterNow Alliance to evaluate the feasibility of creating a stormwater credit trading market and an evaluation of meaningful funding and financing approaches for varying scales of stormwater management. These analyses will build off of this Project and the final products will be incorporated into regional collaboration framework deliverables.

This memo summarizes key drivers and objectives for managing stormwater on a regional scale throughout the County, and includes the following sections:

- Section 2 defines “drivers” and “objectives” for the purposes of the Project,
- Section 3 describes the process used to identify drivers and objectives,
- Section 4 identifies drivers for regional-scale stormwater management,
- Section 5 describes objectives to meet the identified drivers, and
- Section 6 summarizes next steps for the Project.

2. DEFINITIONS

This memo identifies key drivers for managing stormwater on a regional scale and identifies objectives associated with those key drivers. The terms “drivers” and “objectives” are defined as follows for the purposes of the Project:

- **Drivers:** The fundamental issues that provide impetus for managing stormwater on a regional scale.
- **Objectives:** The desired outcomes from addressing the identified stormwater management drivers on a regional scale.

The following overall “vision” statement describes the envisioned path to achieve the objectives identified in this memo:

- **Vision:** Cost-effectively implement multi-benefit stormwater infrastructure solutions that collectively improve water quality; increase resiliency to climate change impacts; mitigate localized flooding; utilize stormwater as a resource; and serve communities equitably, both locally and regionally.

3. PROCESS TO IDENTIFY DRIVERS AND OBJECTIVES

Geosyntec reviewed a number of existing plans, produced by San Mateo County, C/CAG member agencies, and other County-based and regional entities, that are relevant to stormwater capture planning, implementation, and/or resultant benefits, to develop a preliminary list of drivers and objectives for consideration. Several foundational factors related to or benefitted by stormwater management identified through review of the plans were used to develop preliminary drivers for consideration. These factors include the presence of water quality regulations, stormwater infrastructure deficiencies, existing and future flooding issues, climate change impacts, water supply needs, community benefits and engagement, and equity considerations. The preliminary drivers identified in these plans are compiled in Attachment A.

A preliminary list of drivers and associated objectives, along with Attachment A, were presented to the Project Technical Advisory Committee (TAC) for consideration at the first of three TAC meetings on January 22. The Project TAC provided input on how to revise the preliminary drivers to the key drivers that are most compelling for managing stormwater on a regional scale. The Project TAC also considered the associated objectives of the revised drivers, as well as prioritization of the drivers and objectives. Input from the Project TAC was used refine the drivers, which are summarized in Section 4 of this memo. Objectives relating to the drivers are provided in Section 5 of this memo.

4. REGIONAL COLLABORATION DRIVERS

Based on input from the Project TAC, the key drivers for managing stormwater on a regional scale in the County are:

1. Limited Resources
2. Existing Stormwater Infrastructure Deficiencies
3. Water Quality Regulations and Protection
4. Climate Resiliency
5. Beneficial Use of Stormwater
6. Equity and Community Engagement

These drivers are described below.

4.1 Driver 1: Limited Resources

There are currently very limited resources available to address many of the fundamental drivers relating to stormwater capture in the County. This limitation primarily arises from stormwater fees that are lower than what is needed to maintain permittee stormwater programs, conveyance infrastructure, and meet compliance requirements of the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) Municipal Regional Stormwater National Pollutant

Discharge Elimination System (NPDES) Permit (MRP; Order R2-2015-0049), especially with respect to achieving GSI requirements. Additionally, there are limitations with the funding structure of the FSLRRD, which is currently dependent on municipal entities (i.e., San Mateo cities and the County) contributing funding and is challenged by entities that may not want to pay for benefits that do not occur within their jurisdictional boundaries. These funding constraints are coincident with a need for increased investment in infrastructure to provide resiliency and adaptation as the County is confronted with the current and future impacts of a changing climate.

As an example of stormwater funding challenges, in 2015 the Town of Hillsborough had stormwater fees of \$7.34 per parcel per year, which generated \$29,000 annually. In contrast, the storm drain infrastructure improvements identified in their 2015 Storm Drain Master Plan (SDMP) would require more than \$55 million over 30 years to implement, including \$26 million of high priority improvements, or a total of approximately \$900,000 to \$1.8 million per year just for needed storm drain upgrades (Town of Hillsborough, 2015). City of San Bruno provides another example, with 2014 stormwater fees ranging from \$2 to \$4 per 1,000 square feet for parcels, depending on land use, resulting in an average of about \$500,000 to \$600,000 collected by the City's Stormwater Fund each year. Collections support operational work and occasional small improvement projects, with an annual surplus of typically less than \$100,000 a year. The SDMP states that the City would need to revise its storm drainage fee structure or find other funding sources to fund the proposed SDMP Capital Improvement Program (CIP) of over \$20 million for Priority 1 and 2 projects (City of San Bruno, 2014).

A significant impediment to increasing municipal stormwater fees is Proposition 218, a state constitutional amendment that restricts local governments' ability to impose property-related fees without voter approval. Proposition 218 exempts "sewer" fees and taxes from its provisions, but court decisions have interpreted the meaning of "sewer" to preclude stormwater within its definition. As a result, counties and municipalities have been reluctant to go to voters or property owners with tax proposals to support stormwater capture and urban runoff programs and projects to comply with municipal separate stormwater system (MS4) requirements. Contra Costa County tried to get property owner approval for an increased stormwater fee and failed in 2012¹, though some cities in southern California have been successful. As of January 2021, the City of San Bruno City Council has approved a Resolution (No. 2021-04) to initiate a Proposition 218 compliant process to increase their stormwater fee to generate funds to carry out needed improvements to their stormwater infrastructure (City of San Bruno, 2021). Faced with similar funding challenges, the City of San Mateo has commissioned a study to look into the potential to create a stormwater utility and needed next steps (City of San Mateo, 2021b).

¹ See article titled, "Water fee defeat starts email rant" from The Mercury News, 2012. Notably, the article claims, "Nowhere in the [ballot initiative's] voluminous backup reports did analysts answer a homeowner's most basic question: How much money will my city receive from this fee, and how will it spend it?"

C/CAG initiated a similar effort to pursue a property owner-balloted countywide stormwater fee in 2014, including opinion research and evaluation of funding needs, but ultimately did not go forward with the initiative. The needs analysis indicated an annual shortfall to comply with the MRP of approximately \$25 million. This takes into account approximately \$10 million in dedicated stormwater revenue throughout the county, both for C/CAG’s stormwater program (approximately \$2.2 million) and roughly half of the 21 agencies that have pre-Proposition 218 fees in place, as well as the local share of vehicle registration revenue that can be used for water pollution prevention efforts (see below). It is important to note that the needs analysis was performed during the first five-year term of the Municipal Regional Permit, which is now moving toward its third term with increased cost implications associated with GSI implementation and additional pollutant load reduction requirements.

Senate Bill (SB) 231, signed into law in 2017, is intended to provide guidance to the courts in their interpretation of “sewer” in the context of Proposition 218. SB 231 defines “sewer” to include “stormwater” in such a way as to exempt stormwater fees and taxes from its provisions. Taxpayer advocacy groups disagree with this clarification and are likely to challenge in court any agency that attempts to impose a new or increased stormwater property-related fee without a balloting process; hence, no jurisdiction to date has attempted this approach to increasing stormwater revenues.

An example of a successful alternative approach to raising funds for implementation of stormwater programs, C/CAG sponsored Measure M, approved by the voters of San Mateo County in 2010, which imposes an annual fee of ten dollars on motor vehicles registered in San Mateo County for transportation-related traffic congestion and water pollution mitigation programs. The revenue is estimated at \$6.7 million annually countywide over a 25-year period. Per the Expenditure Plan, 50% of the net proceeds are allocated to the cities/County and 50% for countywide programs, including C/CAG’s Countywide Water Pollution Prevention Program.

4.2 Driver 2: Existing Stormwater Infrastructure Deficiencies

There are existing deficiencies in many C/CAG member agency storm drainage systems as a result of limited resources to address these issues. Deficiencies are identified in SDMPs produced by many of the member agencies. In many SDMPs, deficiencies are ranked in terms of severity, with some deficiencies classified as, for example: indicative of “imminent failure” that could “affect a dwelling structure, damage... property..., cause roadway failure or traffic disruption” (Town of Hillsborough, 2015); areas that “continually flood and cause damage and/or pose a threat to safety” (City of South San Francisco, 2016); or “hav[ing] a large area of flooding where the 10-year maximum flood depth is greater than 12-inches” (City of Half Moon Bay, 2016).

All of the SDMPs reviewed by Geosyntec (see Attachment A) identified minor to severe flooding issues resulting from undersized or otherwise deficient storm drain infrastructure. The multi-year schedule and tens of millions of dollars needed to mitigate just the severe/high priority issues (e.g., more than 14 years and \$26 Million for the Town of Hillsborough high

priority improvements; over \$23 Million to address Priority 1 deficiencies for South San Francisco; and \$56 Million to address identified CIP projects and Tier 2 projects for the City of San Carlos) are indicative of the funding challenges for stormwater management overall (see Driver 1).

4.3 Driver 3: Water Quality

The Clean Water Act (CWA) requires MS4 discharges to be permitted under the NPDES permit program. In addition, the CWA requires the States to adopt water quality standards for receiving water bodies. Water quality standards consist of designated beneficial uses for a particular receiving water body (e.g. wildlife habitat, agricultural supply, fishing etc.), along with water quality criteria necessary to support those uses.

