Safe Clean Water Program

Minimum Feasibility Study Requirements for the Scoring and Consideration of Regional Infrastructure Program Projects

1.0 Background

The objective of the Regional Infrastructure Program is to plan, build, and maintain multi-benefit watershed-based projects that improve water quality and increase water supply and/or enhance communities. A feasibility study is required before a project can be submitted for consideration by the Watershed Area Steering Committee (WASC) and scoring by the Scoring Committee.

A feasibility study is a detailed technical investigation and report used to determine the feasibility of a project. A feasibility study being proposed through the Safe Clean Water (SCW) Program's regional Infrastructure Program must meet the minimum requirements provided in this document to be eligible for consideration and scoring. This document may be periodically updated and expanded upon to provide additional requirements, or to incorporate changes in the state of the science.

If a project does not yet have a feasibility study or functionally equivalent feasibility study level information (see Section 5.0), WASCs may decide to dedicate funds for advancing a concept into a fully developed feasibility study through the Technical Resources Program. The District will provide technical assistance teams to complete the feasibility studies in partnership with and on behalf of municipalities, CBOs, NGOs, and others who may not have the technical resources or capabilities to develop feasibility studies. Each WASC will determine whether a submitted feasibility study is complete and therefore eligible to be sent to the Scoring Committee.

The requirements below are to be used in context with the Project Scoring Criteria (Exhibit A) and the SCW Regional Projects Module (Exhibit B) described in Section 4.0 below.

2.0 Requirements

Prior to feasibility study development and on a routine basis, each WASC is encouraged to collaboratively prioritize needs within the watershed, discuss preliminary concepts to address those needs, and strategically plan to package projects that meet multiple needs in the most efficient fashion. A feasibility study is required before a project can be submitted for consideration, scoring, and potential incorporation into a recommended Stormwater Investment Plan). At a minimum, a feasibility study must include:

1. A description of the project details, including:
    - A summary of the project's primary objective(s), secondary objective(s), and any additional objective(s).
    - A description of the primary mechanisms by which the project will achieve its objectives (e.g., runoff and/or pollutant reduction through infiltration, treat and release, capture and use, etc).
    - A description and schematic of the project layout including its anticipated footprint and key components such as inlet, outlet, diversion point, recreational components, nature-based components, pumps, treatment facilities, underdrains, conveyance, and others.

- An outline of the capture area for the project on a map and a breakdown of acreage, land uses and percent imperviousness within the capture area.
- Land ownership and related rights of way.

2. A description and estimate of the benefits provided (determined through best engineering estimates and modeling as appropriate). More information on how to estimate project benefits are provided in Section 3.0.
3. An estimated schedule to design, permit, construct, operate and maintain the project
4. A review of the effectiveness of similar types of projects already constructed if applicable
5. A monitoring plan to measure the effectiveness of the proposed project once completed, including metrics specific to the identified benefits.
6. A lifecycle cost estimate and schedule required to design, permit, construct, operate and maintain the project.
    - Life-cycle costs will contain project costs including but not be limited to: early concept design, pre-project monitoring, feasibility study development, site investigations, formal project design, intermediate and project completion audits, CEQA and other environmental impact studies, land acquisition, permitting, construction, full lifetime operations and maintenance, monitoring, etc. The only costs not included in total life-cycle cost are the dismantling and replacement costs at the end of life.
    - The Water supply benefit section uses Life-cycle costs life-cycle costs for scoring purposes; however, life-cycle costs and estimates are required for all projects regardless if they claim water supply benefits.
7. A plan for how operations and maintenance will be carried out. The plan should include but not be limited to: estimated annual costs associated with maintenance (including: estimates for number of crew required, hours of maintenance per month/year, the staff expertise level, projections of maintenance cost increases over the life of the project); how project maintenance will accommodate Project Labor Agreement (PLA) considerations (if applicable); and responsible party that has agreed to perform the identified operations and maintenance
8. An engineering analysis of the proposed project (e.g., estimates of site conditions, soil sampling, preliminary hydrology report, site layout, utility search, environmental impacts, pertinent historical background for site location, etc.).
    - The minimum requirements for engineering analysis will depend largely on the type of project.
    - Engineering analysis should at a minimum be able to support all benefits claimed.
    - It is understood that not all projects will have completed CEQA and other environmental studies, so estimates and engineering analyses do not have to be as comprehensive as a full CEQA or other environmental study (unless those studies have already been carried out and available to support the project).
9. An assessment of potential CEQA and permitting challenges and associated time requirements and costs

