

Contra Costa Watersheds Stormwater Resource Plan

Executive Summary

The *Contra Costa Watersheds (CCW) Stormwater Resource Plan (SWRP)* was created to help build stormwater management projects and programs within Contra Costa County (County). The plan builds upon a foundation of support for and successful implementation of watershed protection programs, restoration projects, and low impact development throughout the County.

These projects value stormwater as a resource and provide multiple benefits for the community. The *CCW SWRP* identifies potential stormwater management projects and programs that are eligible for grant funds like the Proposition 1 Storm Water Grant Program implementation. The *CCW SWRP* is consistent with the *Storm Water Resource Plan Guidelines* (SWRCB, 2015).



The Contra Costa Clean Water Program (CCCWP) led the development of the *CCW SWRP*, on behalf of Contra Costa County Flood Control and Water Conservation District (Flood Control District), unincorporated Contra Costa County, the 19 incorporated cities and towns within Contra Costa County (Permittees), and other stakeholders. The *CCW SWRP* development involved a robust outreach program to engage and solicit feedback from the County's well-organized and empowered community groups and the public. A Technical Advisory Group (TAG), made up of representatives from state, regional, and local agencies as well as stakeholder groups, was also established to help guide the *CCW SWRP* development.

Multiple Benefits of Stormwater Management Projects

- Improved water quality
- Reduced localized flooding
- Increased water supplies for beneficial uses
- Environmental and community enhancement



Watersheds and Sub-watersheds

- Watershed: an area of land from which all the water, including rain and irrigation runoff, flows into the same body of water.
- Sub-watershed: smaller watersheds that drain to a larger body of water.

ES.1 CONTRA COSTA'S WATERSHEDS: APPROACH AND CHARACTERIZATION

The County boundary is the planning area of the *CCW SWRP*. The 31 major watersheds and sub-watersheds within the County are linked by similar water quality stressors and regional water quality impairments of the San Francisco Bay-Delta Estuary because of urbanization. Municipalities and other dischargers face regulatory requirements to implement control measures to address the loading of polychlorinated biphenyls (PCBs), mercury,

pesticides, trash, and other pollutants. CCCWP was formed to assist Permittees' efforts to comply with stormwater permits through cross-jurisdictional and multiple watershed collaboration. The CCCWP's record of success coordinating efforts across the County uniquely positioned CCCWP to lead the development of the *CCW SWRP*.

To reflect differences in watersheds across the County, and to incorporate community and creek-specific values into the planning process, the *CCW SWRP* organized the County into five watershed-based Planning Units: the East County, Central County, North County, South County, and West County Planning Units. The Planning Units are based on watershed boundaries and aggregate watersheds by geographic proximity, along with similar planning issues and management goals. **Figure ES-1** shows the grouping of sub-watersheds within each Planning Unit, and **Figure ES-2** shows the jurisdictional boundaries of the cities and towns that fall into each Planning Unit.