4.3.1 Impaired Water Bodies and Total Maximum Daily Loads

When designated beneficial uses of a particular receiving water body are being compromised by water quality, Section 303(d) of the CWA requires identifying and listing that water body as “impaired”. Once a water body has been deemed impaired, a total maximum daily load (TMDL) must be developed for the impairing pollutant(s). A TMDL is an estimate of the total load of pollutants from point, non-point, and natural sources that a water body may receive without exceeding applicable water quality standards (with a “factor of safety” included). Once established, the TMDL allocates the loads among current and future pollutant sources to the water body. Table 1 lists the water quality impairments for water bodies in San Mateo County as reported in the Final 2014/2016 California Integrated Report (CWA Section 303(d) List/ 305(b) Report) (SWRCB, 2021).

The SFBRWQCB oversees protection of water quality in the San Francisco Bay Area. The San Francisco Bay Basin Plan (SFBRWQCB, 2017), the water quality control planning document for the San Francisco Bay Region, identifies beneficial uses for waterbodies in the region. The Basin Plan classifies water quality attainment strategies, including specific TMDLs and enhancement plans that help to maintain water quality standards.

Table 1: Summary of 303(d) Listings for San Mateo County

Waterbody	Impaired Pollutants
River & Stream	
Butano Creek	Sedimentation/Siltation
Colma Creek	Trash
Pescadero Creek	Sedimentation/Siltation
Pomponio Creek	Indicator Bacteria
San Francisquito Creek	Diazinon
	Sedimentation/Siltation
	Trash
San Gregorio Creek	Indicator Bacteria

Waterbody	Impaired Pollutants
	Sedimentation/Siltation
San Mateo Creek	Diazinon
	Trash
San Mateo Creek, Lower	Toxicity
San Pedro Creek	Indicator Bacteria
San Vicente Creek	Indicator Bacteria
Coastal & Bay Shoreline	
Aquatic Park (Marina Lagoon, San Mateo County)	Indicator Bacteria
Lakeshore Park Beach (Marina Lagoon, San Mateo County)	Indicator Bacteria
Kiteboard Beach (San Francisco Bay, Lower)	Indicator Bacteria
Oyster Point Marina (San Francisco Bay, Lower)	Indicator Bacteria
Pacific Ocean at Pacifica State/Linda Mar Beach	Indicator Bacteria
Pacific Ocean at Pillar Point	Mercury
Pacific Ocean at Pillar Point Beach	Indicator Bacteria
Pacific Ocean at Venice Beach	Indicator Bacteria
Lake & Reservoir	
Lower Crystal Springs Reservoir	Mercury
Pilarcitos Lake	Mercury
Bay & Harbor	
San Francisco Bay, Lower	Chlordane
	Dichlorodiphenyltrichloroethane (DDT)
	Dieldrin
	Dioxin compounds, including (2,3,7,8-TCDD)
	Furan Compounds
	Invasive Species
	Mercury
	Polychlorinated biphenyls (PCBs)
	Polychlorinated biphenyls (PCBs) dioxin-like
	Trash
San Francisco Bay, South	Chlordane
	Dichlorodiphenyltrichloroethane (DDT)
	Dieldrin
	Dioxin compounds, including (2,3,7,8-TCDD)
	Furan Compounds
	Invasive Species
	Mercury

Waterbody	Impaired Pollutants
	Polychlorinated biphenyls (PCBs)
	Polychlorinated biphenyls (PCBs) dioxin-like
	Selenium

TMDLs have been developed for watersheds throughout San Mateo County. Completed TMDLs include:

- Sediment for Pescadero Creek and Butano Creek;
- Diazinon and pesticide-related toxicity for San Francisco Bay area urban creeks, including Laurel Creek, San Francisquito Creek, and San Mateo Creek in San Mateo County;
- Bacteria for San Pedro Creek, Pacifica State Beach, and Marina Lagoon (Aquatic Park and Lakeshore Park Beach); and
- Mercury and PCBs for San Francisco Bay.

TMDLs under development in San Mateo County include:

- Sediment for San Francisquito Creek and San Gregorio Creek;
- Bacteria for Pillar Point Harbor and Venice Beach on the Pacific Ocean; and
- Bacteria for Kiteboard Beach and Oyster Point Beach on San Francisco Bay.

For municipal stormwater discharges in the Bay area, TMDLs are implemented through requirements in the MRP.

4.3.2 Municipal Regional Permit

C/CAG member agencies are subject to the requirements of the MRP, which was issued first in 2009, reissued in 2015, and is currently being revised for its third five-year term, with the expected effective date of July 1, 2022 (herein called “MRP 3.0”). The MRP applies to 79 large, medium, and small municipalities (cities, towns, and counties) and flood control agencies (collectively referred to as Permittees) throughout the San Francisco Bay Area.

The MRP details specific requirements for new development and significant redevelopment projects (in Provision C.3), including selection, sizing, and design criteria for low impact development (LID), treatment control, and hydromodification control BMPs. Provision C.3 also requires the development of long-term Green Stormwater Infrastructure (GSI) Plans to address pollutants in stormwater discharges. The MRP states:

“Over the long term, the Plan is intended to describe how the Permittees will shift their impervious surfaces and storm drain infrastructure from gray, or traditional storm drain infrastructure where runoff flows directly into the storm

drain and then the receiving water, to green—that is, to a more-resilient, sustainable system that slows runoff by dispersing it to vegetated areas, harvests and uses runoff, promotes infiltration and evapotranspiration, and uses bioretention and other green infrastructure practices to clean stormwater runoff.”

In addition to Provision C.3, trash controls (Provision C.10) and mercury (Provision C.11) and PCBs (Provision C.12) controls are included in the MRP. The SFBRWQCB has indicated that MRP 3.0 will require implementation of the Permittees’ GSI Plans, including a GSI retrofit target to be achieved during the next permit term (2022 – 2027), potentially requiring over 100 acres to be retrofit countywide. In addition, specific provisions to address approved TMDLs that are not included in the current MRP will be incorporated into MRP 3.0. These new provisions will require specific controls for bacteria and sediment in the drainage areas of water bodies impaired for these pollutants (see Table 1). An additional new provision will address discharges to Areas of Special Biological Significance (ASBS), which includes the James V. Fitzgerald Marine Reserve in the County.

MRP Provisions C.11 and C.12 required Permittees to develop a Reasonable Assurance Analysis (RAA) that quantitatively demonstrates that proposed GSI control measures will result in sufficient load reductions of PCBs and mercury to meet the municipal stormwater wasteload allocations (WLAs) for the San Francisco Bay PCBs and mercury TMDLs. C/CAG’s San Mateo Countywide Water Pollution Prevention Program (SMCWPPP) developed an RAA study that quantifies baseline hydrology and loadings of PCBs and mercury loads to San Francisco Bay, and evaluates the benefits of proposed GSI projects to reduce these loads through the capture, infiltration, and/or treatment of stormwater. The RAA was also used to predict the most cost-effective GSI implementation plan for each municipal jurisdiction and subwatershed throughout San Mateo County and set implementation goals for the amount of stormwater volumes to be managed and impervious area to be retrofitted to serve as metrics for implementation tracking (SMCWPPP, 2020). The new MRP requirements in the permit to be reissued in 2022 are expected to result in increased costs for implementation and long-term operations and maintenance, above and beyond what was anticipated in the 2014 C/CAG funding needs analysis (i.e., increased costs above \$25M/yr).

4.4 Driver 4: Climate Resiliency

The climate crisis will cause impacts to all facets of local government (and beyond) in the 21st century, including stormwater management, flood management, water quality, water supply, and drainage systems. California’s Fourth Climate Change Assessment identified dozens of current and future impacts caused by climate change, including an already observed increase in annual maximum temperature of 1.7°F in the San Francisco Bay Area, more intense large winter storms, decreased snowpack in the Sierra Nevada and moisture deficits throughout the state, and a median sea level rise of at least 2.4 feet and potentially as much as 10 feet by 2100 (Ackerly et al, 2019). San Mateo County has identified specific flooding impacts to the County in the Sea Level Rise Vulnerability Assessment for coastal flooding (San Mateo County, 2018) and in the

Sustainable Streets Master Plan for watershed flooding impacts (C/CAG, 2020). As a result of the current and projected impacts resulting from climate change, the San Mateo County Board of Supervisors declared a Climate Emergency in the County (San Mateo County Board of Supervisors, 2019). The Declaration demands accelerated actions on the climate crisis, calls on local and regional partners to collaborate to address climate change, and emphasizes the importance of protecting vulnerable communities by focusing on equitable climate solutions.

Key precipitation related effects of climate change that will likely impact existing stormwater drainage systems include projected increases in less frequent, larger storm events, which countywide downscaled climate modeling has shown could cause up to a 20% increase in the 10-year, 6-hour storm size and up to a 40% increase in the 100-year, 6-hour storm size per the climate analysis conducted in the Sustainable Streets Master Plan (C/CAG, 2020). Storm drain laterals in residential neighborhoods are typically designed for the 10-year, 24-hour event, with larger storm drains sized for a range of storm sizes from the 25-year, 24-hour event to the 100-year, 24-hour event. The projected increases expected for design events under climate change indicate that already deficient storm drain infrastructure is likely to become increasingly strained with larger events in the future, with potential for increased flooding and associated damage.

Per AB 825, the San Mateo County FSLRRD powers include controlling floodwater and stormwater, as well as addressing and protecting against the impacts of sea level rise and coastal erosion. The purpose of the act establishing the district includes comprehensive management of the floodwater and stormwater; conserving waters for beneficial purposes when practical; and protecting infrastructure, life, and property from floodwater and stormwater.

