

**RECOMMENDATIONS FOR PREPARING THE
CLEAN WATER STATE REVOLVING FUND (CWSRF)
PLAN OF STUDY**



Clean Water
State Revolving Fund

March 25, 2021

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This document provides recommendations for preparing a Plan of Study as part of the Clean Water State Revolving Fund Planning application. Not all items listed in this recommendation paper are required; however, providing as much information as possible will assist in the processing of the application and the identification of possible funding sources.

1. Overview

- Provide a summary of the project, applicant name, and project area
- Describe the problem or reason for the project (e.g., water quality, infiltration/inflow (I/I), overflows, public health)
- Explain any geographic, demographics, political, industrial, or environmental considerations that could affect the project
- If the project will be co-funded or considered for co-funding, explain the status of all other sources of funding and the amounts
- Briefly describe any relevant violations, enforcement actions, and/or other orders from the applicant's Regional Water Quality Control Board (Regional Board) or any other agencies, the status of those violations/orders and explain how the project will address them. Provide an explanation if any outstanding violations and/or enforcement orders will not be addressed by the project.
- Describe any conversations the applicant has had with the Regional Board regarding the project and/or planning application
- Describe any previous projects performed with state or federal grant funding
- Describe previous efforts in support of the project and project alternatives

2. System Information

2.1. General

- ◆ Include the following numbers
- ◆ Active service connections by type (Residential, commercial, industrial, other)
 - Estimated population served by system
 - Estimated number of households served
 - Estimated number of second homes
 - Estimated population served by project
 - Estimated number of new customers that will be added because of the project (If none, mention that no new customers will be added)
- ◆ Provide other relevant background information
- ◆ Describe any industrial flows or unique wastewater properties
- ◆ Describe any violations, enforcement actions, and/or other orders from the Regional Board, the status of those violations/orders and explain how the project will address them (This section should include more detail than in the overview)
- ◆ Describe consolidation and regionalization options and considerations, and any efforts made for consolidation/regionalization

2.2. Collection System

- ◆ Describe the lift stations, including number, age, condition, etc.
- ◆ Describe the system pipes, including lengths, sizes, materials, age, flow (if known), etc.
- ◆ Summarize the results of any inspections or studies (Closed Circuit Television (CCTV), I/I), etc.).
- ◆ Describe any issues with access, easements, or private laterals, or any legal issues that could impact the project

2.3. System Map

- ◆ Include a map of the system showing system boundaries, roads, etc.

Figure 1. System Map with Service Area Boundaries

2.4. Treatment Facilities

- ◆ Provide a general summary of treatment facilities (Process/technologies employed, age, condition, permitted treatment capacity, etc.)
 - If a new treatment capacity is anticipated, include the new capacity and how those projections were determined
- ◆ For septic to sewer projects, describe anticipated wastewater flows
- ◆ Describe the current discharge locations and explain if new discharge locations are anticipated
- ◆ If water is being re-used, describe the relevant requirements
- ◆ Include a diagram/map of the treatment facilities, if available

2.5. Treatment Facility Map

- ◆ Include a map of the Treatment Facility

Figure 2. Treatment Facility Map

2.6. Project Area Onsite Wastewater Treatment Systems (OWTS)

- ◆ Provide a general summary of the OWTS in the project area, including general conditions, number of OWTS to be evaluated for local treatment or connection to an existing or new wastewater treatment system
- ◆ Describe community engagement, surveys of residents, feasibility, homeowner's willingness to pay rates, and/or previous efforts to implement project
- ◆ Describe existing wastewater treatment systems near the project area, including distances from project area to the existing collection systems, treatment facilities, and the treatment/conveyance capacity of those systems

3. Project Information

3.1. Project Details

- ◆ Provide an in-depth explanation of the project purpose
 - Explain any water quality or public health problems that will be addressed
 - Provide details if the project is a result of enforcement orders or violations
 - Provide the reasons for upgrades/replacement/rehabilitation
- ◆ Describe previous project related work performed, including work with state or federal agencies, technical assistance providers, or other non-profit organizations (examples include application assistance, income survey, rate studies, etc.)
- ◆ If there is an urgency, explain the targeted timeframe and factors affecting project timeline.
- ◆ Describe any previous attempts to address issues. For example, summarize previous feasibility studies, environmental reviews, in-depth technical analysis etc.
- ◆ Describe project alternatives to be considered
- ◆ Describe possible environmental documents required
- ◆ Describe possible land acquisition / easement documents required
- ◆ List proposed construction items to be evaluated (included in Table 1) – Including how the components will contribute to improving public health, water quality, system reliability, addressing violations, etc.
- ◆ For septic to sewer projects:
 - Provide a brief analysis of project alternatives including connecting to an existing sewer system, local treatment, and septic replacement, if feasible.
 - Provide rough construction cost estimates for project alternatives, including cost per connection. (Estimates to be in the range of millions, i.e. \$2-3 million to replace existing OWTS, \$5-8 million to construct a collection system and treatment facility)

