

**CDPH PROPOSITION 50 FUNDING PROGRAM**  
**PROJECT TECHNICAL REPORT GUIDELINES**  
**Chapter 4a4 – Source water Protection Grants**  
September 17, 2008

The Prop 50 funding application must be accompanied by a 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 for Chapter 4a4 (Source Water Protection Projects) only.

Small water systems (those serving less than 1,000 services connections) may contact their CDPH District Office for assistance in the preparation of their Technical Report.

The Technical Report must be prepared by a qualified, experienced professional. The level of expertise required of the preparer, and the level of detail required in the Technical Report, depends upon the type of project. For destruction of abandoned wells, the Technical Report should be prepared by a professional experienced in well destruction. Use of professionals with the appropriate level of expertise will speed up the processing of the application and will reduce the depth of the Department's technical review.

The Technical Report is the central part of the application and contains most of the technical information needed to process the application. In some cases, some of the Technical Report components may have already been described in a previous document such as an engineering report or feasibility study. If so, simply refer to that document/report on page three (3) of the funding application and attach a copy.

**1. *Project Location***

Describe the project location. This should include the county, general description of the vicinity, the street address, and the Township, Range, and Section (TRS). The TRS is used for recording environmental documentation. The TRS can be determined from a USGS topographic map. Also describe the zoning designation at the project site.

**2. *Problem Description***

Provide a detailed description of the problem(s) to be addressed by this project. Identify the drinking water standard, regulation, or CDPH directive violated. Describe only the problem or problems for which the project was ranked on the priority list.

The Technical Report must describe the type(s) of contaminant(s) that are to be addressed by the project (such as, microbiological contaminants, turbidity, nitrate, chemicals, or disinfection by-products). There must also be a description of the Possible Contaminating Activities (PCAs) that are the most likely sources of the contaminant(s). A list of PCAs and associated contaminants should be included in Chapter 7 of the water system's Drinking Water Source Assessment document. The project for which this application is being submitted was ranked based on a specific type of contaminant, but it is possible that the proposed project will have residual benefits for other types of contaminants. However, to be considered eligible for funding, all elements or components of the proposed project must be directly related to the type of contaminant for which the project was ranked. The funding application must include a copy of the water system's Source Water Assessment document that was completed in accordance with the Department's Drinking Water Source Assessment Program.

### **3. Description of the Proposed Project**

Describe the proposed project in detail. Also, identify the proposed acquisition of any land or easement for this project and, if applicable, explain if the acquisition is the primary element or a supporting element of this project. Proposition 50 Grant funds can only be used to acquire land or easements from willing sellers. For each land or easement that is part of the project, state whether it is to be acquired from a willing seller.

If there is a local task force or group working on source water protection, the group should be described here. The description must include a list of participants, their affiliations, and the methods used to establish membership (i.e., volunteers, delegates from service groups, appointments by elected officials, invited stakeholders, etc.). This description must be included if the applicant indicated on the pre-application that a group exists. If no source water protection task force exists, describe plans for establishing one.

Describe the public participation, education and outreach that are part of the project or necessary to ensure the success of the project. For example, public education is a key element of well abandonment projects. For Source Water Protection projects, public involvement with the project is often essential.

### **4. Map of Existing Service Area**

Provide a map that identifies and delineates the service area of the 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 however, 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 water system rather than the overall district boundary. For community 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.

Since non-community water systems do not usually have distribution systems, it may be more difficult to determine the service area. If the majority of the “users” of the non-community system are derived from a specific area, then this area can be used as the service area for the system. For example, if more than half of the students of a rural school that is a non-community system come from a specific community, that community can be used as the service area. For other non-community systems, the county in which the system is located will generally be used as the service area with respect to determining median household incomes etc.

If the boundaries of the 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.

### **5. Map of the Project Location**

This project was ranked on the priority list based on the source water protection area or zone in which the PCAs to be addressed are located. Use a USGS topographic map, 7.5 minute series, to identify and show the dimensions of the area or zone (length, width, radius, area, etc.) in which the PCAs are located, and their proximity to the water system’s source water and other water system facilities. The Drinking Water Source Assessment Program document, Chapter 6, describes methods to delineate source water protection areas and zones.

If the purchase of land or easements will be included in the application for funding, the size, location, and purpose of each parcel must be shown or described on the map. Provide a supplemental site plan at a larger scale if the USGS map scale is too small to show project details that can be clearly understood.

**6. Existing Population & Service connections**

Estimate the population served on an average daily basis by the water system. For community water systems, this would be the permanent population of the community. Seasonal community systems should use the average population served by the system during the peak period in which the system is in operation. Non-community water systems should use the average daily population served during the periods that the system is in operation. The estimated population can be derived from census data, facility use records, billing information, or by converting service connections to population using a conversion factor of 2.8 persons per connection, whichever most closely approximates the actual number of persons served. Specify the method used to determine population.

Provide the total number of active service connections that are currently and directly served by the water system. This includes all domestic, residential, industrial, commercial or other connections. Wholesalers, or entities that deliver water to another water system, should contact the CDPH District Office to discuss the appropriate number of service connections to be used, since this may vary depending upon the type of project being proposed. Indicate whether the services are metered. Non-community water systems may indicate “not applicable”.