In addition to flooding concerns, increased water stress is projected for much of the state with changes to climate, largely relating to expected declines in snowpack. Additionally, future increases in temperature, regardless of changes (increases or decreases) in total precipitation, are likely to cause longer and deeper California droughts (Ackerly et al, 2019). Most water supply agencies and districts in the County are members of the Bay Area Water Supply & Conservation Agency (BAWSCA) and rely upon the San Francisco Regional Water System for supply. Eighty-five percent of the regional system water comes from Sierra Nevada snowmelt (BAWSCA, 2021). Changes to snowmelt could cause reliability impacts to current water supplies. In the meantime, population is projected to continue to grow in the County, resulting in additional water demand (BAWSCA, 2015). The importance of stormwater as a potential source for augmenting water supplies is included under Driver 5 in the next Section.

Additional impacts of climate change that could impact urban areas include changing temperature and weather patterns. Such changes are projected to result in additional heat stress and may create challenges for maintaining certain vegetation.

4.5 Driver 5: Beneficial Use of Stormwater

In addition to needs relating to future water stress and drought year supply shortfalls, there is also a desire to use stormwater as a beneficial resource throughout the County. The primary beneficial use under consideration is water supply, including smaller scale capture and use to

augment potable use, recharge to groundwater basins, or divert stormwater to supplement recycled water production. Use of stormwater for water supply is supported by California Water Conservation Legislation (AB 1668 and SB 606) signed into law in 2018, which provides a road map for actions to be taken by the California Department of Water Resources and the State Water Resources Control Board to (1) use water more wisely, (2) eliminate water waste, (3) strengthen local drought resilience, and (4) improve agricultural water use efficiency and drought planning (DWR and SWRCB, 2018).

BAWSCA identified in their 2015 Long-Term Reliable Water Strategy (Strategy) a forecasted supply shortfall of up to 43 mgd in future drought years (year 2040, of a total estimated demand of 284 mgd). To address the drought year shortfalls, BAWSCA has identified a number of actions, including supporting local water supply projects. Local water supply projects identified in the Strategy include recycled water, groundwater, and desalination projects, along with local stormwater capture and use projects. Notably, while the Strategy estimated a potential yield from rainwater harvesting (i.e., rain barrels) of 210 AFY to 680 AFY, the Strategy stated that “reliable information on the potential yield of BAWSCA service area wide implementation of stormwater capture projects is not currently available due to the lack of projects in the region.” As a result, larger stormwater capture projects are not included in the portfolio of projects summarized by the Strategy to make up for the drought year shortfall and rainwater capture makes up only 0.5 mgd of the projects identified to cover the shortfall (BAWSCA, 2015).

There are currently initiatives at the state level to increase use of recycled water, including the Recycled Water Policy. The Recycled Water Policy (State Water Resources Control Board Resolution No. 2018-0057) encourages the safe use of recycled water from wastewater sources. There are publicly operated treatment works (POTWs) in the County that utilize recycled water or have plans to. Based on initial research, two of the four POTWs have current recycled water programs and/or plans to expand services. The other two POTWs do not appear to have advanced treatment, which is needed for recycled water systems. A list of POTW status relating to recycled water capabilities is provided as Attachment B. In addition to potentially supplementing recycled water operations, stormwater management upstream may provide other benefits to POTWs, including reductions in peak flows during wet weather.

There are community-based drivers for beneficial use of stormwater as well. Per AB-825, the FLSSRD has powers that include planning and implementing facilities for public recreation incidental to projects that provide flood control drainage and water conservation. Projects that provide community amenities are potentially more likely to have community support and interest (see Driver 6) and may have additional opportunities for grant funding (see Driver 1).

4.6 Driver 6: Equity and Community Engagement

In California, disadvantaged and vulnerable communities have been disproportionately burdened by pollution and socioeconomic and health impacts. The San Francisco Bay Conservation & Development Commission (BCDC) includes in their community vulnerability mapping tool a description of these disproportionate effects on communities of color (BCDC, 2021):

“Discriminatory policies implemented across all levels of government intentionally and unintentionally caused generations of communities of color to face persistent poverty; poor public health; inadequate public services; disproportionate exposure to polluted air, water, and soil; and under-representation in policy-making.”

Multiple metrics have been used to identify vulnerable communities in the County. Some of these indicators include:

- Consistent with Senate Bill 535 (SB 535), CalEnviroScreen was developed to identify California’s most pollution-burdened and vulnerable communities using a quantitative method. Census tracts identified as in the top 25% of most pollutant-burdened in the state per CalEnviroScreen are defined as disadvantaged under SB 535 (CalEPA, 2017).
- The San Francisco Bay Restoration Authority identifies an “economically disadvantaged community” (EDC) as a community with a median household income less than 80% of the area median income (SFBRA, 2019).
- The Metropolitan Transportation Commission’s (MTC) communities of concern include tracts with four or more disadvantage factors as defined in the Plan Bay Area methodology (MTC, 2017).
- The San Mateo County Community Vulnerability Index, which “combines standardized values of seven separate indicators collected from the United States Census Bureau’s American Community Survey to illustrate combined indicators of poverty” (San Mateo County, 2021).

Several of these key vulnerable community indicators were compiled as part of C/CAG’s Sustainable Streets Master Plan. Exhibit 1 of this memo displays the map of vulnerable communities created for the Sustainable Streets Master Plan (C/CAG, 2020). As defined in the Sustainable Streets Master Plan, “vulnerable and disadvantaged communities are those that are considered the most burdened by health, economic, and environmental factors.” The Sustainable Streets Master Plan compiled datasets include the: (1) Median Household Income (MHI) based Disadvantaged Communities (DACs) dataset from the U.S. Census American Community Survey data; (2) CalEnviroScreen DAC dataset; (3) economically disadvantaged communities dataset from the San Francisco Bay Restoration Authority; (4) MTC’s Communities of Concern dataset; and (5) top tier of the San Mateo County Community Vulnerability Index.

The Governor’s Office of Planning and Research includes a definition of social equity in the 2017 General Plan Guidelines from the National Academy of Public Administration (OPR, 2017):

“The fair, just, and equitable management of all institutions serving the public directly or by contract; the fair, just and equitable distribution of public services and implementation of public policy; and the commitment to promote fairness, justice, and equity in the formation of public policy.”

Chapter 4 of the General Plan Guidelines was updated in 2020 to expand considerations of environmental justice, an important component of equity, and to describe in further detail SB 1000, which requires that environmental justice be considered in land use planning. The 2020 General Plan Guidelines Chapter 4 update includes a focus on ensuring equitable access and connections to public services and community amenities, such as community centers, libraries, public transit, parks and recreation facilities, and safe drinking water and wastewater services, as well as active transportation infrastructure, flood control and water drainage, and facilities and programs to improve disaster preparedness and recovery capacity (OPR, 2020).

Following feedback from public outreach efforts, BCDC approved an amendment to the Bay Plan² to include environmental justice and social equity policies, acknowledging that impacts of pollution, flooding, and climate change are impacting and will affect disadvantaged communities differently (BCDC, 2021). This focus on equity considerations is consistent with other initiatives in the state and the County.

The County of San Mateo's Board of Supervisors has recently increased the focus on equity in County decision making. The Board adopted a resolution authorizing an "Agreement with Social Progress Imperative for Research, Data Analysis, and Consulting Services in Connection with the Integration of Equity Factors into the County's Decision-Making Processes" in March 2020 (Resolution 20-089), in addition to resolutions condemning racism (Resolution 20-584) and supporting the Black Lives Matter movement (Resolution 20-394).

In developing C/CAG's Sustainable Street Master Plan, the need for addressing equity and the disproportionate impacts of climate change on historically underserved communities in San Mateo County was recognized early on as an important criterion for project opportunity evaluation. To this end, the opportunity prioritization methodology included metrics for prioritizing project opportunities based on a composite of community vulnerability indices, drawing on existing state, regional and countywide data layers defining disadvantaged communities.

In addition to serving and protecting communities equitably, community engagement is also an important driver for a successful regional collaboration approach. Regional stormwater projects have stalled or failed when there has not been adequate community support for their implementation. A recent example of this includes a stormwater capture project planned for Atherton, which has been moved twice. According to a news article³, the first move occurred after the City Council was not able to come to terms with the school board on the initial elementary school site. The facility was identified to be located at a local park, but a second move was needed after "residents and park users said that the construction process could be too disruptive and the facility would be out of place in the park." Following this, the City Council

² San Francisco Bay Plan, https://www.bcdc.ca.gov/plans/sfbay_plan.html.

³ "Atherton takes first steps toward moving site of water capture project." The Almanac. September 24, 2018. <https://www.almanacnews.com/news/2018/09/24/atherton-takes-first-steps-toward-moving-site-of-water-capture-project>

approved moving forward with environmental review of the third site at an athletic field shared by a town school and local college, “only after town staff members promised the council that they would make extra efforts to inform nearby residents about the project.” Adequate community engagement and education on the importance of stormwater management can increase the likelihood of community support for projects and programs. Community understanding of the need for and importance of managing stormwater – whether addressing water quality mandates, preventing flooding and protecting life and property (now and into the future), or using stormwater beneficially as a resource instead of treating as a waste – is essential for ultimately securing the necessary resources.

Regional stormwater management may result in benefits for which equity issues should be considered. For example, regional stormwater projects can create new or improved recreational facilities, such as new playing fields atop an underground retention facility. The downstream benefits of such a project may benefit some communities more than others, or more directly than the community in which the facility is sited. Decisions around the siting and resultant benefits of such facilities should be viewed through equity lenses.

