



WATER SUPPLY CONSTRUCTION

Permitting Process Manual

Iowa Department of Natural Resources

With instructions for participating in the Drinking Water State Revolving Fund

February 2009





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With instructions for participating in the Clean Water State Revolving Fund



INTRODUCTION

Issuing drinking water construction permits is the responsibility of the Iowa Department of Natural Resources (DNR), specifically the Water Supply Engineering Section. A public water supply construction permit must be obtained from DNR prior to the construction or modification of any source, treatment, storage or distribution system of a public water supply.

When a city or county decides to initiate a drinking water project, many parties may become involved in the process, including:

- DNR field offices;
- Consulting engineers;
- Councils of government and economic development organizations;
- Funding agencies, including the State Revolving Fund (SRF), Department of Economic Development, or USDA Rural Development;
- Financial advisors and bond counsel;
- Consulting parties for environmental and historical reviews;
- Contractors; and
- Members of the public and other interested parties.

The drinking water construction permitting process described in this manual was created to foster greater coordination, communication, and cooperation among all of the parties involved. Following the process outlined in this manual will help eliminate delays, avoid problems, and enable the success of drinking water construction projects.

The construction permitting process applies to all projects. However, financing a project through programs involving federal funds, such as Community Development Block Grants, the Drinking Water State Revolving Fund (DWSRF), or Rural Development, can add other requirements. This manual also discusses in detail the requirements of the DWSRF program and notes how the loan process interfaces with the construction permitting process. If other financing programs are used, the applicant should work with those program managers to determine additional requirements.

Progressing through drinking water construction permitting is a step-by-step process as outlined in this manual. All the materials and forms you will need, such as construction schedules, program applications, and technical information, are included or referenced to web sites.

Drinking Water State Revolving Fund

- ***Low-interest financing for planning and design, construction, replacement or rehabilitation of a public water supply system, and source water protection***
- ***Assistance with meeting federal requirements***
- ***Disadvantaged communities may receive up to 30 year terms***
- ***Recent projects ranged from a \$38,000 loan for planning and design, to \$39 million for construction of a new water treatment facility***

If at any time there are questions about the process, please feel free to contact the DNR Water Supply Engineering section.

WATER SUPPLY CONSTRUCTION PERMITTING PROCESS

The following section of the manual outlines the steps involved in project planning, design, and construction. Also included or referenced in this manual are checklists, fact sheets, and related materials. All capital improvement projects follow this basic process.

Steps in the process that are associated with the Drinking Water State Revolving Fund are italicized and highlighted.

PLANNING AND ENVIRONMENTAL REVIEW

Step 1 Owner hires Consultant.

Once the Owner identifies a need for drinking water construction improvements, the Owner will contract with an engineer consultant (Consultant). In some cases, the need may have been identified by the DNR, which may either advise the Owner to initiate planning or require it through a compliance/enforcement action. An owner may also identify its need for study and voluntarily proceed into the planning process. The Consultant will investigate and evaluate the issues and make recommendations for needed improvements.

More information on hiring an engineering consultant can be found on the Consulting Engineers Council of Iowa's web site at <http://www.iaengr.org/QBS.pdf>.

Step 2 Owner Applies for P&D Loan if Needed.

The Owner may choose at this point to apply for a planning and design loan through the Drinking Water State Revolving Fund (DWSRF). See Exhibit 1 for more information. Whether or not a DWSRF construction loan will be sought, planning and design (P&D) loans are available through the Iowa SRF to cover the costs incurred for engineering work and fees related to project preparation and submittal. Interest rate for P&D loans is 0% for up to three years, and the P&D loan can be rolled into a DWSRF construction loan or may be repaid with other permanent financing. The planning and design costs must be directly related to the drinking water project and must be eligible under the DWSRF program.

Exhibit 1: Planning and Design Loan Fact Sheet

A link to the P&D loan information is on <http://www.iowasrf.com>.

Step 3 Consultant Prepares PER for DNR Approval.

In consultation with the Owner, the Consultant prepares a Preliminary Engineering Report (PER).

All SRF projects must have a PER.

The following are examples of non-SRF projects that will require submittal and approval of a PER:

- Projects that are designed to correct Maximum Contaminant Level (MCL) violations, Treatment Technique (TT) Violations or Action Level (AL) exceedences
- A new water source if needed to correct shortfalls in capacity or if expected to have dissimilar water quality compared to existing sources
- Primary source connections to rural systems
- A new treatment plant or significant modification of an existing water plant including increasing the loading rates of unit processes, increasing the plant capacity, or modifying the treatment process which will change the characteristics of the finished water
- A new water storage structure or significant modification of an existing structure that may impact C-T, modify system pressures, upgrade the storage requirements to meet Ten States standards or compensate for shortfalls in source or treatment plant capacity
- A significant expansion of the service area, where demand surpasses facility capacity (based on a 20-hr day), or results in system pressures dropping below 20 psi during any flow condition

The PER should include a description of the current drinking water supply system, including a discussion of existing and potential problems or failures in the system and the status of compliance with state and federal criteria. Documents should include but not be limited to: Summary of the design criteria; operation requirements, where applicable; general layout; detailed plans; specifications; cost estimates; and water purchase contracts, where applicable. *Recommended Standards for Water Works*, published by the Great Lakes-Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers (also known as the Ten States Standards), provides more detail on requirements for the PER. This publication may be ordered through <http://www.hes.org> or is available on line at www.leafocean.com.