10. For non-municipal project applicant/developers (if applicable), an initial letter of support for the project that includes concurrence on proposed operations and maintenance plan and the responsible party.
11. A plan for outreach/engagement to solicit, address, and incorporate stakeholder input on the project. The project outreach/engagement effort should include considerations related to displacement and gentrification.
12. Identify if utilizing funds from Measure A. If so, acknowledge that the project will be fully subject to and comply with the displacement policies associated with Measure A.
13. A plan to incorporate vector minimization into the project design, operations, and maintenance.
14. Discussion identifying how nature-based solutions were either utilized to the maximum extent feasible or otherwise considered but not included.
15. A summary of any legal requirements or obligations that may arise as a result of constructing the project, and how those requirements will be satisfied.
16. For projects involving LA County Flood Control District (LACFCD) infrastructure, facilities, or right-of-way, provide confirmation of conceptual approval from LACFCD.
17. Acknowledgment of eligible expenditures being only those incurred after November 7, 2018.

It is the intent of the feasibility study to provide enough information about a potential project to allow the Watershed Area Steering Committee members to make an informed decision for which projects should move forward for funding. The feasibility study should provide enough information or estimates to allow each project to be scored through the 110-point Infrastructure Program Project Scoring Criteria (Exhibit A).

3.0 Estimating Score-Based Benefits

To the extent possible, feasibility studies should provide estimates for the benefits provided by each project. These include water quality, water supply, and community investment benefits as well as a characterization of any nature-based solutions employed by the project, and how a project may be leveraging funds and engaging the public.

Additional information for characterization of benefits are provided in the following subsections.

3.1 Water Quality Benefits

The score for water quality is broken into two separate tracks, wet weather projects and dry weather projects. Only one track may be used for the purposes of scoring. Any project may utilize the wet weather scoring section; however, only projects designed for 0.25-inch rain events or below may utilize the dry weather scoring section. For Water Quality scoring, the management of stormwater includes activities that capture, infiltrate, divert, or treat and release stormwater or urban runoff.

At a minimum for scoring purposes, a feasibility study should be able to provide an estimate of the following:

Wet Weather (all projects, 0-inch storms and above)

- The design 24-hour BMP capacity volume, including a breakdown of the capacity volume calculation such as project storage capacity, estimated infiltration rate (if applicable), footprint area, etc (i.e., typically the 85^{th} percentile, 24-hour capacity).
- The capital cost of the project
- Description of the diversion structure for the project (if applicable), diversion rate(s) and conditions when diversion would and would not occur
- Assessment of any available/anticipated monitoring data collected for the project
- Assessment of anticipated event-based project performance (e.g., during the project's 24-hour design condition) including a breakdown of the following:
    - Estimated peak inflow rate and total inflow volume
    - Estimated portion of the peak inflow that would be retained by the project through infiltration, capture, diversion, use, or other means
    - Estimated outflow from the project and bypassed flow with a breakdown of the portion released from each outlet (if applicable) and portion of the outflow through each outlet that would be treated, untreated and mechanism of treatment
    - Estimated primary and secondary pollutant concentrations in the inflow to the project
    - Estimated primary and secondary pollutant concentrations in the outflow from each outlet of the project (if applicable)
    - Flow and pollutant balance based on the estimates above including calculations of the pre- and post-project flows, pollutant loads and concentrations and resulting reductions of each
    - If the project is not inline (e.g., has a diversion structure), estimated portion of the flow volume at the diversion structure that would bypass/not be captured
    - Citations or description of methods to generate the estimates above
- Through modeling (or another similar approach with justification provided) an assessment of the long-term pollutant reduction benefit of the project for the applicable primary and secondary pollutants. Modeling should use a similar process to the E/WMPs (e.g. Watershed Management Modeling System, WMMS). Analysis should calculate the pollutant reduction of the project over the most recently available 10-year period by comparing influent and effluent flows, concentrations and loads. Results should incorporate the latest applicable performance data to reflect the efficiency of the BMP type. Modeling results can be based on the best-case reduction among the pollutants in each class. The method to evaluate pollutant reduction should be expressed as a percentage and be consistent with the applicable TMDLs and E/WMPs for the pollutants in the project's watershed, and the analysis should include justification of the selected Method. The following table shows the potential modeling metrics for analysis of long-term pollutant reduction benefit.