5. OBJECTIVES TO MEET DRIVERS

Objectives, or the preferred outcomes of managing stormwater on a regional scale, are described in this section. Many objectives relate to several of the drivers identified in section 4. The driver(s) relevant for each objective is included in each subsection. Stormwater capture projects implemented through regional-scale stormwater management should be identified, prioritized, and designed to maximize the number of objectives that are addressed.

5.1 Objective 1: More Efficiently Use Limited Resources

The primary objective of managing stormwater on a regional scale is to use limited municipal resources more efficiently and effectively. This includes achieving economies of scale through funding of larger projects and implementing these projects in the locations that provide the most benefits (e.g., capturing larger quantities of water, reducing flood flows and pollutant loads, and providing other benefits). This also includes a focus on planning and implementing multi-benefit projects that have a higher potential of meeting the requirements of various state and federal grants and therefore increasing opportunity to augment limited existing resources through these sources. One example of this would be the State’s Integrated Regional Water Management (IRWM) approach to distributing water resource funding throughout the state through grant programs (SWRCB, 2021). *(Relates to Driver 1)*

5.2 Objective 2: Support Improvements to and/or Alleviate Strain on Existing Stormwater Infrastructure

Identify and prioritize stormwater capture opportunities that can minimize existing storm drain deficiencies or their impacts, as identified in Permittee SDMPs. A major challenge for the C/CAG member agencies is implementation of needed upgrades for deficient storm drain

infrastructure. Many more severe storm drain issues may be best managed by upgrades to “grey infrastructure,” (i.e., storm drain pipes, pump stations, detention facilities, or other infrastructure). However, some storm drain capacity issues can be at least partially addressed by regional capture projects and GSI while providing other benefits. More frequent flooding events can be minimized through implementation of GSI, which provides detention of stormwater (and retention/infiltration where feasible) during lower return frequency storm events and can help to reduce peak flows to the storm drain system. Additionally, even moderate to more severe storm drain deficiencies could potentially be served by diverting runoff to larger regional stormwater capture facilities, where feasible. *(Relates to Driver 2 and Driver 1)*

5.3 Objective 3: Cost Effectively Comply with Water Quality Regulatory Requirements

Implement stormwater capture facilities that can allow permittees to cost-efficiently meet water quality regulatory requirements. In addition to programmatic needs relating to enforcing and complying with MRP requirements, the RAA Report found that high levels of investment in structural stormwater controls are needed to meet the PCBs TMDL target across the County. However, the RAA Report demonstrated substantial modeled cost (~35%) savings in meeting TMDL targets with implementation of identified regional projects coupled with implementation at a countywide scale instead of each jurisdiction having to achieve a proportionate share of water quality improvement (SMCWPPP, 2020). If additional regional projects are identified and optimized for load reduction potential, these savings could potentially be increased due to less need for small-scale, distributed GSI facilities on public rights-of-way or parcels. Based on a review of statewide GSI design and construction cost data, the unit cost for regional treatment is significantly less than the unit cost for distributed GSI or green street projects (Geosyntec, 2018). There are added cost benefits relating to inspection and maintenance efficiencies with centralized facilities in comparison to distributed GSI.

In addition to the MRP compliance needs relating to GSI and PCBs load reductions, there are additional requirements, such as Provision C.3 (new development/redevelopment) and Provision C.10 (trash control), that may require additional investment in water quality control measures, and new requirements expected in MRP 3.0 as described in Driver 3. Maximizing the water quality benefits provided by any given facility implemented through regional-scale stormwater management can allow for efficiencies in meeting these requirements. *(Relates to Driver 3 and Driver 1)*

5.4 Objective 4: Consider and, Where Appropriate, Design for Projected Future Impacts Resulting from Climate Change

Site and design stormwater capture facilities to avoid future climate impacts and/or to help mitigate future climate impacts. These impacts include flooding from sea level rise or upland floods, heat stress, and water stress. For example, stormwater capture projects should not be sited in locations where there is a strong likelihood of inundation from sea level rise in the future (unless specifically designed to be inundated) or where rising groundwater levels due to sea level

rise will limit infiltration capacity or infringe upon the necessary depth separation for groundwater protection. Facilities should be sited and designed to alleviate future impacts from climate change to the extent feasible, providing that other high priority objectives are met through the same facilities or other stormwater capture facilities. Siting considerations relating to climate change resiliency could include, for example: locating a facility where it could serve to detain peak flows projected to be higher in the future; siting in locations upstream of areas that are anticipated to have compound effects of sea level rise and increased runoff; siting a facility where it could provide increased water supply through recharge, detention, and/or diversion (also see Objective 5); or siting subregional facilities or integrated GSI and regional scale projects where there are projections of increased heat stress.

If a facility is sited such that it could serve to mitigate some of these climate impacts, it must also be designed appropriately to manage those projected changes. A facility sited to cool urban heat islands should include vegetation that maximizes shade and/or cooling through evapotranspiration. Similarly, a facility sited to detain increasing peak flows should be designed with an outfall structure or other features that can manage these peaks. Importantly, climate projections range widely and where facilities are designed to mitigate increased peak flow, there should also be consideration of the range of potential future outcomes for precipitation to minimize the potential for unintended consequences. *(Relates to Driver 2, Driver 4 and Driver 5)*

5.5 Objective 5: Supplement County Water Supply Portfolio with Stormwater Where Feasible

Where economically and physically feasible, use stormwater capture projects to supplement the County Water Supply Portfolio. Examine opportunities for using regional and subregional stormwater capture facilities to supplement water supply through groundwater recharge, capture, treatment, and use, larger-scale detention and diversion to treatment plants to supplement recycled water operations. Facilities sited for water supply should also be designed specifically to provide those water supply benefits, for example, to infiltrate optimally for recharge or use an active controlled outfall to divert water to a recycled water treatment facility when the timing is optimal.

A key objective of the BAWSCA Long-Term Reliable Water Supply Strategy includes identifying and evaluating water supply management projects that could be developed to meet drought year demands, during which supply shortfalls could be experienced. Stormwater capture and use is identified as a potential water supply project under consideration, but BAWSCA identified only a small proportion of the projected drought shortfall to be made up by rainwater capture (i.e., rain barrels) in their Strategy (BAWSCA, 2015). There could be the opportunity to increase the stormwater portion of BAWSCA's water supply project portfolio even during drought years with innovative stormwater capture projects.

The economics of stormwater use as water supply vary widely depending on a number of factors, and include storage, treatment, and conveyance considerations. Based on a study by Diringer *et*

al. (2020), recharge to groundwater provides the most cost-efficient solutions due to the smaller storage requirements as compared to detention facilities, and centralized capture systems are substantially less expensive than decentralized facilities.

According to Cooley *et al.* (2019), the levelized cost of stormwater capture and use for water supply is less expensive than non-potable reuse, indirect potable reuse, and seawater desalination. However, some Peninsula and South Bay POTW facilities that have recycled water operations are currently not considering supplementing operations with stormwater supply. This is largely related to the fact that stormwater has lower concentrations of pollutants and does not require the same level of treatment as wastewater (thus potentially a waste of energy to treat similarly to wastewater), and that stormwater quantity is unpredictable and would not arrive at the POTW at a steady flow rate without substantial storage (City of San Mateo, 2021; Santa Clara Valley Water District, 2021).

It is possible that the economics of stormwater capture and use as water supply will become more favorable as state water conservation initiatives are enacted and effects of climate change are increasingly felt. If so, the objective to use regional stormwater capture facilities to expand the water supply portfolio may become a higher priority in the coming years. Furthermore, while recognizing the cost-efficiencies of more centralized options for beneficial reuse of stormwater, there is also the potential to leverage existing programs to capture and reuse stormwater at a site or parcel scale, including the rain barrel rebate partnership between BAWSCA and C/CAG. *(Relates to Driver 4 and Driver 5)*

5.6 Objective 6: Site and Design Projects to Equitably Serve and Protect Communities

Site and design facilities to equitably serve and protect communities, particularly disadvantaged communities and socially vulnerable communities. Consistent with OPR's General Plan Guidelines, communities across the County should have equitable access to services, amenities, resiliency, and benefits provided through stormwater capture facilities. Equitable access should consider racial, socio-economic, and health factors. Additionally, as feasible, facilities could be sited and designed to increase amenities or resiliency in communities to provide more equitable distribution of these benefits more generally. In particular, communities identified as disadvantaged or socially vulnerable should be of focus when considering equitable implementation of regional stormwater capture facilities (see Figure 1). As possible, communities that may be expected to be disproportionately impacted by climate change should be of focus when considering how climate resiliency benefits can be incorporated into the suite of regional and subregional stormwater capture projects implemented through regional-scale stormwater management. Additionally, the intersection of climate change impacts and other related environmental issues needs to be better considered and anticipated (e.g., impacted water supplies or water contamination from nearby industrial facilities). Similarly, if community centers, libraries, public transit, parks, and recreation facilities can be incorporated into regional stormwater capture projects, equitable implementation of these amenities should be of priority. The mobilization and demolition cost and effort needed for implementing a regional stormwater

capture project could be used to benefit other community projects that may not have sufficient funding for full implementation. *(Relates to Driver 6 and Driver 5)*

5.7 Objective 7: Consider Local Community Benefits and Concerns in Project Implementation

Educate and engage residents regarding stormwater management needs, stormwater capture facilities, and associated benefits to maximize the potential for community support.

