



**PROPOSITION 84, SECTION 75022**  
**The Safe Drinking Water, Water Quality and Supply, Flood Control,**  
**River and Coastal Protection Bond Act of 2006**

**TECHNICAL REPORT GUIDELINES**

The Proposition 84 (Prop 84) funding application must be accompanied by either a feasibility study or a construction project technical report to allow CDPH to determine the eligible project components and associated costs. These guidelines will assist the applicant in preparing an acceptable technical report. Small public water systems should contact their CDPH District Office before completing this section. CDPH will provide assistance to small public water systems in the preparation of the technical report.

The technical report must be prepared by a qualified, experienced professional. The expertise required of the preparer, and the level of detail required in the report, depends upon the type of project. For a treatment plant or large capacity/complex infrastructure project, the report should be prepared by a professional engineer experienced in water system design. For a simple project, such as the installation or replacement of a pump, construction of a simple intertie, or pipeline replacement, the report may be prepared by a professional with experience in the proposed technology or facilities.

The technical report is an important part of the application and contains most of the technical information needed to process the application. If some of the information has been described in another document such as an engineering report or feasibility study, refer to that document in the application and attach a copy.

Contact the CDPH Prop 84 Funding Program or your local CDPH District Office for additional guidance.

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**A. WATER SYSTEM INFORMATION**

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1. Describe the current state of the public water system and its facilities. Include sources, storage, treatment, and the distribution system. Specify capacities, sizing, types, and treatment techniques.
2. Describe the project location. Include the county, a general description of the vicinity, the street address, and the Township, Range, and Section (TRS). Also describe the zoning designation at the project site.

The TRS is used for recording environmental documentation and can be from a USGS topographic map available from many internet resources or through the USGS at: <http://www.usgs.gov/>

**Attach maps to the technical report that show:**

- ***Existing service area***

A map or drawing must be included in the report that shows the location of key facilities of the existing system (e.g. sources, treatment units, reservoirs, storage tanks, and primary distribution mains)

The map must identify and delineate the service area of the public water system. This information is used for purposes of project affordability, identifying disadvantaged community boundaries, and other factors. For municipal systems, the service area is likely to be the city or town limits, in which case a map showing those limits is sufficient. Some large special districts may include more than one public water system within their legal district boundary. The service area in this case should be the area served by the specific permitted public

water system rather than the overall district boundary. For community public water systems that do not have a specified legal boundary, the service area should be described as that area served by the existing distribution system.

If the boundaries of the public water system extend beyond the area served by the existing distribution system, the location of the current distribution system within those overall boundaries should be shown on the service area map.

- ***Location of proposed new facilities***

A map or drawing must be included in the report that shows the location of the proposed new facilities.

- ***Topography with proposed facilities (for environmental review)***

A topographic map of the project area is required for environmental review

- ***Site Plan***

The site plan may be shown on a topographic map and one map can fulfill both requirements. Alternatively, the site plan may be included in the map of the service area boundaries and a topographic map could be separate.

- ***Location, size, and purpose of each parcel of land to be purchased (if applicable)***

If the purchase of land will be included in the application for funding, the size, location, and purpose of each parcel must be shown or described.

3. Select the agency that has jurisdiction over your water system. CDPH or Local Primacy Agency (LPA). If the water system is LPA regulated, identify the County that has jurisdiction.
4. Provide the public water system permit number, status, and any amendments including dates.

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## **B. PROBLEM DESCRIPTION**

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1. Provide a detailed description of the public water system problem(s) to be addressed by this project. Identify the drinking water standards, regulations, and/or CDPH directives that are being violated. Do not describe all of the problems in the system. Only describe the problem(s) for which the project was ranked on the Project Priority List.

***To be considered eligible for funding, all elements or components of the proposed project must be directly related to the ranked problem.***

2. Attach supporting documents to verify the problem still exists. Acceptable documents include the last two years of water quality data, most recent compliance order, or other type of enforcement action.
3. If the project has changed from what was originally identified in the pre-application, please provide a detailed description of the new project. If the project has not changed, indicate that it has not changed.