		Pick Any One Primary Pollutant Class and Any One Secondary Pollutant Class		
Pollutant Class	**Pollutant Name**	**Method 1 (% Concentration Reduction)**	**Method 2 (% Load Reduction)**	**Method 3 (% Exceedance Day Reduction)**
Primary or Secondary	Bacteria	✓	✓	✓
	Metals	✓	✓	
	Toxics		✓	
	Nutrients	✓	✓	
	Chloride	✓	✓	
Secondary	Trash		✓	✓
	Bacteria	✓	✓	✓
	Metals	✓	✓	
	Toxics		✓	
	Nutrients	✓	✓	
	Chloride	✓	✓	

Notes:
-The Secondary Pollutant Class includes all primary pollutants with the addition of trash (NOTE: the primary pollutant class cannot be the same as the secondary pollutant class).
-Primary and secondary pollutants are pollutants subject to TMDLs for the nearby downstream receiving waters of the project.
-Secondary pollutants may also include 303(d)-listed pollutants and pollutants that have been subject to exceedances during recent monitoring programs.
-Trash is not considered a valid primary pollutant. For estimate of trash reduction, the analysis can demonstrate equivalence with the Full Capture System definition for 100% reduction.

<u>**Dry Weather (Only projects designed for 0.25-inch storms and below)**</u>

- Justification (with or without modeling) showing that the project is designed to capture, infiltrate, divert, or treat and release 100% of all tributary dry weather flows at the site location.
- Description of the method used to estimate dry weather flows at the site location

3.2 Water Supply Benefits

At a minimum for scoring purposes, a feasibility Study should be able to provide the following:

- Through modeling, or other similar approach with justification, provide the annual average amount of stormwater or urban runoff captured by the project **for reuse**.
  - Stormwater that is treated and released to the receiving water is not to be considered as stormwater reuse.
  - For projects that treat and use stormwater to directly offset potable water use through irrigation or similar means, projections of the irrigation demand and use should be provided.
  - The estimate of annual average capture should account for the inflow to the project from the project capture area, the storage of the project, and the overflow/bypass during storm events (when capacity is exceeded).
  - The annual average estimate should clearly document the basis for the annual average precipitation/hydrology (e.g., whether a specific year was used as a representative average year with justification, or whether the long-term average was calculated across many years). A minimum of 20-years should be used for the annual average calculations.
  - Diverted stormwater and urban runoff can include, but not be limited to, water diverted to a separate groundwater recharge facility, into a water treatment plant, to a sanitary sewer to be converted into recycled water, etc. Demonstrate that the diverted water would not otherwise be diverted/captured downstream.
  - Identify whether and how the 85th percentile is being captured/diverted. If not, is there opportunity to do so? If feasible but not incorporated, explain why. If not feasible, explain why.

- Through modeling, or other similar approach with justification, provide the annual average amount of stormwater or urban runoff captured by the project to augment water supplies, whether infiltrated or diverted (such as to a spreading facility or to a sanitary sewer for recycled water).
  - Projects should specify and justify whether supply benefit claimed is for offsetting potable demand, increasing water supply, or both (and how). Since not all re-use offsets demand (especially if the project creates new demand), provide any analysis of supply and demand impacts when claiming an offset of potable demand.
  - Projects claiming an increase in water supply through soil infiltration should provide engineering estimates and justification that the water is reaching a usable groundwater aquifer. Projects capturing water that would otherwise end up at an LACFCD spreading grounds downstream of the project should not claim an increase in water supply. If augmenting supply in a managed aquifer, provide confirmation that the agency managing the groundwater basin concurs with the added benefit.
  - Stormwater that is treated and released to the receiving water is not to be considered as augmented water supply.