A key success factor for implementation of regional and subregional stormwater capture facilities is support from the local community. Inadequate education and outreach to the local community can stymie projects simply because residents are unaware of the benefits of stormwater management or view short-term impacts of constructing a project as outweighing the long-term benefits, especially if those benefits are primarily experienced in downstream communities. The residents of San Mateo County have elected federal and state officials with a focus on environmental issues (i.e., see California League of Conservation Voters Scorecard). Therefore, presumably an understanding of the environmental benefits of stormwater capture could increase overall support for facility implementation. Additionally, if a stormwater fee increase is ultimately brought to property owners or the voters, this education and understanding may increase the likelihood of success (as well as support for the potential renewal of C/CAG's Measure M vehicle registration fee in 2035).

Additionally, if other benefits can be maximized through facility implementation (see, for example, those listed in Objective 8), those benefits can be designed with consideration of the needs and desires of the local community. If the local community is aware of the environmental benefits and has a chance to weigh in on other additional community benefits provided by a stormwater capture facility, there is increased potential for support from nearby residents. *(Relates to Driver 6 and Driver 1)*

5.8 Objective 8: Maximize Other Benefits, Where Possible

Stormwater capture projects should be sited and designed to maximize additional benefits provided. Following prioritization, siting, and designing facilities to optimally meet the other objectives listed in this memo, facilities selected for implementation should be designed to maximize other benefits achieved through implementation. Other benefits that could be considered for this objective include but are not limited to:

1. Integrating waterways into communities (opportunities for wetlands, stream restoration, or creek daylighting that can be integrated into regional stormwater capture facilities);
2. Community amenities (including trails, parks, playgrounds, community centers, etc.);
3. Habitat (use of native plants, design to maximize ecosystem benefits);
4. Safety/Health/Active Transportation (green space for urban health and reduction of heat island, GSI as a buffer feature in multi-modal transportation design, GSI as part of a larger project to encourage walking or biking); and

5. Education (siting and signage selected with consideration of public education benefits, GSI facility tours).

Relating to community amenities, the FSLRRD has authority to implement projects that provide recreational benefits. The incorporation of community amenities into or through stormwater capture project implementation can also encourage public buy-in to projects in their communities (see Objective 7). (*Relates to Driver 5 and Driver 6*)

6. SUMMARY AND NEXT STEPS

6.1 Identification of Projects to Meet Objectives

As described in Section 3, the vision for managing stormwater on a regional scale is to:

- Cost-effectively implement multi-benefit stormwater infrastructure solutions that collectively improve water quality; increase resiliency to climate change impacts; mitigate localized flooding; utilize stormwater as a resource; and serve communities equitably, both locally and regionally.

A next step in meeting this vision is to identify potential multi-benefit regional stormwater capture project locations and designs that could address the objectives of managing stormwater on a regional scale. A number of plans reviewed as part of the development of this memo include relevant information that can be used to identify and prioritize multi-benefit stormwater capture projects, such as deficient storm drain infrastructure identified in storm drain master plans, high priority water quality facilities included in member agency GSI Plans, facility locations incorporated into RAA output, projects identified through the County Stormwater Resource Plan (SMCWPPP, 2017), and potential resiliency solutions identified in San Francisco Estuary Institute's Adaptation Atlas (SFEI, 2018). A compilation of maps from these sources is provided as Attachment C.

Importantly, Driver 1, limited resources, relates to a number of regional-scale stormwater management approach objectives. As described in Sections 4.1 and 4.2, there is currently not sufficient funding to upgrade deficient infrastructure in many jurisdictions, let alone meet all eight objectives summarized in Section 5. As such, prioritization of identified stormwater capture projects may be difficult if choices must be made between meeting different objectives in any given facility. Additionally, identified facilities may preferentially alleviate impacts in the jurisdiction(s) in which they are located and/or adjacent to. This tension is something that will need to be considered as regional projects are identified and the regional-scale stormwater management approach is developed further.

A visual of how the drivers and objectives interact is shown in Figure 1 on the following page.

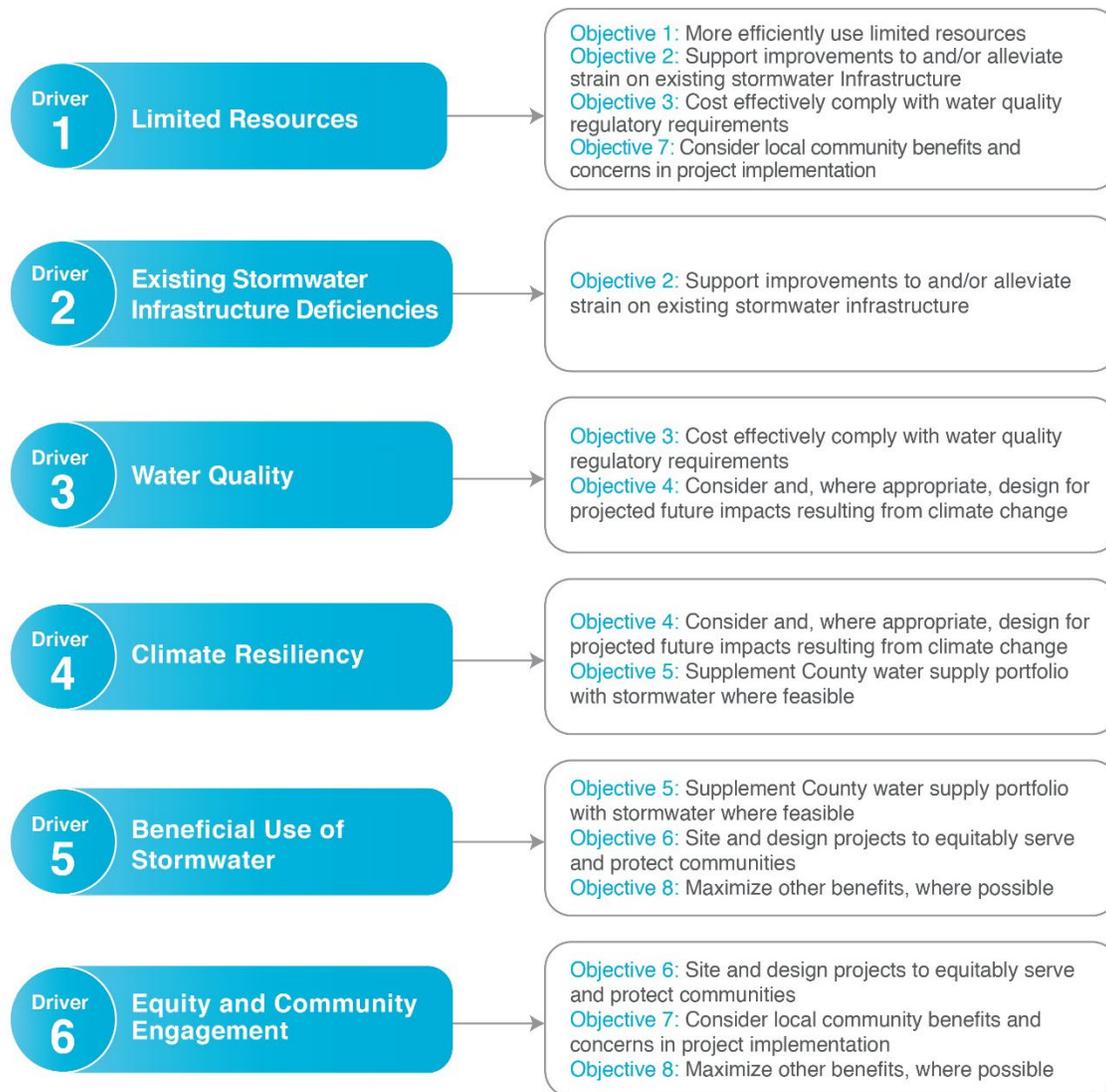


Figure 1: Drivers and Objectives

6.2 Project Next Steps

The existing plans described in section 6.1 can be used as input to the list of regional stormwater capture projects identified to meet the objectives described in this memo and shown in Figure 1. Craftwater will be incorporating the analyses summarized in existing plans, along with the findings of this memo, into the identification and prioritization of feasible regional stormwater capture projects to be implemented through a regional-scale stormwater management approach.

With consideration of the drivers and objectives, Geosyntec and Craftwater will develop the approach for the business case demonstration, and Craftwater will conduct modeling and

analyses to develop quantitative output to support the business case. This may include estimates of facility performance in terms of water quality benefits, including load reduction, peak flow reduction, and other quantitative metrics. Geosyntec will work collaboratively with Craftwater to evaluate the output of this analysis alongside comparative benefits achieved from smaller-scale distributed facilities. It is anticipated that planning-scale cost analyses will be conducted for both sets of potential projects to demonstrate the potential economic benefits of siting regional stormwater capture facilities where they can optimally meet the objectives. The results of these analyses will be used to develop the Business Case for .

The Business Case will then be presented to the Project TAC and C/CAG member agencies to obtain input. These considerations will be used to develop a draft regional collaboration framework that will be summarized in a final white paper as part of the Project.

7. REFERENCES

- Ackerly, D., A. Jones, M. Stacey, B. Riordan. 2018. San Francisco Bay Area Summary Report. California's Fourth Climate Change Assessment. Publication number: CCCA4-SUM-2018-005.
- Bay Area Water Supply & Conservation Agency (BAWSCA). 2015. Bay Area Water Supply & Conservation Agency Long-Term Reliable Water Supply Strategy, Phase II Final Report. Prepared by CDM Smith. February.
- BAWSCA. 2021. <https://bawsca.org/water/supply>. Accessed 28 January.
- California Environmental Protection Agency, Office of Environmental Health Hazard Assessment. 2017. CalEnviroScreen 3.0. January.
<https://oehha.ca.gov/media/downloads/calenviroscreen/report/ces3report.pdf>
- California Regional Water Quality Control Board, San Francisco Bay Region (SFBRWQCB). 2015. Municipal Regional Stormwater Permit (Order No. R2-2015-0049). NPDES Permit No. CAS612008. 19 November.
- SFBRWQCB. 2019. Water Quality Control Plan (Basin Plan). 5 November.
- SFBRWQCB. 2019. Water Quality Control Plan (Basin Plan) Table 4-8.
https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/planningmdls/basinplan/web/tab/tab_4-08.pdf
- City/County Association of Governments of San Mateo County (C/CAG). 2020. San Mateo Countywide Sustainable Streets Master Plan DRAFT. December.
- City of Half Moon Bay. 2016. Half Moon Bay Storm Drain Master Plan Update. Prepared by Schaff & Wheeler Consulting Civil Engineers. August.

