



Guide to PERs for the Drinking Water SRF

This guide provides information for developing a Preliminary Engineering Report (PER) for funding construction projects under the Drinking Water State Revolving Fund (DWSRF).

Once a construction project has been identified for funding by the Drinking Water Intended Use Plan, the first step the project sponsor must take in securing a loan from the DWSRF is to submit a PER to the South Carolina Department of Health and Environmental Control (DHEC). The PER will be reviewed by an SRF project manager, who will work closely with the engineer preparing the PER, to insure that the PER contains the following relevant information:

1. **General Information** [required by Section R.61-58.1(C)(1) of the State Primary Drinking Water Regulations (SPDWR)]:
 - a. Name, address and phone number of the owner, corporation, town, or utility, as well as, the name and title of the responsible officer;
 - b. Name, address and phone number of the engineering firm, as well as, the name of the engineer responsible for the design;
 - c. General description of the service area and surroundings (e.g., type of economy, estimated percentage residential, estimated percentage industrial, terrain, location, possible rate of development); and,
 - d. Number and type of customers to be served, (e.g., domestic, industrial, commercial, agricultural, etc.).
2. **Discussion of Need:** Describe in detail any current violations of the Safe Drinking Water Act, any potential problems (risk to human health, violations of the Safe Drinking Water Act, etc.) that may occur if corrective action is not taken, and/or any secondary water quality problems.
3. **Discussion of Alternatives Considered for Meeting the Need:** Describe in detail the alternatives available, including the discussion of a “no action” alternative. The number and types of alternatives depend upon the scope and complexity of the project. For alternatives analysis, use a minimum planning period of five (5) years, and a maximum planning period not to exceed the useful life of the project, usually 20 years.
4. **Discussion of the Rationale for the Alternative Selected:** Describe in detail the rationale for the alternative selected. Both non-monetary and monetary factors should be addressed by the rationale. Non-monetary factors may include, but are not limited to, environmental effects, implementability, operability, performance reliability and institutional issues. Monetary factors should include capital costs and operation and maintenance costs.

The level of detail depends upon the scope and complexity of the project; however, the discussion should present a concise, technically reasonable rationale. If the selected alternative includes the construction of new groundwater or surface water source(s), a detailed engineering and economic assessment of the feasibility of a regional alternative for meeting the water supply needs must be included in the discussion of alternatives.

5. **Cost Estimate of the Selected Alternative:** Provide a total capital cost estimate for the selected alternative. This estimate must include project costs which are both eligible and ineligible for funding under the DWSRF program, and must be categorized as follows:
- a. **Planning, Design, and Engineering** - This category includes the cost of any planning, design, and engineering services incurred prior to construction (i.e., costs associated with, preparing the PER, permit fees, plans and specifications, advertising, pre-bid conference, bidding procedures, pre-construction conference, loan application, and administration, etc.). Only those costs for which there is a clear documentation of expenses incurred solely for the proposed project and are dated no earlier than 36 months from the date of the final application, are eligible for funding under the DWSRF program.
 - b. **Legal and Appraisal fees** - This category includes legal and appraisal costs associated with obtaining land (easement or purchase), and bond council fees associated with the SRF loan application and loan closing process. **Please note** that only the legal and appraisal costs associated with obtaining land from a willing seller are eligible for funding under the DWSRF program, if incurred no earlier than one year prior to the date of submission of a complete loan application package to the Budget and Control Board. If it is known at the time the PER is prepared, that the land is to be obtained from a willing or unwilling seller(s), please specify and separate the legal and appraisal costs associated with each type of seller; otherwise, assume that all land will be purchased from a willing seller.
 - c. **Land** - This category includes the actual cost of the land that is integral to the project. **Please note** that only land purchased from a willing seller(s) is eligible for funding under the DWSRF program. If it is known at the time the PER is prepared, that the land will be purchased from a willing or unwilling seller(s), please specify and separate the costs associated with each type of seller; otherwise, assume that all land will be purchased from a willing seller. **Please note** that any land purchased more than one year prior to the submission of a complete loan application package to the Budget and Control Board is not eligible for funding under the SRF program. **Also**, be aware that Land Acquisition form #2554 will need to be completed and included with the first draw request. The form along with instructions can be found in Appendix C of the Construction Contracts Guidance Package (http://www.scdhec.net/environment/water/docs/srf_construct.pdf).
 - d. **Equipment** – This category includes the cost of any equipment that is directly purchased by the sponsor such as pumps, generators, etc. There is no contingency allowed on equipment; therefore, the engineer should be conservative in estimating the equipment costs. Force account work used to install the equipment is not eligible for funding under the SRF. Force account work is the use of the sponsor's own employees or equipment for construction, construction related activities (including architectural and engineering services), or the repair or improvement to a facility.
 - e. **Materials** - This category includes the cost of any materials such as pipe, valves, brick and mortar, etc., that are directly purchased by the sponsor. Force account work used to install the materials is not eligible for funding under the SRF. The cost of supplies such as fuel, oil, and tools used by the sponsor to install the materials is not eligible for funding under the SRF.

