

3 Public Project Identification, Prioritization, and Mapping

Element Addresses MRP Provision C.3.j.i.(2)

3.1 Tools for Public Project Identification and Prioritization

Publicly owned parcels and ROWs that could potentially be retrofit to include multi-benefit stormwater capture facilities were identified as part of the Contra Costa Watersheds Stormwater Resource Plan (SWRP) (CCCWP, 2018). These potential project locations were used as the basis for identifying future public retrofit locations within the [permittee area]. A summary of the project identification and prioritization process conducted for the SWRP is described herein; additional details may be found in the SWRP (CCCWP, 2018).

3.1.1 SWRP Project Opportunity Identification

The SWRP identified public retrofit opportunities through a request for planned projects, sent to the Contra Costa County Permittees, along with a geographic information system (GIS)-based project opportunity analysis, conducted using data received from the Permittees through a data request. Information related to the identification of potential projects was received from 25 jurisdictions, government agencies, non-governmental organizations, and watershed groups that were contacted with potential project requests.

The desktop GIS analysis entailed screening for publicly-owned parcels and ROWs without physical feasibility constraints that would preclude implementation of a stormwater capture project. The project opportunity analysis consisted of the following steps:

1. Identify publicly-owned parcels through parcel ownership and/or tax-exempt status.
2. Screen identified publicly-owned parcels to identify those at least 0.1 acres in size; and with average slopes less than 10%.
3. Identify ROW using the county-wide roadway data layer. Roadways considered were state and county highways and connecting roads, as well as local, neighborhood, and rural roads.
4. Identify land uses associated with identified parcels and surrounding identified ROWs with a combination of ABAG land use categories and use codes provided by the Contra Costa County Assessor.
5. Screen all identified locations (i.e., parcels and ROWs) for physical feasibility. The following screening relating to physical constraints was applied to identified sites (to the extent that the necessary data had been provided or obtained):

- a. Regional facilities were not considered for parcels that were greater than 500 feet from a storm drain, due to limited feasibility in treating runoff from a larger drainage area;
- b. Parcel-based facilities were not considered for sites that were more than 50% undeveloped land uses, due to the limited potential for pollutant of concern load reduction;
- c. Parcels with significant drainage area outside of urbanized areas were removed, as these sites would not provide opportunity for significant pollutant of concern load reduction;
- d. Sites more than 50% within environmentally sensitive areas (ESAs) (designated wetlands, biologically sensitive areas) were removed so as not to disturb these habitats;
- e. Sites with more than 50% overlying landslide hazard zones were removed to avoid the potential for increasing landslide risk.

The remaining identified public parcels and ROWs were considered preliminarily feasible for installation of stormwater capture facilities and were analyzed using a metrics-based multi benefit analysis. The results of the metrics-based multi-benefit analysis provided some information helpful for consideration of GI priorities within the [permittee's area]. A summary of the project opportunity classification and scoring conducted for the SWRP is provided in the following section.

3.1.2 SWRP Project Opportunity Metrics-Based Multi-Benefit Analysis

To conduct the SWRP project opportunity metrics-based multi-benefit analysis required as part of the SWRP, additional data was analyzed and classifications were made regarding the project opportunities. First, all project opportunities (i.e., including those identified through the GIS opportunity analysis and the stakeholder potential projects process) were classified using the following information:

1. Stormwater capture project type;
2. Infiltration feasibility;
3. Facility type; and
4. Drainage area information.

Details regarding each of these classifications are provided in the following sections.

Stormwater Capture Project Type

All physically feasible project opportunities that did not include a previously defined non-GI stormwater capture facility (e.g., stream restoration projects provided by Stakeholders as part of the SWRP project request) were assumed to be feasible for GI implementation as part of the SWRP project opportunity classification. The projects identified through the GIS opportunity analysis and stakeholder stormwater capture projects process were categorized as parcel-based, regional, or ROW/green street projects, as summarized in Table Y.

Table Y: Green Infrastructure Project Types and Categorization Criteria

GI Project Type	Definition	Description
ROW/green street projects	Treating the road and portions of adjacent parcels	<ul style="list-style-type: none"> All street-based projects.
Regional Projects	Treating a large area draining to the parcel	<ul style="list-style-type: none"> The parcel contains at least 0.5 acre of undeveloped or pervious area (as identified through the land use class); and The drainage area is larger than the parcel itself and the location is sufficiently close to a storm drain (i.e., within 500 feet, where storm drain pipe data is available).
Parcel-based projects	Treating the drainage area only on the identified parcel	<ul style="list-style-type: none"> All other parcel locations.

Infiltration Feasibility

All SWRP project opportunity locations were categorized as feasible, infeasible, or partially feasible for infiltration, based on underlying hydrologic soil group, depth to groundwater (as data was available), nearby soil or groundwater contamination, and presence of underlying geotechnical hazards, as described in Table X.

Table X: SWRP Project Opportunity Infiltration Feasibility Categorization Criteria

Infiltration Feasibility Category	Description
Hazardous/infeasible for infiltration	Projects that are located: <ul style="list-style-type: none"> More than 50% overlying liquefaction hazards; or Within 100 feet of a site with soil or groundwater contamination (e.g., based on proximity to active GeoTracker¹ or EnviroStor² sites).
Infiltration safe but only partially feasible	None of the above constraints exist, but the soil underlying the facility is relatively poorly draining (identified as hydrologic soil group [HSG] C or D).
Infiltration feasible	The site has none of the infiltration hazards present and the soil underlying the facility is relatively well draining (identified as HSG A or B).