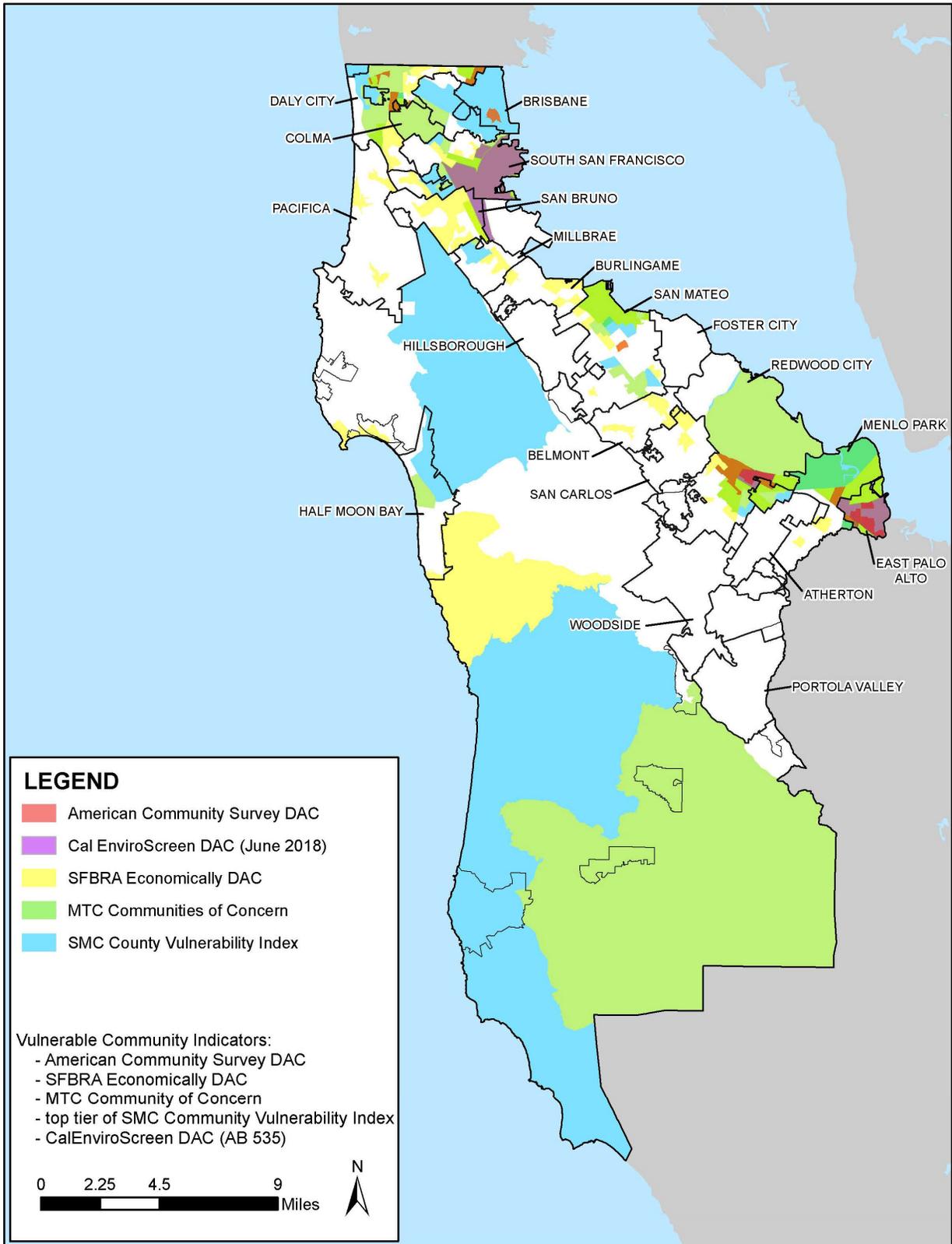
- City of Pacifica, 2021. “Pacifica’s NCCWD Water Recycling Facility”.
<https://www.cityofpacifica.org/depts/wwt/calercreek/default.asp>. Accessed February.
- City of Palo Alto, 2021. Recycled Water at the Regional Water Quality Control Plant.
https://www.cityofpaloalto.org/gov/depts/pwd/pollution/recycled_n_other_non_potable_water.asp. Accessed February.
- City of San Bruno. 2014. City of San Bruno Storm Drain Master Plan Final Report. Prepared by GHD Group. June.
- City of San Bruno, 2021. San Bruno City Council Agenda Package, January 12.
- City of San Carlos. 2017. City of San Carlos Citywide Storm Drain System Master Plan. Prepared by GHD Group. April.
- City of San Mateo, 2021a. Conversation with Azalea Mitch, Acting Public Works Director. January.
- City of San Mateo, 2021b. DRAFT Stormwater Funding Analysis. Prepared by SCI Consulting Group and Larry Walker Associates.
- City of South San Francisco. 2016. South San Francisco Storm Drain Master Plan. Prepared by Michael Baker International. February.
- Cooley, H. R. Phurisamban, P. Gleick. 2019. The cost of alternative urban water supply and efficiency options in California. Environmental Research Communications. Vol 1. No 4. 28 May. <https://iopscience.iop.org/article/10.1088/2515-7620/ab22ca>
- County of San Mateo Board of Supervisors. 2020. Resolution No. 20-089. Adopt a resolution authorizing an agreement with Social Progress Imperative. 4 March.
<https://sanmateocounty.legistar.com/LegislationDetail.aspx?ID=4388458&GUID=8B38FBDA-F032-4DF1-AA46-31CA0D94EA33&Options=ID|Text|&Search=equity>
- County of San Mateo Board of Supervisors. 2020. Resolution No. 20-394. Adopt a resolution supporting the Black Lives Matter movement. 16 June.
<https://sanmateocounty.legistar.com/LegislationDetail.aspx?ID=4577131&GUID=25995C04-3750-4AFC-AF8E-633C528C8188&Options=ID|Text|&Search=equity>
- County of San Mateo Board of Supervisors. 2020. Resolution No. 20-584. Adopt a resolution condemning racism and injustice. 28 July.
<https://sanmateocounty.legistar.com/LegislationDetail.aspx?ID=4606260&GUID=13864D34-0F88-424D-A442-F5366A905316&Options=ID|Text|&Search=equity>
- Diringer, S.E., M. Shimabuku, H. Cooley. 2020. Economic evaluation of stormwater capture and its multiple benefits in California. PLOS One. 24 March.
<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0230549>

- Geosyntec, 2018. Green Infrastructure Cost Estimation Methodology. Memo to the Contra Costa Clean Water Program. November.
- Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG), 2017. Plan Bay Area 2040: Final Equity Analysis Report. July.
- San Francisco Bay Conservation and Development Commission (BCDC). 2021. Community Vulnerability Mapping Tool. <https://www.bcdc.ca.gov/data/community.html>. Accessed 30 January.
- San Francisco Bay Regional Water Quality Control Board. 2017. Water Quality Control Plan (Basin Plan) for the San Francisco Bay Basin. Basin Plan amendments adopted through May 4. https://www.waterboards.ca.gov/sanfranciscobay/basin_planning.html
- San Francisco Bay Restoration Authority, 2019. Economically Disadvantaged Communities Reference Sheet.
- San Francisco Public Utilities Commission (SFPUC), 2021. “Other Projects”. <https://sfwater.org/index.aspx?page=862>. Visited February.
- San Mateo County Office of Sustainability. 2018. County of San Mateo Sea Level Rise Vulnerability Assessment. March.
- San Mateo County Board of Supervisors. 2019. Resolution Endorsing the Declaration of a Climate Emergency in San Mateo County. File #19-847. 17 September. <https://cmo.smcgov.org/blog/2019-09-17/board-supervisors-declare-climate-emergency-san-mateo-county>
- San Mateo County, 2021. Community Vulnerability Index. <https://cmo.smcgov.org/cvi>. Accessed February.
- San Mateo Countywide Water Pollution Prevention Program (SMCWPPP), 2017. Stormwater Resource Plan for San Mateo County. Prepared by Paradigm Environmental and Larry Walker Associates, Inc. February.
- SMCWPPP, 2020. San Mateo County-Wide Reasonable Assurance Analysis Addressing PCBs and Mercury: Phase II Green Infrastructure Modeling Report. Prepared by Paradigm Environmental and Larry Walker Associates, Inc. September.
- Santa Clara Valley Water District, 2021. Conversation with Kirsten Struve, Assistant Officer for Water Supply Division. January.
- State of California. 2012. Senate Bill No. 535, California Global Warming Solutions Act of 2006. 30 September. https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201120120SB535