Table 1. Construction items to be evaluated and issues addressed (Example)

Proposed Solution	Issue/Violations/Enforcement Orders Addressed
Septic to Sewer	Reduce impact to groundwater and surface water, address prohibition order from Regional Board or County (Water quality)
New oxidation ditch	Capacity / Treatment Effectiveness (Water quality, treatment capacity), Address Enforcement Order #
Replace aging pipes	Reduce I&I, Preventative (System reliability, water quality)
Rehabilitate aging pipes	Reduce I&I, Preventative (System reliability, water quality)
Rehabilitate manholes	Deteriorating condition (System reliability, water quality)
Increase size of force main	Reduction of Sewer Overflows (Water quality)
Increase lift station pump size	Reduction of Sewer Overflows (Water quality)
Install generator	No backup power currently exists (System reliability)

3.2. Scope of Work

List each task to be performed and provide a brief explanation of how each task will support the planning/design of a construction project. **Clearly identify deliverables for each task.** An example write-up:

- ◆ Project Report – A project report will be created by a professional engineer that will satisfy the requirements of the Clean Water State Revolving Fund (CWSRF) construction funding application. The project report will investigate current system conditions, project alternatives, project feasibility, identify the preferred project alternative, and identify required environmental and design work.
 - Deliverable: Draft and Final Project Report

Examples of additional tasks

- ◆ Inflow & Infiltration (I&I) Study
- ◆ 30% Plans and Specifications
- ◆ 60% Plans and Specifications
- ◆ 90% Plans and Specifications
- ◆ Rate Study
- ◆ Income Survey
- ◆ Memorandum of Understanding or Consolidation Agreement (for septic to sewer projects connecting to an existing system)
- ◆ Land acquisition / easements documents
- ◆ Formation of Assessment Districts
- ◆ Assistance with financial documents and fiscal controls
- ◆ CEQA documents
- ◆ Environmental federal cross-cutters documents
- ◆ Environmental permit drafts
- ◆ Fiscal Sustainability Plan
- ◆ CWSRF Planning Funding Application

- ◆ CWSRF Construction Funding Application
- ◆ Project administration
- ◆ Mapping/surveying

3.3. Budget

Provide an estimated cost for each task included in the scope of work. An example is provided below.

Table 2. Planning Cost Estimates (Example)

Task	Estimated Cost
Project Administration	\$ xxx
Plan of Study / Planning Application	\$ xxx
Infiltration & Inflow Study	\$ xxx
CCTV Inspection	\$ xxx
Master Sewer Plan Update	\$ xxx
Project Report	\$ xxx
Survey/Mapping	\$ xxx
30% Engineering Design & Specifications	\$ xxx
60% Engineering Design & Specifications	\$ xxx
Rate Study / Proposition 218 Hearing	\$ xxx
CEQA Documentation	\$ xxx
Environmental Federal Cross-Cutter Documents	\$ xxx
Fiscal Sustainability Plan	\$ xxx
Drafts of Required Permits	\$ xxx
Right-of-Way Acquisition / Easement Documentation/Planning	\$ xxx
CWSRF Construction Funding Application	\$ xxx
Total Estimated Project Cost	\$ xxx

3.4. Schedule

Provide an estimated project schedule using the date of agreement execution as the start date.

Table 3. Planning Deliverable Schedule (Example)

Task	Estimated Start	Estimated Draft Submittal	Estimated Final Submittal
Plan of Study / Planning Application	N/A	N/A	N/A
CCTV Inspection	0 months	N/A	4 months
Infiltration & Inflow Study	0 months	N/A	6 months
Master Sewer Plan Update	0 months	10 months	12 months
Project Report	6 months	18 months	21 months
Survey/Mapping	12 months	N/A	16 months
30% Engineering Design & Specs	21 months	N/A	26 months
60% Engineering Design & Specs	26 months	N/A	32 months
Rate Study / Proposition 218 Hearing	26 months	30 months	36 months
CEQA Documentation	26 months	30 months	36 months
Environmental Federal Cross-Cutter Documents	26 months	30 months	36 months
Fiscal Sustainability Plan	26 months	N/A	32 Months
Drafts of Required Permits	26 months	N/A	36 months
Right-of-Way Acquisition / Easement Documentation/Planning	26 months	N/A	32 months
CWSRF Construction Funding Application	30 months	N/A	36 months
Status Reports	Quarterly		

Note: All durations are based on elapsed months following an executed agreement.