- f. **Contingency for Materials** - This category applies only to materials that are directly purchased by the sponsor. The SRF program allows a contingency of 2.5%.
- g. **Construction Engineering** - This category includes the costs associated with engineering services during construction such as inspections, change orders, overview of contractors, shop drawings, record drawings, concrete or soil testing, pay estimates, and draw requests.
- h. **Construction** - This category includes the costs associated with the construction of the project by a contractor.
- i. **Contingency for Construction** - The SRF program allows a contingency of 10%.
- j. **Loan Closing Fee** - There is a non-refundable loan closing fee, which can be financed within the SRF loan. For the amount of this fee please contact Trish Comp with the South Carolina Budget and Control Board's Office of Local Government at 803-737-3808.

Note: All construction portions of a project are required to be bid prior to loan closing. Based on bid results, the construction portion of the loan commitment may be adjusted downward to bid(s) plus contingency or increased by a maximum of 10% exclusive of contingency, depending on the availability of funds. Any bid amount exceeding 10% of the construction portion of the loan commitment is the sole responsibility of the project sponsor.

- 6. **Design Parameters and Calculations for the Selected Alternative:** Specify design parameters and provide design calculations in sufficient detail to demonstrate that:
 - a. All necessary components of the project have been included and properly designed;
 - b. Cost estimates are reasonable; and,
 - c. The selected alternative can be expected to meet the project need.
- 7. **Location Map:** A map must be included in the PER that shows the location of the facilities to be constructed (treatment plant, water lines, tanks, etc.). The size of all water lines and tanks must be included on the map.
- 8. **Planning Area Map:** For projects involving a new treatment plant, a treatment plant expansion, a new source, storage, or a water line extension, a map must be included showing the boundaries of the area planned to be served.
- 9. **Any other applicable information required by Section R..61-58.1.C of the SPDWR.**
- 10. **Environmental Evaluation:** The PER must include an evaluation of the environmental effects of the alternatives, except in cases where DHEC determines that the proposed project qualifies for a categorical exclusion (CE). The evaluation must include sufficient information to enable DHEC to complete an environmental review to determine if the project will significantly impact the environment.

In general, the project sponsor should avoid alternatives which significantly affect, directly or indirectly, sensitive areas such as:

- ▶ Endangered species
- ▶ Flood plains
- ▶ Historical/archaeological sites
- ▶ Important farmlands
- ▶ National natural landmarks
- ▶ Special coastal resources
- ▶ Wetlands
- ▶ Wild and scenic rivers

To obtain information to evaluate the environmental effects, applicable State and Federal agencies, listed below, must be solicited. The relevant agency comments usually will serve to substantiate a claim of “No Significant Impact”. The engineer preparing the PER may submit a detailed description and location map of the alternatives to the applicable agencies, requesting input. Alternatively, the engineer may provide this same information to DHEC’s SRF program, which will coordinate obtaining environmental input from the agencies. *The sponsor and engineer are encouraged to take advantage of this service provided by DHEC.*

Copies of the letters sent to the environmental agencies, and their corresponding responses, *must* be included within the PER. If an environmental agency indicates possible impacts to the environment, the PER should address how such impacts will be minimized.