- For projects that treat and use stormwater to directly offset potable water use through irrigation or similar means, projections of the irrigation demand and use should be provided.
- The estimate of annual average capture should account for the inflow to the project from the project capture area, the storage of the project, and the overflow/bypass during storm events (when capacity is exceeded).
- The annual average estimate should clearly document the basis for the annual average precipitation/hydrology (e.g., whether a specific year was used as a representative average year with justification, or whether the long-term average was calculated across many years). A minimum of 20-years should be used for the annual average calculations.
- Diverted stormwater and urban runoff can include, but not be limited to, water diverted to a separate groundwater recharge facility, into a water treatment plant, to a sanitary sewer to be converted into recycled water, etc. Demonstrate that the diverted water would not otherwise be diverted/captured downstream.
- Identify whether and how the 85^{th} percentile is being captured/diverted. If not, is there opportunity to do so? If feasible but not incorporated, explain why. If not feasible, explain why.

- The nexus between water supply and the stormwater that is captured/infiltrated/diverted by the project should be clearly documented and justified.
- Total life-cycle cost of the project based on annualized value. (See section 2.0 Requirements)

3.3 Community Investment Benefits

For scoring purposes, a feasibility study should be able to provide the following, if applicable:

- Justification for how the project will improve flood management, flood conveyance, or flood risk mitigation.
- Justification for how the project will create, enhance, or restore park space, habitat, or wetland space.
- Justification for how the project will improve public access to waterways.
- Justification for how the project will enhance or create new recreational opportunities.
- Justification for how the project will create or enhance green spaces at schools.
- Justification for how the project will improve public health by reducing local heat island effect and increase shade.
- Justification for how the project will improve public health by increasing the number of trees and/or other vegetation at the site location that will increase carbon reduction/sequestration and improve air quality.

3.4 Nature-Based Solutions

For scoring purposes, a feasibility study should be able to provide the following, if applicable:

- Justification for how the project will implement or mimic natural processes to slow, detain, capture, and absorb/infiltrate water in a manner that protects, enhances or restores habitat, green space or usable open space
- Provide justification for how the project will utilizes natural materials such as soils and vegetation with a preference for native vegetation
- An engineering estimate for how much impermeable area is removed after the construction of the project. Compares the impermeable area of the site to before construction to now after the project is completed.

3.5 Leveraging Funds and Community Support

For scoring purposes, a feasibility study should be able to provide the following, if applicable:

- Existing agreements, MOUs, grant awards, or other secured funding documentation for how other funds are being leveraged to finance the project. This may include leveraged municipal funds from the SCW Municipal Program.
- Either a plan or existing justification for how the project demonstrates strong local, community-based support or has been developed as part of a partnership with local non-governmental organizations, community-based organizations, and others.

4.0 Feasibility Study and SCW Regional Projects Module

Exhibit B is a representation of the online SCW Regional Projects Module available at XXXXXX. This interactive tool guides the user through the process of inputting all necessary project data (for a feasibility study or otherwise) as well as data required for scoring by the Scoring Committee. It effectively represents a template for feasibility studies and incorporates all required information called out in this Feasibility Study Requirements document. A complete submission will be equivalent to a feasibility study upon confirmation from the WASCs. Each user will have the ability to estimate their score and/or modify the project inputs before submitting a feasibility study or project.

The Scoring Committee will use the same tool to validate information and generate an official score for WASC consideration. All feasibility studies and projects that are deemed complete and requested to be scored by the Scoring Committee will be preserved in the SCW Regional Projects Module.

5.0 Functional Equivalence

Projects that are already developed (e.g., an EWMP project that is ready for construction but is awaiting funding) may have equivalent feasibility study level information in part or in full. If all requirements in this document are satisfied in another document for a given project, that document shall be considered functionally equivalent to a feasibility study. Those projects with functionally equivalent feasibility study-level information for all requirements will not need to develop an additional feasibility study. Projects with functionally equivalent feasibility study-level information for only certain requirements will need to supplement that information with all remaining required information detailed herein.

Project applicants with functional equivalent projects will still need to enter their equivalent project level information into the SCW Regional Projects Module for scoring purposes using the Infrastructure Program Project Scoring Criteria.