Mouth of Baxter Creek in Richmond

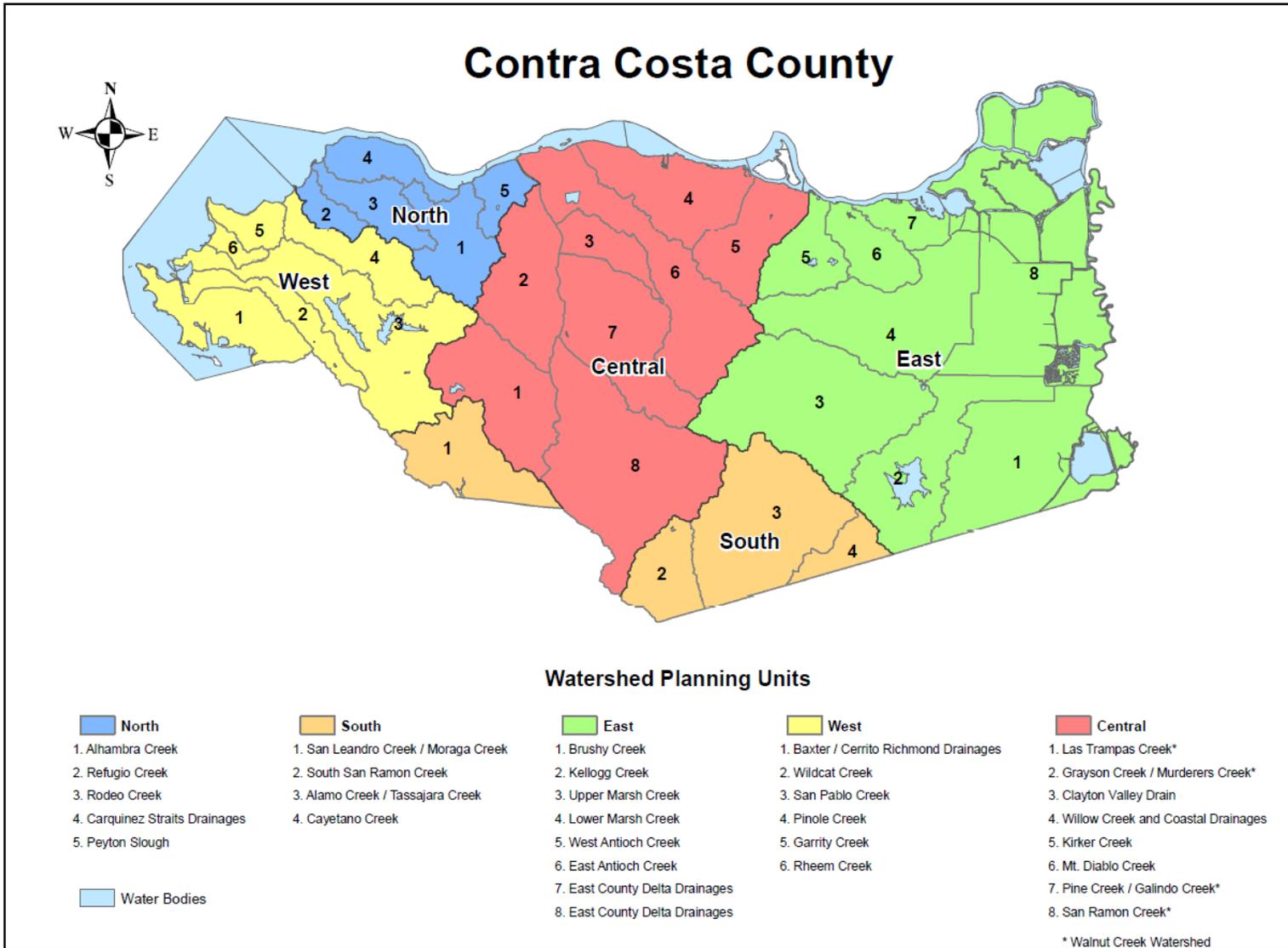


Figure ES-1. Contra Costa County Watershed Planning Units and Watersheds

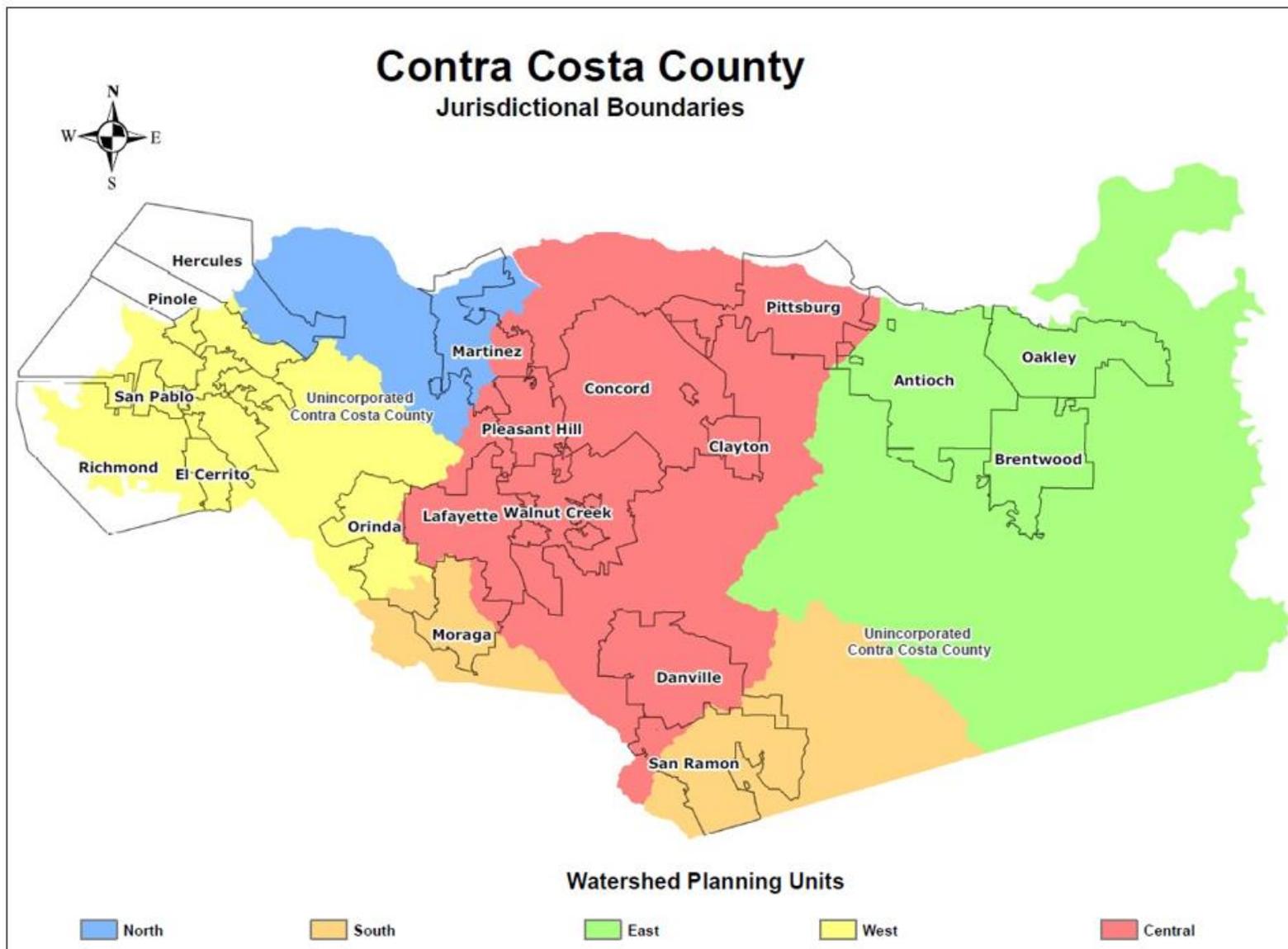


Figure ES-2. Contra Costa County Local Jurisdictions and Watershed Planning Unit

ES.2 WATER QUALITY COMPLIANCE STRATEGIES AND THE SWRP

Many waters bodies in the County have impaired water quality or are tributary to impaired waters such as the San Francisco Bay and the Sacramento-San Joaquin Delta. Various watersheds are subject to Total Maximum Daily Loads (TMDLs) for mercury, PCBs, and pesticides. Compliance with TMDLs and applicable permits was a major driver informing the selection, evaluation, and prioritization of projects.

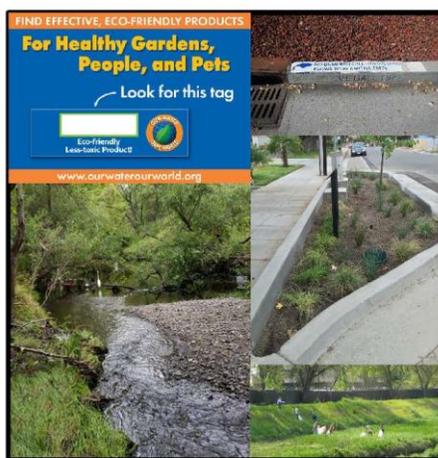
Stormwater discharges from most municipalities in the County are regulated under the San Francisco Bay Region Municipal Regional Stormwater National Pollutant Discharge Elimination System (NPDES) Permit¹ (MRP). Municipalities in the eastern Contra Costa County are currently regulated under the Central Valley Regional Water Quality Control Board's (Central Valley Regional Water Board's) Eastern Contra Costa County Municipal Separate Storm Sewer System (MS4) permit.² The two Regional Water Boards have agreed to regulate all stormwater discharges from Contra Costa municipalities under the MRP in the future. The provisions in the Eastern Contra Costa County MS4 permit largely mirror the MRP provisions. For brevity, the *CCW SWRP* references the MRP throughout this document.