Exhibit 2 provides a checklist for preparation of a PER.

If the Owner is **not** seeking a DWSRF loan, the PER may be submitted to DNR at this point and you may skip to **Step 7**.

Please note: If changes are made after the approval of the PER, an addendum must be submitted.

Exhibit 2: Preliminary Engineering Report Checklist

Step 4 Owner Prepares Viability Assessment.

Applicants for Drinking Water SRF loans and new public water supply systems must complete a viability self-assessment using the Self-Assessment Manual for Iowa Water System Viability to demonstrate their technical, financial, and managerial capacity. There are two versions of the manual, one for rural water systems and municipalities, and one for privately-owned systems, homeowners associations, mobile home parks, and very small municipalities. The manuals are available on-line at <http://www.iowadnr.com/water/viability/manual.html>.

Step 5 Consultant Prepares Environmental Review Information.

Using Exhibit 4, the Environmental Review (ER) Checklist, the Consultant prepares and gathers required project information. This material will be sent in with the IUP application (see Step 6). The SRF ER Specialist will determine whether a Categorical Exclusion will be possible or if a full ER is necessary.

Exhibit 4: SRF Environmental Review Checklist

Step 6 Owner/Consultant Submits IUP Application.

If the Owner is planning to seek DWSRF construction financing, the Intended Use Plan application (Exhibit 3) must be prepared and signed. This identifies the type of project and amount of funding requested for placement on the project priority list of the DWSRF Intended Use Plan (IUP). Projects are scored and ranked based on their priority for funding. IUPs are developed on an annual basis with quarterly updates as needed. The IUP now asks for information on qualifying for Disadvantaged Community status.

IUP applications are available on-line at <http://www.iowasrf.com>.

Exhibit 3: DWSRF Intended Use Plan Application

To be eligible for placement on the DWSRF Intended Use Plan, the Owner must submit the following:

- *DWSRF Intended Use Plan Application*
- *Preliminary Engineering Report*
- *Viability Self-Assessment*
- *SRF Environmental Review Checklist (Exhibit 4)*

Step 7 DNR Assigns Project Manager to Begin Reviewing Project.

DNR assigns a project manager (PM), who will contact the Owner and Consultant to discuss project issues, schedules, required permits, and other information as needed. For some projects, the project manager may request and schedule a meeting.

Step 8 DNR PM Reviews PER.

The DNR project manager reviews the Preliminary Engineering Report and either seeks additional information or recommends approval or denial. The Owner and Consultant are notified when the PER is approved.

Step 9 DNR PM Reviews Viability Assessment.

The DNR project manager reviews the Viability Self-Assessment to determine if the Public Water Supply is technically, managerially, and financially capable of maintaining a system that can consistently and reliably provide safe drinking water. The Owner is notified when the Viability Assessment is approved or if conditions are assigned to achieve viability..

Step 10 DNR PM Scores Project for IUP.

The DNR project manager assigns the project a score, using the project point ranking system contained in DNR program rules. With this score, the project is placed on the Intended Use Plan (IUP) for approval in the following quarter. If the project will not proceed to construction financing during the current state fiscal year, it is placed on a contingency list for future funding. Projects on the contingency list may be moved to the fundable list any time as needed.

Project priority lists are published for public comment and must be approved by the Environmental Protection Commission before projects can be financed.

Step 11 DNR Holds Project Meeting and Begins ER.

When a project is placed on the DWSRF IUP, DNR will schedule a project initiation meeting including the DNR PM, the Owner, the Consultant, and the Environmental Review Specialist. The primary purpose of the meeting is to coordinate the Environmental Review (ER) which is a requirement of the DWSRF and other federal funding programs. In addition, the PM will discuss any other project planning or permitting issues.

Step 12 DNR Conducts Site Survey Process.

Site surveys are required for well, surface water intake, and below-grade storage tank projects. The Consultant submits Schedule 4 (along with Schedule 1a) and supporting maps to the DNR project manager. The project manager works with the DNR field office to obtain a site survey report. The site is approved or denied, or the project manager may add conditions that must be fulfilled for site approval. Once the site survey process is completed, the project manager notifies the Consultant and the Owner of the results.