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## **C. ALTERNATIVE SOLUTIONS**

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1. It is essential that all feasible alternatives should be evaluated. For example, if the problem is a contaminated well, alternatives may include drilling a new well, installing treatment on the existing well, blending the water with other uncontaminated sources, purchasing water from another system, or abandoning the source and physically consolidating with an adjacent water system. Alternatives that are obviously not feasible for economic or physical reasons do not have to be evaluated (this

does not apply to consolidation alternatives). An alternative should not be discarded for political reasons (e.g. simply because the adjacent system is not interested in consolidating).

In evaluating and discussing the feasibility of each alternative, the report should include cost estimates, cost comparisons, effectiveness and reliability of the alternatives. The cost estimates may be based on “typical” construction costs, use of existing examples, or application of best engineering judgment. Both initial capital costs and operation and maintenance costs (over the useful life of the facilities) should be evaluated.

The selected alternative will be based primarily on cost effectiveness. Preference is given to the project alternative that achieves an acceptable result at the least cost.

2. Each applicant is required to fully evaluate consolidation as a project alternative. “Consolidation” with respect to the technical report means physically combining two or more systems into one system with the elimination of the other merged system(s) as separate water systems. Consolidation needs to be evaluated only with other systems that are in reasonably close proximity and which could be inter-connected by pipelines where the physical terrain makes this feasible. After evaluation, consolidation may be deemed a non-viable alternative due to costs, physical factors, or limitations of the adjacent public water system. If consolidation is determined to be infeasible, the reasons for that determination must be described. For example, the adjacent public water system may not have sufficient water to serve the combined systems, or may not have adequate operational or managerial capacity, or may simply refuse to consolidate. If consolidation appears to be a cost-effective solution but the other public water system refuses to agree to the consolidation, the applicant needs to include a letter from that public water system confirming their refusal.

**If the system is consolidating or interconnecting please see the attached Prop 84 Guidelines for Consolidation Projects for more information.**

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#### **D. SELECTED PROJECT ALTERNATIVE**

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1. Funds may be provided for the most cost-effective solution to the problem. Describe in detail the selected project that will resolve the ranked problem. Identify each unit process or major component.
2. Describe how the project would solve the ranked problem and the results expected. Results may include: an improvement in water quality, maintaining water quality, reduction in treatment or operational costs, reduction in monitoring costs, potential public health benefits, etc.
3. The proposed project must be consistent with the local agency/county planning criteria, such as existing distribution system design criteria, fire code requirements, etc. Describe any planning documents used as the design criteria. Documentation must be provided to show the selected components are required.
4. List all parties involved and identify the restructured water system that will remain after the project is complete. See attached Prop 84 Guidelines for Consolidation Projects for more information.

**Questions 5, 6 and 7 pertain to the feasibility study technical report only**

5. Describe the projected growth in the service area of the public water system, and any impacts that the proposed project will have on the projected growth. Eligible project costs are limited to facilities sized to serve no more than the 20-year demand projected in an Urban Water Management Plan or the 20-year demand projected in a comparable public water system planning document. If an applicant does not have an Urban Water Management Plan or comparable document, the eligible project costs are limited to facilities sized to serve no more than ten percent above existing water demand at peak flow.

**For applicants without an Urban Water Management Plan**, the technical report must address certain items in order to establish the eligible design capacity of the project. These steps are explained below. As indicated earlier, all assumptions, criteria, and calculations used must be shown and described.