- State of California. 2017. Senate Bill No. 231, Local government: fees and charges. 6 October.
https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180SB231
- State of California. 2018. Assembly Bill No. 1668 and Senate Bill No. 606, Water Management Planning. 18 and 21 May.
https://www.waterboards.ca.gov/water_issues/programs/conservation_portal/docs/enrolled_ab1668_sb606.pdf
- State of California, Department of Water Resources and State Water Resources Control Board. 2018. 2018 Water Conservation Legislation. Accessed January 2021.
<https://water.ca.gov/Programs/Water-Use-And-Efficiency/Making-Conservation-a-California-Way-of-Life#:~:text=California%20has%20long%20been%20at,capita%20water%20use%20by%202020.>
- State of California. 2019. Assembly Bill No. 825, Chapter 292. San Mateo County Flood and Sea Level Rise District. and The San Mateo County Flood Control District Act (Chapter 2108 of the Statutes of 1959). 12 September.
https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201920200AB825
- State of California, Office of Planning and Research. 2017. General Plan Guidelines.
<https://opr.ca.gov/planning/general-plan/guidelines.html>
- State of California, Office of Planning and Research. 2020. General Plan Guidelines, Chapter 4, Section 8: Environmental Justice Element. June.
- State Water Resources Control Board. 2018. Water Quality Control for Recycled Water, Resolution No. 2018-0057.
https://www.waterboards.ca.gov/water_issues/programs/water_recycling_policy/policy.html
- SWRCB, 2021. Impaired Water Bodies, Final 2014/2016 California Integrated Report (Clean Water Act Section 303(d) List / 305(b) Report).
https://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2014_2016.shtml.
 Accessed January (website last updated April 2, 2019).
- SWRCB, 2021. Integrated Regional Water Management.
<https://water.ca.gov/Programs/Integrated-Regional-Water-Management>. Accessed February.
- Town of Hillsborough. 2015. Hillsborough Storm Drain Master Plan. Prepared by BKF Engineers. May.

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EXHIBIT 1
Vulnerable Communities



Note: Map was prepared by Lotus Water Engineering for the San Mateo Countywide Sustainable Streets Master Plan (C/CAG, 2020).

**San Mateo County
Vulnerable Community Indicators**
C/CAG Advancing Regional Stormwater Capture
Projects: Drivers and Objectives



Exhibit

1

CWR0650

February 2021

ATTACHMENT A

Drivers Matrix

Agency	Title	Year	Report Category	Driver 1: Limited Resources	Driver 2: Existing Stormwater Infrastructure Deficiencies	Driver 3: Water Quality	Driver 4: Climate Resiliency	Driver 5: Beneficial Use of Stormwater	Driver 6: Equity and Community Engagement
SFBRWQCB	Municipal Regional Stormwater NPDES Permit (MRP)	2015	Permit			X			
SFBRWQCB	San Francisco Bay Mercury TMDL	2008	TMDL			X			
SFBRWQCB	San Francisco Bay PCBs TMDL Project	2010	TMDL			X			
SFBRWQCB	Pescadero and Butano Creeks Watershed Sediment TMDL	2018	TMDL			X			
SFBRWQCB	San Vicente Creek and Fitzgerald Marine Reserve Fecal Indicator Bacteria Project	2016	TMDL			X			
SFBRWQCB	Pillar Point Harbor and Venice Beach Bacteria TMDL (Open for Public Comment)	2020	TMDL			X			
SFBRWQCB	San Francisquito Creek Sediment TMDL		TMDL			X			
SFBRWQCB	San Gregorio Creek Sediment TMDL		TMDL			X			
SFBRWQCB	Kiteboard Beach and Oyster Point Beach Bacteria TMDL		TMDL			X			
SFBRWQCB	San Pedro Creek and Pacifica State Beach Bacteria TMDL	2012	TMDL			X			
SFBRWQCB	San Francisco Bay Beaches Bacteria	2016	TMDL			X			
San Francisquito Creek Joint Powers Authority	Website	2020	Flood Management		X		X		
San Mateo County	Climate Adaptation Risk Analysis for the San Mateo Countywide Sustainable Streets Master Plan, Sustainable Streets Master Plan	2020 (DRAFT)	Climate Change Adaptation		X		X	X	X
San Mateo County	SMC Energy and Water Strategy for 2025	2020 (DRAFT)	Water Supply Management		X		X	X	X
BAWSCA	Long-Term Reliable Water Supply Strategy (Risk Assessment)	2015	Water Supply Management					X	
FSLRRD	FSLRRD BOS Presentation, December	2020	Climate Change Adaptation		X		X	X	X
SFEI	SFEI SF Bay Shoreline Adaptation Atlas	2019	Climate Change Adaptation		X		X	X	X
San Mateo County	County of San Mateo Sea Level Rise Vulnerability Assessment	2018	Climate Change Adaptation		X		X	X	X
Coastside County Water District	Coastside County Urban Water Management Plan	2016	Groundwater	X				X	
San Mateo County	San Mateo Plain GW Basin Assessment	2018	Groundwater					X	
City of San Bruno/Daly City	South Westside Basin GWMP	2012	Groundwater					X	
California's Groundwater Bulletin	Half Moon Bay Terrace (Coastside) GWMP		Groundwater					X	
San Mateo County	SMC Hazard Mitigation Plan	2016	Climate Change Adaptation		X			X	
San Mateo County	Stormwater Resource Plan for San Mateo County	2017	Stormwater Resource Plan		X		X	X	X
SMCWPPP	San Mateo County-Wide Reasonable Assurance Analysis Addressing PCBs and Mercury	2020	TMDL/MRP Compliance			X	X	X	
San Mateo County	Climate Ready Viewer	2020	Climate Change Adaptation		X		X		
Silicon Valley Clean Water	Solids Management	2021	Sustainability				X		
San Mateo County	Groundwater Information	2020	Groundwater					X	
San Mateo County Board of Supervisors	FLSSRD CEO Len Materman's presentation to the San Mateo County Board of Supervisors	2020	Presentation				X		X
Atherton	Green Infrastructure Plan	2019	GSI Plan			X	X	X	X
Belmont	Green Infrastructure Plan	2019	GSI Plan			X	X	X	X
Brisbane	Green Infrastructure Plan	2020	GSI Plan			X	X	X	X
Burlingame	Green Infrastructure Plan	2019	GSI Plan			X	X	X	X
Colma	Green Infrastructure Plan	2019	GSI Plan			X	X	X	X
Daly City	Green Infrastructure Plan	2019	GSI Plan			X	X	X	X
East Palo Alto	Green Infrastructure Plan	2019	GSI Plan			X	X	X	X
Foster City	Green Infrastructure Plan	2019	GSI Plan			X	X	X	X

Agency	Title	Year	Report Category	Driver 1: Limited Resources	Driver 2: Existing Stormwater Infrastructure Deficiencies	Driver 3: Water Quality	Driver 4: Climate Resiliency	Driver 5: Beneficial Use of Stormwater	Driver 6: Equity and Community Engagement
Half Moon Bay	Green Infrastructure Plan	2019	GSI Plan			X	X	X	X
Hillsborough	Green Infrastructure Plan	2019	GSI Plan			X	X	X	X
Menlo Park	Green Infrastructure Plan	2019	GSI Plan			X	X	X	X
Millbrae	Green Infrastructure Plan	2019	GSI Plan			X	X	X	X
Pacifica	Green Infrastructure Plan	2019	GSI Plan			X	X	X	X
Portola Valley	Green Infrastructure Plan	2019	GSI Plan			X	X	X	X
Redwood City	Green Infrastructure Plan	2019	GSI Plan			X	X	X	X
San Bruno	Green Infrastructure Plan	2019	GSI Plan			X	X	X	X
San Carlos	Green Infrastructure Plan	2019	GSI Plan			X	X	X	X
San Mateo, City	Green Infrastructure Plan	2019	GSI Plan			X	X	X	X
San Mateo County	Green Infrastructure Plan	2019	GSI Plan			X	X	X	X
South San Francisco	Green Infrastructure Plan	2019	GSI Plan			X	X	X	X
Woodside	Green Infrastructure Plan	2019	GSI Plan			X	X	X	X
Atherton	Climate Action Plan	2016	Climate Action Plan				X	X	X
Belmont	City of Belmont 2017 Climate Action Plan	2017	Climate Action Plan				X	X	X
Brisbane	City of Brisbane Climate Action Plan	2015	Climate Action Plan				X	X	X
Burlingame	City of Burlingame 2030 Climate Action Plan	2019	Climate Action Plan				X	X	
Colma	Town of Colma Climate Action Plan	2013	Climate Action Plan				X	X	X
Daly City	Daly City's Green Vision, A Climate Action Plan for 2011 - 2020 and Beyond	2005	Climate Action Plan				X	X	X
East Palo Alto	City of East Palo Alto Final Climate Action Plan	2011	Climate Action Plan				X	X	
Foster City	Foster City Climate Action Plan	2015	Climate Action Plan		X		X	X	X
Hillsborough	Town of Hillsborough	2010	Climate Action Plan				X	X	
Menlo Park	2030 Climate Action Plan	2020	Climate Action Plan				X	X	X
Millbrae	City of Millbrae Final Climate Action Plan	2020	Climate Action Plan				X	X	X
Pacifica	City of Pacifica Climate Action Plan	2014	Climate Action Plan				X	X	X
Redwood City	Climate Action Plan City of Redwood City	2020	Climate Action Plan				X	X	X
San Bruno	City of San Bruno Climate Action Plan	2012	Climate Action Plan				X	X	
San Carlos	City of San Carlos Climate Action Plan	2009	Climate Action Plan				X		X
San Mateo, City	City of San Mateo 2020 Climate Action Plan	2020	Climate Action Plan				X	X	X
San Mateo County	San Mateo County Energy Efficiency Climate Action Plan	2013	Climate Action Plan				X	X	X
San Mateo County	County of San Mateo Government Operations Climate Action Plan	2012	Climate Action Plan				X	X	
South San Francisco	City of South San Francisco Climate Action Plan	2014	Climate Action Plan				X	X	
Woodside	Town of Woodside Climate Action Plan	2015	Climate Action Plan				X	X	X
C/CAG	RICAPS Climate Action Plan Template	2020	Climate Action Plan				X	X	X
Atherton	Town of Atherton Townwide Drainage Study Update	2015	Storm Drain Master Plan	X	X	X			
Belmont	Belmont-Wide Storm Drainage Study	2009	Storm Drain Master Plan	X	X	X			
Brisbane	Storm Drainage Master Plan	2003	Storm Drain Master Plan	X	X	X			
East Palo Alto	City of East Palo Alto Storm Drain Master Plan	2014	Storm Drain Master Plan	X	X	X			
Half Moon Bay	Half Moon Bay Storm Drain Master Plan Update	2016	Storm Drain Master Plan	X	X				
Hillsborough	Hillsborough Storm Drain Master Plan	2015	Storm Drain Master Plan	X	X	X			
Menlo Park	City-Wide Storm Drainage Study	2003	Storm Drain Master Plan	X	X				
Millbrae	City of Millbrae Storm Drain Master Plan	2018	Storm Drain Master Plan	X	X	X			
Pacifica	City of Pacifica Storm Drainage System Master Plan	2012	Storm Drain Master Plan	X	X				
San Bruno	City of San Bruno Storm Drain Master Plan	2014	Storm Drain Master Plan	X	X	X			
San Carlos	City of San Carlos Storm Drain System Master Plan	2017	Storm Drain Master Plan	X	X				
San Mateo, City	Storm Drain Master Plan San Mateo, California	2004	Storm Drain Master Plan	X	X				
South San Francisco	City of South San Francisco Storm Drain Master Plan	2016	Storm Drain Master Plan	X	X	X			