All forms and schedules are available on-line at <http://www.iowadnr.com/water/wse/conpermits.html>.

Step 13 ER Specialist Prepares EID.

Using the materials provided by the Consultant, the ER Specialist will obtain clearances from the consulting parties which are listed in Exhibit 4. The ER Specialist will assemble and send to the Owner an Environmental Information Document (EID) prior to the public hearing. This document will include reference to concurrence letters from various organizations (SHPO, USFWS, USACE, IDNR Water Resources, IDNR Conservation & Recreation, and others) and will summarize the findings of the environmental review to date. The EID and a copy of the PER should be made available to the public at a central repository during public notice. These documents should be presented at the public hearing for comment by the Consultant.

Please note: SRF will cooperate with other agencies when CDBG or RD funding is involved.

Step 14 ER Specialist Coordinates with Owner/Consultant to Determine a Well-Timed Public Hearing.

When appropriate information has been collected, the ER Specialist will discuss with the Owner the timing of a public hearing. A local public hearing on the proposed project is required for the DWSRF. Thirty-day notice must be given before the date of the hearing. The public notice should be published in a local newspaper or otherwise “well-publicized” such as posting in at least three public locations (City Hall, Post Office, etc.) in the city which have been permanently designated for public notice by ordinance in order to inform the affected community.

The Owner will prepare and publish the notice. Exhibit 5 provides a suggested format.

Please note: By federal regulations for DWSRF projects, the Owner must comply with a 30-day notice period, even if other funding agencies only require 4-20 days.

Exhibit 5: SRF Public Notice Format Example

Step 15 Owner Holds DWSRF Public Hearing.

Exhibit 6 outlines the necessary components of the public hearing. The Owner will hold a public hearing where the Consultant will present a summary of the proposed project, the potential environmental and financial impacts to the community and any alternatives that were considered. The public will then be afforded an opportunity to contribute input. Resolution of any significant local concerns may be necessary.

Exhibit 6: SRF Public Hearing Checklist

Step 16 *Owner Submits Public Hearing Results.*

As soon as possible after the hearing is held, Owner provides the ER Spec with either proof of publication (including the date published and the newspaper name) or a statement of how the public notice was accomplished, as well as the minutes from the public hearing, signed by the city clerk, including any comments from the public. In addition, the Owner returns a copy of the EID with an authorized signature, stating that the project description, scope, and anticipated environmental impacts detailed above are accurate and complete to the best of the Owner's knowledge.

Step 17 *ER Specialist reviews public input.*

The ER Specialist will review any public comments. Based on the material and comments gathered, the ERS will prepare an Environmental Assessment document (EAD) and make a decision whether or not a Finding of No Significant Impact (FNSI) is appropriate. If needed, a FNSI may require impact mitigation, such as vibrational monitoring in historical neighborhoods, wetland creation, various permits, or other actions; if any of these actions are needed, the ERS will notify the applicant. If a FNSI cannot be reached, even through mitigation, the project will be unable to obtain SRF funds.

Step 17 **Consultant Pursues Additional Permits as Required.**

Additional permits may be needed depending on the type of project. An NPDES discharge permit will be required if there is a discharge to a water of the state. For new wells, surface water sources or increased water demands, a water use permit or modification may be necessary. Storm water permits may be required for construction projects. Questions regarding additional permits, such as for solids disposal or air quality, should be directed to the DNR project manager.

For non-DWSRF projects, you may skip to **Step 21** once this step is completed.

Step 18 *ER Specialist Prepares and Issues FNSI.*

If appropriate, the ER Specialist will issue the FNSI. The ER Specialist will distribute the FNSI to interested parties and put it out for a mandatory 30-day period to allow input or comments. During this time, interested parties may prepare comments in response to the FNSI and submit them to SRF.

The ER Specialist will evaluate any comments received in response to the FNSI to determine if the FNSI is appropriate as written or needs revision or if there are any adjustments to the project needed to resolve any warranted concerns. If comments warrant, the ER Specialist will revise the FNSI; if this is necessary, the ER Specialist will reissue the FNSI and a new 30-day review period will begin.

Step 19 *SRF Issues FNSI Clearance Letter.*

After the 30-day period, if there are no significant comments or issues, the FNSI is considered cleared and the project can proceed. The ER Specialist will notify Owner as well as the SRF Finance Officer, who will communicate with the Owner on how to begin the process of obtaining an SRF construction loan.

The project is now ready for the DESIGN phase.

PROJECT DESIGN

Step 20 **Consultant Prepares Project Design.**

Using *Recommended Standards for Water Works*, published by the Great Lakes-Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers (also known as the Ten States Standards), and Iowa Administrative Code 567 Chapter 43, the Consultant prepares the plans and specifications for the project.