Exhibit A – Infrastructure Program Project Scoring Criteria

Section	Score Range	Scoring Standards
A.1 **Wet Weather Water Quality Benefits**	50 points max	The Project provides water quality benefits
	20 points max	A.1.1: For Wet Weather BMPs Only: Water Quality Cost Effectiveness (Cost Effectiveness) = (24-hour BMP Capacity)[1] / (Capital Cost in $Millions) • <0.4 (acre feet capacity / $-Million) = 0 points • 0.4-0.6 (acre feet capacity / $-Million) = 7 points • 0.6-0.8 (acre feet capacity / $-Million) = 11 points • 0.8-1.0 (acre feet capacity / $-Million) = 14 points • >1.0 (acre feet capacity / $-Million) = 20 points *[1]. Management of the 24-hour event is considered the maximum capacity of a Project for a 24-hour period. For water quality focused Projects, this would typically be the 85th percentile design storm capacity. Units are in acre-feet (AF).*
- OR -	30 points max	A.1.2: For Wet Weather BMPs Only: Water Quality Benefit - Quantify the pollutant reduction (i.e. concentration, load, exceedance day, etc.) for a class of pollutants using a similar analysis as the E/WMP which uses the Districts Watershed Management Modeling System (WMMS). The analysis should be an average percent reduction comparing influent and effluent for the class of pollutant over a ten-year period showing the impact of the Project. Modeling should include the latest performance data to reflect the efficiency of the BMP type. <u>Primary Class of Pollutants</u> • >50% = 15 points • >80%= 20 points *(20 Points Max)* <u>Second or More Classes of Pollutant</u> • >50% = 5 points • >80%= 10 points (10 Points Max)
A.2 **Dry Weather Water Quality Benefits**	20 points	A.2.1: For dry weather BMPs only, Projects must be designed to capture, infiltrate, treat and release, or divert 100% of all tributary dry weather flows.
	20 points max	A.2.2: For Dry Weather BMPs Only. Tributary Size of the Dry Weather BMP • <200 Acres = 10 points • >200 Acres = 20 points
B. **Significant Water Supply Benefits**	25 points max	The Project provides water re-use and/or water supply enhancement benefits
	13 points max	B1. Water Supply Cost Effectiveness. The Total Life-Cycle Cost[2] per unit of acre foot of Stormwater and/or Urban Runoff volume captured for water supply is: • >$2500/ac-ft = 0 points • $2,000–2,500/ac-ft = 3 points • $1500-2,000/ac-ft = 6 points • $1000–1500/ac-ft = 10 points • <$1000/ac-ft = 13 points *[2]. Total Life-Cycle Cost: The annualized value of all Capital, planning, design, land acquisition, construction, and total life O&M costs for the Project for the entire life span of the Project (e.g. 50-year design life span should account for 50-years of O&M). The annualized cost is used over the present value to provide a preference to Projects with longer life spans.*
	12 points max	B2. Water Supply Benefit Magnitude. The yearly additional water supply volume resulting from the Project is: • <25 ac-ft/year = 0 points • 25 - 100 ac-ft/year = 2 points • 100 - 200 ac-ft/year = 5 points • 200 - 300 ac-ft/year = 9 points • >300 ac-ft/year = 12 points

Section	Score Range	Scoring Standards
C. Community Investments Benefits	10 points max	The Project provides Community Investment Benefits
	10 points	C1. Project includes: • One of the Community Investment Benefits identified below = 2 points • Four distinct Community Investment Benefits identified below = 5 points • Seven distinct Community Investment Benefits identified below = 10 points Community Investment Benefits include: • Improved flood management, flood conveyance, or flood risk mitigation • Creation, enhancement, or restoration of parks, habitat, or wetlands • Improved public access to waterways • Enhanced or new recreational opportunities • Greening of schools • Reducing local heat island effect and increasing shade Increasing the number of trees increase and/or other vegetation at the site location that will increase carbon reduction/sequestration and improve air quality.
D. Nature-Based Solutions	15 points max	The Project implements Nature-Based Solutions
	15 points	D1. Project: • Implements natural processes or mimics natural processes to slow, detain, capture, and absorb/infiltrate water in a manner that protects, enhances and/or restores habitat, green space and/or usable open space = 5 points • Utilizes natural materials such as soils and vegetation with a preference for native vegetation = 5 points • Removes Impermeable Area from Project (1 point per 20% paved area removed) = 5 points
E. Leveraging Funds and Community Support	10 points max	The Project achieves one or more of the following:
	6 points max	E1. Cost-Share. Additional Funding has been awarded for the Project. • >25% Funding Matched = 3 points • >50% Funding Matched = 6 points
	4 points	E2. The Project demonstrates strong local, community-based support and/or has been developed as part of a partnership with local NGOs/CBOs.
Total	Total Points All Sections 110	