Total Maximum Daily Load

A TMDL is pollutant budget for a water body. It identifies the maximum amount of a pollutant a water body can receive and still meet water quality standards.

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

Order No. R2-2015-0049
NPDES Permit No. CAS612008
November 19, 2015



The MRP requires Permittees to develop and implement Green Infrastructure (GI) Plans. The MRP further requires the Permittees to complete a reasonable assurance analysis (RAA) to demonstrate that required PCBs and mercury load reductions will be achieved by the TMDL deadlines through implementation of the GI Plans and other permit-required control measures.

The *CCW SWRP* forms the foundation for water quality improvement strategies through GI implementation, which are expected to be an essential part of the Permittees' approach to meet the TMDL and permit-mandated water quality improvement goals. The *CCW SWRP* incorporated water quality metrics into the process of selecting project opportunities, prioritizing them and evaluating their benefits. A primary goal for the *CCW SWRP* was to

¹ Order R2-2015-0049, NPDES Permit No. CAS612008

² Order No. R5-2010-0102, NPDES Permit No. CAS083313

identify multiple benefit GI projects that could be included in municipal GI Plans and help the County’s jurisdictions meet their TMDL and MRP requirements. County jurisdictions and other stakeholders will ultimately have the option to pursue future implementation grant funding for multiple benefit project opportunities included the *CCW SWRP*.

Figure ES-3 presents a conceptual understanding of the relationship between the *CCW SWRP*, GI Plans, and the RAA.