Please note: For DWSRF projects, development of plans and specifications can take place at any time after the PER is approved, but construction permits will not be issued until after the FNSI clears.

Step 21 **Owner/Consultant Prepare Contract Specifications and Plans.**

Please note: Certified well contractors are required for all well projects.

Step 22 **Owner/Consultant Prepare SRF Front-End Documents.**

The Owner must include several required front-end documents in contract specifications. These requirements are explained in Exhibit 7. If possible, the documents included in Exhibit 7A should be inserted verbatim into the construction specification. These front-end specifications will be reviewed by the DNR project manager as part of the construction permit approval process to ensure compliance with state and federal laws and regulations.

Exhibit 7: SRF Front-End Specification Instructions
Exhibit 7A: SRF Required Front-End Specifications

Step 23 Consultant Submits Construction Permit Application and Fee.

A public water supply construction permit must be obtained from Iowa DNR prior to the construction or modification of any source, treatment, storage or distribution system of a public water supply. To obtain a construction permit, plans and specifications, along with the applicable construction permit application forms and fees, must be submitted to the Iowa DNR.

In addition, for proposed wells, the Owner must submit proof of legal control of the land for a 200-foot radius around the well (see IAC 567 Chapter 43.3(7) for more information).

Schedule 1a, requesting general information, and Schedule 1c, the fee calculation form along with applicable fee, must be provided with all applications for a construction permit. The other forms (schedule 2a through 16d) are required based upon the nature of the project (e.g., water mains or well construction). The Water Supply Service Agreement form is required for all projects where the applicant is someone other than the supplier of the water.

All forms and schedules are available on-line at <http://www.iowadnr.com/water/wse/conpermits.html>.

Step 24 DNR Issues Construction Permit.

Once the construction permit is issued, the project is ready to proceed to bidding, financing, and CONSTRUCTION

PROJECT CONSTRUCTION

Step 25 *Owner Bids Project and Signs DWSRF Loan.*

Once the construction permit is issued, the Owner goes out for bids for the project. At this point, if they haven't done so already, the SRF will contact the Owner about closing the DWSRF loan. If the community qualifies for Disadvantaged Community status, the Consultant can use Exhibit 8, a worksheet to calculate the weighted average useful life of the project.

Exhibit 8: DWSRF Extended Financing Worksheet

Step 26 *Consultant Submits Bid Document Package to SRF.*

When bids are received and the Owner accepts a bid proposal, the Consultant prepares and submits to SRF a packet of documents. Required documents, which are listed in Exhibit 9, include bid information, contractor certifications, contracts, and other information. When all the information is complete, SRF issues to the Owner a letter of concurrence in award, which also explains the amount of bid that is eligible for DWSRF reimbursement.

Exhibit 9: SRF Bid Document Checklist

Step 27 *During Construction, SRF and DNR Reviews Cost Eligibility.*

After signing a DWSRF loan, the Owner will submit reimbursement requests to the SRF Finance Officer as costs are incurred. The DNR project manager will review those requests to make sure all the costs claimed are eligible.

Step 28 *During Construction, Owner Submits Change Orders to DNR.*

Change orders and addenda that affect the scope or nature of the project must be submitted to the DNR project manager before enacting.

For all DWSRF projects, this also includes change orders that could affect the project location. These changes could affect project eligibility or funding. All change orders and addenda must be submitted for approval before final loan disbursements are made.

Please note: All change orders and addenda require a signature and seal from the Consultant.

Step 29 *DNR Conducts Inspections.*

For non-DWSRF projects, DNR may conduct interim and/or final inspections as needed.

For DWSRF projects, interim inspections at appropriate times in the construction schedule may be conducted as needed, and a final inspection will be conducted for all projects. The final inspection will be conducted after the Owner has notified the SRF Finance Officer that the construction is completed.

Step 30 Owner Receives and Returns Construction Completion Card.

DNR sends the "Notification of Completion of Construction" card to the Owner, with permit, project, and facility information pre-filled. The Owner adds the date of project completion and signs the card and returns it to DNR. The information may also be submitted by letter or e-mail.

Step 31 Owner Submits Final Loan Disbursement Request.

The Owner sends the final loan disbursement request to the SRF Finance Officer. Before payment, the following items must be submitted:

- *Final construction payment estimates signed by the contractors, engineer and city showing no retainage, or provide evidence that retainage has been released*
- *Engineer's certification of project completion*
- *City's resolution or certification from the engineer of project completion signed by the city*
- *Written notification of works in operation*
- *Final inspection by DNR project manager*
- *Final minority/women owned business documentation*
- *Any change orders that have not been approved by DNR project manager*

**END OF WATER SUPPLY CONSTRUCTION PERMITTING PROCESS
THANK YOU!**