- a. Determine the existing maximum day demand. This should reflect the demand as of the date of submission of the application. Where possible, this maximum day demand should be based on records of usage experienced by the public water system during recent periods of highest daily use (e.g. during the past 5 years). Where such records are not available, the applicant must calculate approximate maximum day demand based on annual use, number and type of consumers, etc. using reasonable criteria. In determining existing water demand, be sure to include water delivered to another public water system under an existing contract. The allowable amount of growth in water demand would be the existing amount determined by the above plus 10 percent.
  - b. Determine the design capacity or size of key facilities that are proposed to be constructed to meet the water demand at maximum day demand determined in Item 5.a above. This should include any water sources, primary treatment unit processes, pumping and storage facilities, and transmission mains that will be part of the project. The project engineer may use any of several methods or criteria to determine the design capacities or size of these project components including Waterworks Standards, previous design criteria such as filter flow rates, as approved by the Department; AWWA criteria; or Ten-States Standards. The assumptions and criteria used to size the units must be clearly shown.
6. Describe how the project is or is not in conformance with planning documents.
7. Describe how the peak flow demand is impacted by the industrial and commercial water users in the service area of the public water system. It may be necessary to separate the residential demand from any industrial, commercial, or agricultural demands in the area. Non-residential demand can have a significant impact on facility sizing and should be accounted for in the design.

## **E. ELIGIBILITY**

1. Describe any elements of the proposed project that will be included, but are ineligible for funding under the Prop 84 eligibility criteria. For example, the applicant may choose to replace some distribution pipeline for a project where a new well is being drilled to solve a source water problem. In this case, the piping to connect the well to the distribution system is eligible, but piping to replace old or leaking distribution lines is not eligible. The project can include ineligible components; however, the applicant will need to identify a funding source other than Prop 84 funds to pay for the ineligible portion. Matching funds, if required, must be spent on eligible components.

Other ineligible components include: land acquisition (except that which is integral to the project); project facilities primarily to serve future growth; dam or rehabilitation of dams; raw water storage

facilities; motor vehicles used for employee or material transportation; decorative items; extended warranties for equipment; insurance cost (except construction insurance); and all other related items not specifically included in the contract. Landscaping is only eligible if it is specifically required as a mitigation measure under CEQA.

**Do not include water system improvements that are not directly related to the problem being solved.**

2. Describe any land or easements that will be acquired as part of the construction project. Discuss the necessity for any land acquisition and justify the size of the land being purchased. Please note that only land or easements that are integral to the construction of source, treatment or distribution facilities are eligible for Prop 84 funding.

**NOTE:** Land acquisition is not an eligible cost under a feasibility study. Land acquisition planning and assessment may be included as a task in the feasibility study but actual land purchase may only be done under a construction project.

## **F. FINAL PLANS AND SPECIFICATIONS (FOR CONSTRUCTION PROJECTS ONLY)**

The technical report must include final plans and specifications for the proposed project. Include a project layout of the treatment process showing the location of the facilities and a flow diagram. For new wells, the size of the well casing and the pump, as well as the expected yield of the well, should be indicated. Any assumptions, design criteria, flow rates, etc. used to size the facilities should be shown. Any reasonable methods may be used to estimate flows, water demand, or unit capacities such as using existing records, a comparison to a similar public water system, or AWWA, Ten-State, or other industry standards. A table format for presenting the information is preferred.

Include all the plans and specifications and other technical aspects for the proposed project.

1. Describe the projected growth in the service area of the public water system, and any impacts that the proposed project will have on the projected growth. Eligible project costs are limited to facilities sized to serve no more than the 20-year demand projected in an Urban Water Management Plan or the 20-year demand projected in a comparable public water system planning document. If an applicant does not have an Urban Water Management Plan or comparable document, the eligible project costs are limited to facilities sized to serve no more than ten percent above existing water demand at peak flow.

**For applicants without an Urban Water Management Plan,** the technical report must address certain items in order to establish the eligible design capacity of the project. These steps are explained below. As indicated earlier, all assumptions, criteria, and calculations used must be shown and described.