ATTACHMENT B
Summary of POTWs serving San Mateo County

Advancing Regional Stormwater Capture Projects: Drivers and Objectives
 Attachment B: Summary of County POTWs
 City/County Association of Governments of San Mateo County

Publicly Owned Treatment Works	C/CAG Agencies Served by the POTW	Treatment Level	Recycled Water Information
City & County of San Francisco, Southeast	Brisbane	Secondary ¹	
City of Burlingame Wastewater Treatment Plant	Burlingame	Secondary ¹	
City of Millbrae Water Pollution Control Plant	Millbrae	Secondary ¹	
City of Pacifica Wastewater Treatment Plant	Pacifica	Advanced Secondary ²	The Calera Creek Water Recycling Plant can treat 4 million gallons of sewage per day (up to 20 MGD during storm events). Recycled water is used to irrigate local fields around the City of Pacifica. (City of Pacifica, 2021)
City of San Mateo Waste Water Treatment Plant	Foster City San Mateo Town of Hillsborough	Advanced Secondary ²	Currently working on the design for the recycled water component of the POTW Expansion project. The project will produce Title 22 / Recycled Water effluent. Since they are not the water purveyor in the area, however, they don't have plans to distribute the recycled water. Foster City owns 25% of the facility and they are interested in developing plans for future recycled water needs (they are both a water purveyor and sewer agency). The effort would require additional treatment to the Title 22 effluent being produced (reverse osmosis due to salinity levels) and a distribution system for their City. With respect to stormwater, the City doesn't have plans for use. (City of San Mateo, 2021)
North San Mateo County Sanitation District	Daly City Colma South San Francisco	Tertiary ³	<i>"In 2004, as part of a partnership between the SFPUC and the City of Daly City, recycled water was made available to Lake Merced Golf Club, the Olympic Club Golf Course, and the San Francisco Golf Club by adding a tertiary level of treatment at the North San Mateo County Sanitation District (a subsidiary of the City of Daly City) Wastewater Treatment Plant located in Daly City, and by installing a distribution system from the treatment plant to these respective golf courses. Recycled water currently accounts for about 80% of the irrigation at these locations. This has markedly decreased the demand on local groundwater in the vicinity of Lake Merced.</i> <i>In 2012, the Harding Park and Fleming golf courses began irrigating with recycled water also supplied by the North San Mateo County Sanitation District in Daly City."</i> (From SFPUC: https://sfwater.org/index.aspx?page=862) The Daly City recycled water expansion project is designed to meet the annual demand of the irrigation customers of about 1,060 AFY and the peak daily demand of 2.3 mgd (BAWSCA, 2015).
Palo Alto Regional Water Quality Control Plant	East Palo Alto Menlo Park	Advanced Secondary ²	The City of Palo Alto's Regional Water Quality Control Plant generates approximately one million gallons of high quality recycled water each day. Recycled water is available for permitted users. (City of Palo Alto, 2021)

Advancing Regional Stormwater Capture Projects: Drivers and Objectives

Attachment B: Summary of County POTWs

City/County Association of Governments of San Mateo County

Publicly Owned Treatment Works	C/CAG Agencies Served by the POTW	Treatment Level	Recycled Water Information
Sewer Authority Mid-Coastside	Half Moon Bay	Secondary ¹	
Silicon Valley Clean Water (SVCW)	Atherton Belmont East Palo Alto Menlo Park Portola Valley Redwood City San Carlos Woodside	Advanced Secondary ²	SVCW is a Joint Powers of Authority serving Belmont, Redwood City, San Carlos, and the West Bay Sanitary District. POTW has advanced treatment and is providing recycled water to the community through the Redwood City's Public Works department. Recycled water is used for landscaping, agriculture and industrial applications. There is a process to provide permanent recycled water connections for approved uses. The recycled water yields are significant greater than the identified regional demand (BAWSCA, 2015).
South San Francisco Water Quality Control Plant	Colma San Bruno South San Francisco	Secondary ¹	POTW also provides dechlorination for Millbrae and Burlingame

Notes:

¹Secondary treatment standards are established technology based requirements by EPA for municipal wastewater treatment plants. The standards are reflected in terms of five-day BOD, TSS removal, and pH.

²Advanced secondary treatment includes, at a minimum, filtration.

³Tertiary treatment includes additional chemical or physical treatment of wastewater so that it can be used as recycled water for non-potable irrigation and industrial purposes.

Primary Source: POTWs in the SF Bay Region

https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/planningtmdls/basinplan/web/tab/tab_4-08.pdf

ATTACHMENT C

Compiled Maps of Potential Projects from Existing Plans Reviewed

Provided at: [Advancing Regional Stormwater Projects: Drivers and Objectives Memo, Attachment C](#)

C/CAG AGENDA REPORT

Date: February 18, 2021
To: Stormwater Committee
From: Matthew Fabry, Program Manager
Subject: Receive update on Municipal Regional Permit reissuance and process to review and respond to the Administrative Draft.

(For further information or questions contact Matthew Fabry at mfabry@smcgov.org)

RECOMMENDATION

Receive update on Municipal Regional Permit reissuance and process to review and respond to the Administrative Draft.

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 and summarized key issues at an MRP 3.0 Steering Committee meeting on the same day. Water Board staff has provided a 60-day comment period, with comments due on April 8. Water Board staff has requested, to the extent possible, consolidated comments through Countywide Stormwater Programs.

Staff will provide a high-level summary of key issues in the Administrative Draft (to the extent they can be identified by the meeting date) and a schedule/process for soliciting and consolidating comments on behalf of member agencies by the comment deadline.

ATTACHMENTS

None

C/CAG AGENDA REPORT

Date: February 18, 2021
To: Stormwater Committee
From: Matthew Fabry, Program Coordinator
Subject: Review and consider updates to ad-hoc work groups and appointees

(For further information or questions contact Matthew Fabry at mfabry@smcgov.org)

RECOMMENDATION

That the Committee review and consider updates to ad-hoc work groups and appointees.

DISCUSSION

In February 2013, the Committee established two ad-hoc work groups with five members each to help provide input and guidance to C/CAG staff and the Committee on priority issues. The two groups were called the Countywide Funding Initiative and Permit Implementation work groups. Since their establishment, many of the original appointees have left the Stormwater Committee. The Countywide Funding Initiative work group stopped meeting after C/CAG discontinued efforts toward a countywide Proposition 218 stormwater fee in 2014. The Permit Implementation work group has continued to meet periodically on Municipal Regional Permit (MRP) issues and members have participated on the regional MRP 3.0 Steering Committee.

Staff recommends the Committee consider revising the Countywide Funding Initiative work group to be a Funding/Financing work group that can engage in current C/CAG efforts to look at innovative stormwater funding and financing approaches and credit trading marketplaces through the pro-bono support efforts of the WaterNow Alliance and American Rivers/Corona Environmental Consulting. In addition, with MRP 3.0 on the horizon and several member agencies exploring or pursuing stormwater fees, this work group can help C/CAG staff explore whether renewed discussions on a countywide funding initiative are warranted. Staff recommends the Permit Implementation work group remain focused on MRP-related issues.

Remaining designated members of the Countywide Funding Initiative work group are Chair Breault and Member Porter. Remaining designated members of the Permit Implementation work group are Committee members Porter and Willis, and Chair Breault and Vice-Chair Ovadia have participated in work group meetings. At the January Stormwater Committee meeting, Members Mitch and Bozorginia expressed interest in joining ad-hoc groups.

Staff recommends the Committee consider refocusing the Countywide Funding Initiative workgroup on general Funding/Financing and consider appointing volunteers to both groups, as well as whether to revisit appointments on a regular, recurring schedule.

ATTACHMENTS

None