**7. Water Rights Information**

Describe the nature of any water rights that may apply to this project. If the project does not impact or change the quantity or location of water sources or allow an increase the population that can be served by drinking water sources, this section is not required and the applicant should type “n/a” for not applicable next to line seven (7) on page three (3) of the funding application.

If the water system diverts surface water pursuant to a water right granted by the State Water Resources Control Board, attach a copy of the water rights permit. If the water system has applied for a water rights permit, but it has not yet been issued, attach a copy of the application for the water rights.

**8. Evaluation of Alternatives/Cost Effectiveness**

Funds must be provided to the most cost-effective solution to the problem. Therefore, it is essential that all feasible alternatives be evaluated.

In considering alternatives, only alternatives that involve significantly different concepts need to be evaluated. It is not necessary to evaluate different forms or variations of the same basic concept. In addition to evaluating and discussing the “feasibility” of each alternative, the Technical Report should estimate and compare the costs and relative effectiveness (including reliability) of the alternatives. “Costs” need only be addressed in a general sense. The cost-comparison of alternatives may be based on “typical” construction costs, use of existing examples, or application of best engineering judgment; specific detailed costs of the alternative are not required.

State law requires that the basic environmental impacts of each alternative be determined and compared. This information may be presented in the Initial Study that many systems will need to prepare as part of the environmental review (CEQA - California Environmental Quality Act) process. For those projects that have not gone through the CEQA process at the time of application submittal, an initial comparison of environmental impacts will be necessary. This comparison does not have to be detailed but merely compare the general impacts of the alternatives.

The primary decision as to which alternative to fund will be based on “cost-effectiveness.” Preference shall be given to the project alternative that achieves an acceptable result at the least cost. In comparing the relative cost, both initial capital costs and operation and maintenance (O&M) costs (over the useful life of the facilities) should be considered.

#### **9. *Feasibility of Consolidation***

Consolidation with another water system should be considered and evaluated as one of the alternatives, if applicable. For example, in lieu of preventing a contaminant from further impacting a well, the applicant could destroy the well (an eligible source water protection cost) and consolidate with another water system.

The Department recognizes that consolidation is generally not a feasible option for larger systems. Therefore, systems serving more than 10,000 persons do not need to explore this option in any detail but can simply include a statement that consolidation is not feasible.

“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 water system. For example, the adjacent water system may not have sufficient water to serve the combined systems, 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 water system refuses to agree to the consolidation, the applicant needs to include a letter from that water system confirming their refusal.

If this section is not applicable, type “n/a” for not applicable next to line nine (9) on page three (3) of the funding application.

#### **10. *Anticipated Benefits of Proposed Project***

The Technical Report should describe how the project would solve the primary problem and the results that would be 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.

#### **11. *Conceptual Project Design***

The Technical Report must include a conceptual or preliminary project design. Any assumptions, design criteria, flow rates, etc. used to size any facilities or improvements should be included in the Technical Report.

## **12. Analysis of Projected Growth**

This analysis is not required for Chapter 4a4 (Source Water Protection) projects. Please type “n/a” for not applicable next to line twelve (12) on page three (3) of the funding application.

## **13. Ineligible Project Components**

Describe any elements of the proposed project that will be included but are ineligible for funding using the Prop 50 eligibility criteria. The project can include ineligible components, however, the applicant will need to identify a funding source other than Prop 50 funds to pay for the ineligible portion. Matching funds, if required, must be spent on eligible components.

Ineligible components include: land or easement acquisition except that which is integral to the project; motor vehicles used for employee or material transportation; decorative items; extended warranties for equipment; insurance cost (except for construction insurance); and all other items not included in the project contract. Landscaping is only eligible if it is specifically required as mitigation under CEQA.

## **14. Cost Breakdown of Proposed Project**

In most cases, the initial cost estimate included in the pre-application was a rough estimate. It is expected that the full application will refine those estimates. Applicants are not limited to project costs stated in the pre-application. In developing the cost estimates for the project, the applicant must break down the total cost estimate into various project elements. 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.

- a) Planning, preliminary engineering, and application preparation
- b) Design and engineering costs
- c) Construction costs broken down by:
  - Major project components
  - Land or easement acquisition
  - Eligible versus ineligible items
- d) Construction management and contingencies
- e) Legal and administrative costs
- f) Other items not covered above (describe the items)

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

## **15. Useful Life of Key Project Components**

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. This section may not apply to most projects and can be so indicated on page three (3) of the funding application as “n/a” for not applicable.

**16. Proposed Design and Construction Schedule**

The Technical Report should include a proposed schedule for project completion. The schedule should allow time needed for preparation and submission of plans and specifications, completion of financing and preparation of construction bids (after approval of plans and specifications), and completion of construction. Be sure to include the time needed to complete the CEQA environmental review process. Timeframes should generally be expressed as months needed, rather than specific dates, since the timing of any funding offer is unknown. The CDPH District Office will use these estimates as a basis for preparation of an overall project schedule.

**17. Environmental Information**

Any other project description required for environmental documentation may be included here or may be submitted separately on the CDPH Prop 50 Environmental Information Form.

**18. Other**

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