To expedite DHEC’s review of the PER, the engineer may submit a draft copy of the PER for review prior to receiving comments from all of the relevant environmental agencies. However, the PER is not considered complete until all relevant agency responses are included and addressed.

The following is a list of State and Federal agencies whose input may be required for the environmental evaluation:

- ▶ S.C. Department of Archives and History (*Historic/Archaeological Sites*)
- ▶ S.C. Department of Natural Resources (*Fish and Wildlife*)
- ▶ S.C. Department of Parks, Recreation & Tourism (*State Parks*)
- ▶ Federal Emergency Management Agency (*Flood Plains*)
- ▶ U.S. Department of Agriculture, Natural Resources Conservation Service (*Important Farmland*)
- ▶ U.S. Department of Commerce, National Marine Fisheries Service (*Endangered Marine Species and their Habitat*)
- ▶ U.S. Department of the Interior, Fish and Wildlife Service (*Wetlands, Endangered Species, Coastal Barrier Resources*)
- ▶ U.S. Department of the Interior, National Park Service (*National Natural Landmarks, Wild and Scenic Rivers*)

Depending on project specifics, intra-DHEC environmental input also may be required on issues of Coastal Zone resources (DHEC’s Office of Ocean and Coastal Resource Management) and/or interbasin transfer and navigable waterways (DHEC’s Bureau of Water).

In addition to the above environmental issues, the engineer may be required to address compliance with Executive Order No. 12898, Environmental Justice in the PER.

11. **Public Participation:** A public meeting and/or hearing must be held for all projects except for those having little or no environmental effect. In general, all projects except for those that qualify for a CE will be required to have a public meeting. In lieu of a special meeting, this may be accomplished through discussion of the project during regularly scheduled board or council meetings, which are open to the public. However, for any meeting to qualify as a public meeting for the SRF, public notice must be made at least 30 days prior to the date of the meeting. The notice must specify that the proposed project will be discussed. This discussion must include the need for the project, alternatives evaluated, rationale for the selected alternative and the environmental and financial impacts of the selected alternative.

In certain special cases involving environmental concerns or other public issues one or more additional public meeting(s) and/or hearing(s) may be required for the project. Should this be necessary, the Department project manager reviewing the project will instruct you as to details of this public

participation process. The PER must include documentation (e.g., copy of public notice, newspaper articles, etc.) and a discussion of the public participation process, including any comments received and responses provided.

12. **Signature and Seal:** The PER submitted must bear the signature and seal of a professional engineer, registered in the State of South Carolina.

Review Process: DHEC will review the PER for compliance with the Safe Drinking Water Act, SPDWR and special SRF requirements, and conduct an environmental review to determine if the project will significantly affect the environment. If DHEC concludes that the project will have a significant environmental impact, the sponsor must:

- ▶ modify the project to reduce the environmental impact;
- ▶ select another alternative and evaluate its environmental impact; or,
- ▶ prepare an environmental impact statement.

If DHEC concludes from its review of the environmental evaluation in the PER that there will be no significant environmental impact, a “Finding of No Significant Impact” document will be prepared and made available for public comment for a period of thirty (30) days. If the public notice period lapses with no public comments, DHEC will issue a letter approving the PER. If comments are received, approval of the PER may hinge on their resolution.

Certain categories of projects may be excluded from the necessary environmental evaluation. In such cases, DHEC will prepare and issue a public notice of Categorical Exclusion (CE), with concurrent approval of the PER. DHEC will determine if a project qualifies for a CE following receipt of a detailed project description and location map.

More information? Contact the SRF Section at DHEC's Bureau of Water.
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