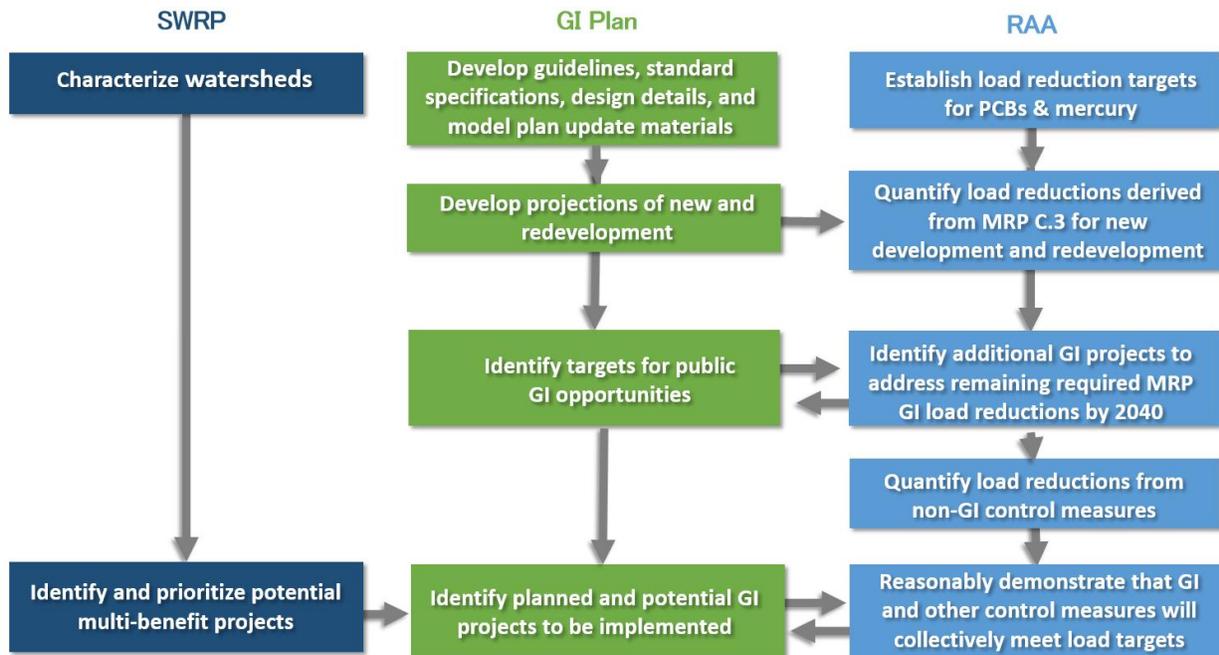


Figure ES-3. Relationship Between the *CCW SWRP*, the RAA, and the GI Plans

ES.3 PROJECT OPPORTUNITIES AND PROJECT CONCEPTS

The *CCW SWRP* includes ten stormwater management project concepts and thousands of additional project and programmatic opportunities, some of which could be developed into concepts prior to seeking funding. The process for identifying project opportunities and then selecting ten potential projects for concept development is outlined below and shown in Error! Reference source not found..

1. **Identify projects** – Potential projects were provided by the Permittees and other *CCW SWRP* stakeholders. Additional potential project locations were identified and catalogued using a geographic information system (GIS)-based opportunity analysis.
2. **Score projects using an automated metrics-based evaluation** – The *CCW SWRP* used a quantitative metrics-based multiple benefit evaluation, as required by the *Storm Water Resource Plan Guidelines (SWRP Guidelines, SWRCB, 2015)*, to score potential projects. Multiple benefits evaluated included water quality, water supply, flood control, environmental and community benefits of projects. The scoring was automated using metrics based on available project attributes. These scores were then used to preliminarily rank the projects for each jurisdiction.
3. **Rank projects based on input from CCCWP Permittees and the TAG** – Using the project scores along with other institutional knowledge, the CCCWP, jurisdictions, and

the TAG provided input on project ranking and prioritization of projects as required by the *SWRP Guidelines*. The ranked project opportunity lists are provided in **Appendix F**.

4. **Develop Project Concept Designs** – Ten projects were selected for development of concept designs showing the project footprint, stormwater treatment facilities, projected PCBs and mercury load reductions and other benefits, and a cost estimate. The concept designs for these ten projects are provided in **Appendix B**.