For the purpose of SWRP project opportunity multi-benefit scoring (i.e., the metrics-based analysis conducted), locations feasible for infiltration were assumed to retain the full water quality capture volume. At locations that are partially feasible for infiltration, it was assumed that infiltration would be

¹ GeoTracker is a California State Water Resources Control Board website which tracks sites with the potential to impact water quality in California, including contaminated sites (<https://geotracker.waterboards.ca.gov/>).

² EnviroStor is the Department of Toxic Substances Control's data management system for tracking cleanup, permitting, enforcement and investigation efforts at hazardous waste facilities and sites with known contamination or sites where there may be reasons to investigate further (<https://www.envirostor.dtsc.ca.gov/public/>).

promoted in the facility, but the full water quality capture volume would not be infiltrated due to poor drainage. These areas were assumed to infiltrate to the extent possible using a raised underdrain. Locations that are hazardous for infiltration were assumed to implement non-infiltrating GI projects (i.e., lined bioretention) and were assumed to retain no volume.

SWRP Project Opportunity Facility Type

Each SWRP project opportunity location was assigned a facility type. For potential projects identified by the Permittees and/or stakeholders, a facility type was assigned based on the facility description or classification provided by the agency or project proponent. For project opportunities identified through the GIS analysis, the facility type was assumed to be GI, with infiltration capability defined based on the infiltration feasibility screening. The resulting SWRP multi-benefit stormwater capture project types that were considered for the GI Plan included:

- Capture and Reuse
- Constructed Wetland
- Lined Bioretention
- Unlined Bioretention
- Unlined Swale
- Water Quality Basin
- [Permittee add additional SWRP considered facility types]

SWRP Project Opportunity Drainage Area

For each identified project opportunity, the drainage area was identified and characterized as follows:

1. All project opportunities with identified drainage areas were characterized as provided by project proponents.
2. For ROW project opportunities for which the drainage area had not been characterized, the roadway and an assumed tributary width (e.g., 50 feet per side) that extends into the adjacent parcels was considered the drainage area.
3. For parcel-based project opportunities for which the drainage area had not been characterized, the entire parcel was assumed to make up the drainage area.
4. For regional project opportunities for which the drainage area had not been characterized, the drainage area characterization (i.e., slope and land use) was approximated.

SWRP Project Opportunity Metrics-Based Multi-Benefit Analysis Scoring

Using the information compiled in the identified project opportunity database, each SWRP identified project received a score using a metrics-based multi benefit analysis. A description of each scored project component is provided below:

- Parcel area (for regional and parcel-based GI projects only) - This scoring component awarded more points for larger parcels.
- Slope – This scoring component awarded more points to flatter slopes and is related to ease of construction and implementation.
- Infiltration feasibility – More points were awarded to projects that overlie infiltrating soils.
- PCBs/mercury yield classification in project drainage area – This scoring component is related to the influent TMDL pollutant loads; higher potential load reduction achieved higher points.
- Removes pollutant loads from stormwater – Points were awarded to facilities designed as GI or treatment control facilities for this scoring component.
- Augments water supply – Increasing points were awarded based on potential water supply provided for this scoring component.
- Provides flood control benefits – Flood control facilities received points specific to providing flood control benefits for this scoring component.
- Re-establishes natural water drainage systems or develops, restores, or enhances habitat and open space – Hydromodification control, stream restoration, and habitat restoration projects received points specific to providing these environmental benefits, for this scoring component.
- Provides community enhancement and engagement – Projects that specifically provide public use areas or public education components with potential opportunities for community engagement and involvement were given points specific to providing community benefits, for this scoring component.

All classified and scored SWRP projects were compiled into a master database as part of the SWRP and organized by Permittee. The SWRP identified projects located within the [permittee's] jurisdictional boundary were provided to the [permittee] for review. The project classification information and SWRP score were provided to the [permittee] for informational purposes.

5 Tracking and Mapping Public and Private Projects Over Time

Element Addresses Provision C.3.j.iv.

5.1 Tools and Process

The CCCWP has developed a county-wide GIS platform for maintaining, analyzing, displaying, and reporting relevant municipal stormwater program data and information related to MRP Provisions C.10 (trash load reduction activities) and C.11/C.12 (mercury and PCBs source property identification and abatement screening activities). This tool is also used to track and report on GI project implementation.

The CCCWP's stormwater GIS platform features web maps and applications created using ESRI's ArcGIS Online (AGOL) for Organizations environment, which accesses GIS data, custom web services and reports that are hosted within an Amazon cloud service running ESRI's ArcGIS Server technology.

The *C.3 Project Tracking and Load Reduction Accounting Tool* within the CCCWP AGOL system is used to track and report on GI project implementation. It is currently used to track and map existing private and public projects incorporating GI; in the future it may also be used to map planned projects and will allow for ongoing review of opportunities for incorporating GI into existing and planned CIPs. The AGOL system can be used to develop maps that can be displayed on public-facing websites or distributed to the public. These maps can be developed to contain information regarding the GI project data input into the AGOL system.

The *C.3 Project Tracking and Load Reduction Accounting Tool* is intended to be used to allow for estimates of potential project load reduction for PCBs and mercury and presently supports the BASMAA Interim Accounting Methodology for certain load reduction activities. In the future, the tool is planned to be updated with the RAA methodology developed for the County. That functionality is planned to be active by the end of the current permit term.

The [permittee] actively engages with the AGOL tool and maintains up-to-date [permittee] project data. The [permittee] currently conducts updates of the AGOL tool at an XX frequency.