- c. Determine the existing maximum day demand. This should reflect the demand as of the date of submission of the application. Where possible, this maximum day demand should be based on records of usage experienced by the public water system during recent periods of highest daily use (e.g. during the past 5 years). Where such records are not available, the applicant must calculate approximate maximum day demand based on annual use, number and type of consumers, etc. using reasonable criteria. In determining existing water demand, be sure to include water delivered to another public water system under an existing contract. The allowable amount of growth in water demand would be the existing amount determined by the above plus 10 percent.
- d. Determine the design capacity or size of key facilities that are proposed to be constructed to meet the water demand determined in Step 1 at maximum day demand. This should include any water sources, primary treatment unit processes, pumping and storage facilities, and transmission mains that will be part of the project. The project engineer may use any of several methods or criteria to determine the design capacities or size of these project

components including Waterworks Standards, previous design criteria such as filter flow rates, as approved by the Department; AWWA criteria; or Ten-States Standards. The assumptions and criteria used to size the units must be clearly shown.

2. Describe the peak flow demand impacted from the industrial and commercial water users in the service area of the public water system. It may be necessary to separate the residential demand from any industrial, commercial, or agricultural demands in the area. Non-residential demand can have a significant impact on facility sizing and should be accounted for in the design.
3. The useful life of the key system components (the elements that makes up the largest construction budget items) of the project should be estimated. All key components should have a useful life of at least 20 years.
4. Describe all the phases and their priorities related to the overall project, including the estimated time to complete each phase. Applicants should consult with their local CDPH District Office to determine phasing options for the proposed project.
5. In most cases, the initial cost estimate included in the pre-application was a rough estimate. Applicants are not limited to project costs stated in the pre-application. It is expected that the full application will refine those estimates. In developing the cost estimates for the project, please provide a detailed scope of work describing each task to be performed for the proposed project. This cost breakdown is typically more detailed than the table shown in the financial section of the Application. As a minimum, the technical report should show the anticipated costs of the following items if they will be included in the funding requested. For additional guidance please contact your local CDPH District Office.
  - Planning, preliminary engineering, and application preparation
  - Design and engineering costs
  - Construction costs broken down by:
    - Major project components
    - Land acquisition
    - Eligible versus ineligible items
    - Excess ineligible growth capacity
  - Construction management and contingencies
  - Legal and administrative costs
  - Other (describe)

NOTE: If the project contains ineligible construction items, the percentage of indirect costs (planning, administrative, design etc.) that apply to the eligible construction portion should be estimated. This can be based on a straight proration, which will be the method used by the CDPH unless some other means is indicated.

**If there are questions on ineligible items, please contact your local CDPH District Office before completing this section.**

## **F. SCOPE OF WORK AND COST ESTIMATE (FOR FEASIBILITY STUDIES ONLY)**

1. Attach a scope of work necessary for the completion of the proposed feasibility study (see attached Feasibility Study Scope of Work example). Provide a detailed itemized list with description and anticipated cost associated with each item. Include all non-construction costs and ineligible items.

## G. PROPOSED SCHEDULE

The technical report should include a proposed schedule for project completion. At a minimum, the schedule should allow time needed for preparation and submission of draft plans and specifications, preparation of construction bids (after approval of final plans and specifications), and completion of construction etc. Be sure to include the time needed to complete the CEQA environmental review process. Timeframes should generally be expressed in months from the date of execution of a funding agreement, rather than specific dates.

**Construction projects are required by our Prop 84 criteria to be completed no later than 3 years from the date of execution of a funding agreement.**

For Feasibility Studies, attach a scope of work necessary for the completion of the proposed feasibility study (see attached Feasibility Study Scope of Work example). Provide a detailed itemized list with description and anticipated cost associated with each item.

**Feasibility Studies are required by our Prop 84 criteria to be completed no later than 18 months from the date of execution of a funding agreement.**

## H. ATTACHMENTS TO TECHNICAL REPORT

See the checklist in the application for documents to be included with this Proposition 84, Section 75022 construction project technical report. Make sure your water system's name and pre-application number are on every additional attachment.

Include any other technical information that is pertinent to this particular project that may not be included elsewhere in the report.

## I. APPLICATION CERTIFICATION

Provide the signature and date for the Authorized Representative preparing the Technical Report. This certifies that the Authorized Representative possesses the expertise necessary to prepare the report and has been authorized to prepare the report by the water system's governing body. The Authorized Representative preparing the report attests to the accuracy of the information provided.