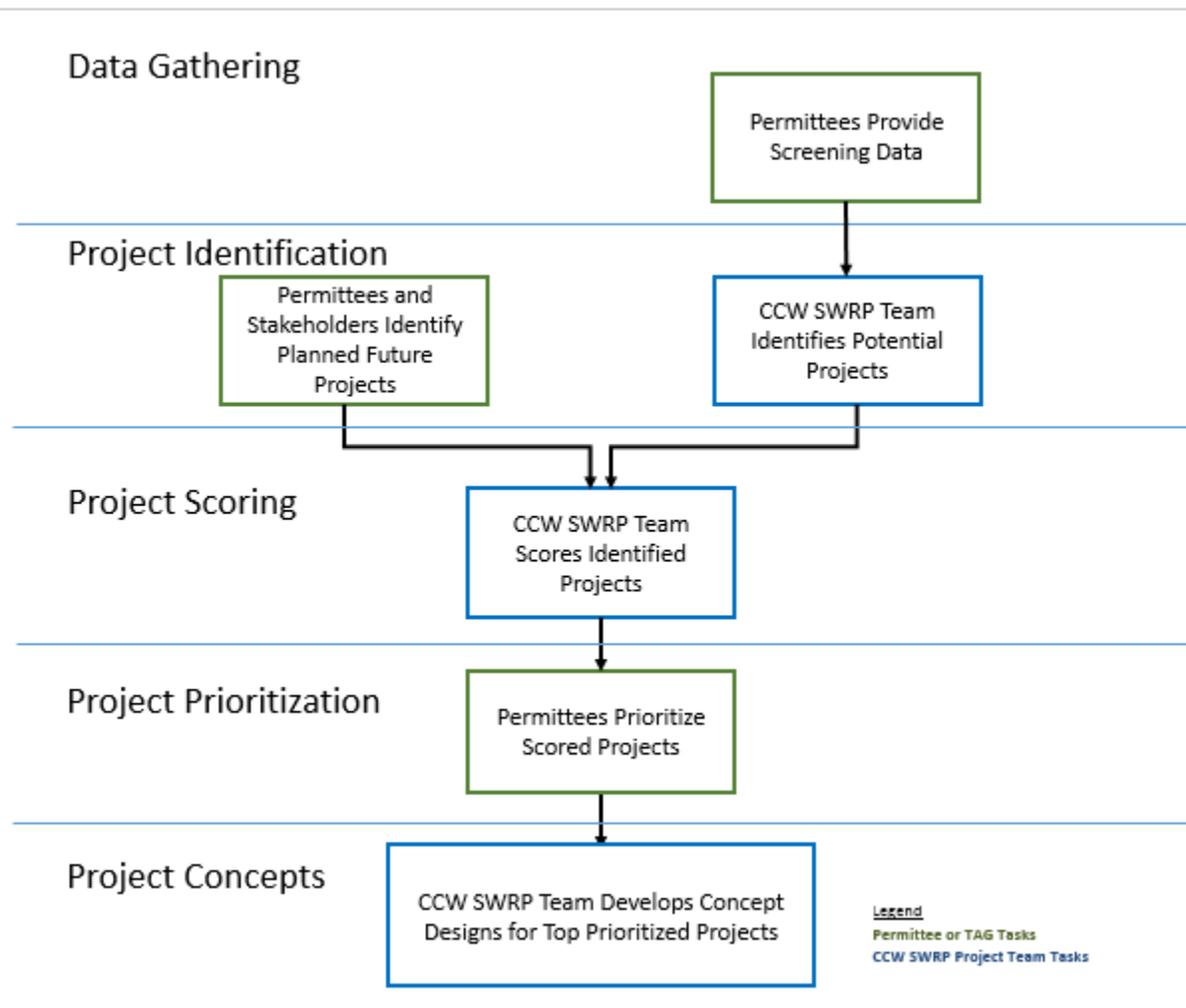


Figure ES-4. Process for Identifying Project Opportunities and Developing Project Concepts

Table ES-1. CCW SWRP Project Concepts

Permittee	Project Name	Project Type
Antioch	Vieira Ave- Wilbur Ave Green Streets	Green street
Concord	Hillcrest Park Regional Retrofit	Stormwater capture/use, bioretention, and full trash capture in a city park
Danville	Sycamore Valley Road Park and Ride Expansion	Bioretention retrofit in a park and ride lot
El Cerrito	El Cerrito del Norte TOD Complete Street Improvements	Green street
Oakley	Oakley Train Station Green Infrastructure Project	Distributed bioretention at a train station and regional infiltration/bioretention basin
Orinda	Orinda Way Green Street Project	Green street
Pittsburg	Americana Storm Drainage Project	Retrofit of an existing detention basin for water quality and bioswales
Richmond	2nd Street Bikeway Project	Green street
San Pablo	Sutter Ave Green Street	Green street
Walnut Creek	Heather Farm Park Retrofit	Distributed bioretention throughout a city park

ES.4 CCW SWRP IMPLEMENTATION

Funding for building projects will be obtained by municipalities, partnerships of agencies, or other stakeholder project sponsors. The TMDL implementation schedules and requirements of the MRP are likely to be the primary driver for municipal decision making regarding funding for GI projects. The MRP's GI planning requirements and the PCBs and mercury TMDL pollutant load reduction schedules will also drive the pace of implementation of the GI projects in the *CCW SWRP*.

The *CCW SWRP* is a living document. As projects are implemented and lessons learned through wider scale integration of GI and other multiple benefit stormwater capture or treatment projects, the *CCW SWRP* will be periodically updated for changing current regulatory requirements and implementation strategies. Updates are expected to coincide with the five-year cycle for reissuance of the MRP. A GIS-based web mapping application will be used to add new multi-benefit stormwater projects to the prioritized project lists. Following the initial publication, the *CCW SWRP* prioritized project opportunity lists will be dynamically updated and maintained in the GIS based web-mapping tool.