2015 Drinking Water Infrastructure Needs Survey and Assessment

Instructions

Please take a few minutes to read through these *Instructions*, the *Lists of Codes*, and the questionnaire before beginning.

What is the Purpose of the Survey?

- The 2015 Drinking Water Infrastructure Needs Survey and Assessment (DWINSA or Assessment), captures the 20-year (January 1, 2015 through December 31, 2034) infrastructure needs of public water systems eligible for Drinking Water State Revolving Fund (DWSRF) monies. The DWSRF provides low interest loans and other forms of financial assistance to water systems.
- The results of the Assessment document the total national, state-specific, American Indian, and Alaska Native Village infrastructure need for drinking water systems. The results are reported to Congress and are used to allocate DWSRF monies for fiscal years 2018 through 2021. ***Your participation is critical to the success of the survey and to your state's or EPA Region's DWSRF allotment.***

What is a "need?"

For the purposes of the Assessment, a "need" is a project related to installation or major rehabilitation of capital infrastructure required now or within the next 20 years to continue to provide safe drinking water to your current consumers. Infrastructure needs, based on sound engineering practices, are those that will preserve the physical integrity of the water system and protect public health. Do not include needs for future growth (anticipated or speculative); however, projects necessary for existing customers can be **sized** for reasonably anticipated growth.

How Does the Assessment Work?

- Approximately 2,800 of the 52,000 community water systems in states, District of Columbia, Puerto Rico, Northern Mariana Islands, American Samoa, Guam and the U.S. Virgin Islands have been selected to participate in the Assessment.
- The needs of each participating system are extrapolated and added to the needs of other systems that were surveyed in previous Assessments to represent the state-specific, American Indian, and Alaska Native Village need.

What is My Role?

- Your role is to assess your water system's infrastructure and record projects necessary to continue to meet the needs of current water users over the next 20 years. Do not include projects substantially associated with future (anticipated or speculated) population growth.
- Each project must be documented or described to show how it would address a current or future water quality and/or quantity deficiency for existing customers. Whenever possible, please use existing documentation such as a Capital Improvement Plan (CIP), Master Plan, or a sanitary survey report.
- If at all possible, please provide any existing project cost estimates. However, do not generate a cost estimate for this Assessment. If a project does not have a documented cost estimate, please provide design parameters (e.g., length and diameter of pipe needed) so EPA can model the costs.

What am I asked to do?

- Read these *Instructions*, the *Lists of Codes*, and the questionnaire.
- Identify 20-year project needs from January 1, 2015 through December 31, 2034.
- Record projects and identify the type of documentation submitted for each project.
- Send the completed questionnaire and documentation to your designated Assessment coordinator by *July 17, 2015* or call them to make other arrangements.

How Do I Identify Projects to Be Included?

- Begin by reviewing your system inventory and consider projects that you will need to address within the next 20 years. The inventory tables in the questionnaire are optional but are provided to help you identify your needs.
- Next, refer to any planning documents available for your system. Many projects listed in your CIP or Master Plan may be allowable needs. If you participated in the 2011 survey, your state will provide you with your data from that survey as a starting point.
- Use "List 1 - Type of Need" in the accompanying *Lists of Codes* to help prompt you to consider the types of projects to be included.
- Include projects as necessary for **new** infrastructure; to **replace** or **rehabilitate** existing infrastructure; or in the case of a complete treatment plant, to **expand/upgrade** the plant.
- Current and Future Needs – Include projects that are needed now as well as projects that will be necessary over the next 20 years to address the needs of your existing customer base.
- Include only one project to address any given piece of infrastructure. For example, if you have a project for the construction of a tank, do not include the subsequent rehabilitation of that tank in the future.
- Include only projects that did not begin construction as of January 1, 2015. You may, however, include future phases of a project if it will be built in phases.

How is the Questionnaire Organized?

- The questionnaire consists of a projects table on which infrastructure projects are recorded. The table addresses the categories listed below:
  - Source, Treatment, Storage, and Pumping Projects.
  - Transmission and Distribution Projects.
  - Meters, Service Lines, Backflow Prevention Devices/Assemblies, Valves, etc.
- The questionnaire includes a documentation summary page for you to record information about the need for each project. See page 3 for information about documenting the need for each project.
- The questionnaire also includes water system inventory tables. While NOT REQUIRED, completing these tables can help you to consider your system's entire inventory and assess which of your system's infrastructure may need attention within 20 years.

What Types of Projects Should Not Be Included?

- Projects or costs that are not DWSRF-eligible:
  - A project with a substantial portion of the reason for the project being for fire flow, fire protection, or Insurance Services Office (ISO) ratings.
  - A project with a substantial portion of the reason for the project being to meet demand of expected future (anticipated or speculated) growth or to encourage future expansion or development that is not also necessary to meet the needs of existing customers.
  - Projects intended for land acquisition unrelated to the siting of another project. However, land purchase as part of a project, such as to locate a tank, would be eligible.
  - Projects required for dams or raw water reservoirs.
- Projects or costs that are not for capital improvements, such as:
  - Projects for studies or watershed control programs.
  - Operations and maintenance needs/costs, laboratory analytical costs, or sample collection.
  - Costs associated with staff.
  - Loan interest and fees.
- Projects that are not associated with maintaining or obtaining safe drinking water, such as:
  - Landscaping or other projects for appearance.
- If documentation implies a project is for one of the above reasons but you are aware of additional reasons the project is needed, you may provide a signed statement clarifying why the project would address an allowable need.

Current Need – projects that are needed now, even if you may not be able to start construction immediately due to budget or other issues.

Future Need – projects that you know will be necessary over the next 20 years, but are not needed immediately (example: a tank that is currently operational but will require rehabilitation in 15 years).

Future Growth – projects for which a substantial portion is needed to accommodate anticipated or speculated future growth. These projects are not DWSRF-eligible and are not included in the Assessment.

How Do I Provide Project Documentation?

Every project recorded on the questionnaire must be accompanied by documentation that discusses the reason(s) the project is needed. In addition, in order to assign a cost to a project, you must provide either an existing documented cost estimate (e.g. from an Engineer's Estimate or Capital Improvement Plan) or sufficient information for the project to be assigned a cost using cost models.

Please mark-up the documentation indicating where each project is discussed. Use tabs, highlighters, or simply write the project number in the margin of each applicable page.

- **Documentation Types** - See List 4 in the *Lists of Codes* for specific types of documentation. The two categories of documentation are:

  A. Independent – generated through a process independent of the Assessment (examples include a CIP, Master Plan, laboratory results, sanitary survey report, or bid tabulation).

Some project types require independent documentation of need. These include:

- New Surface Water Intakes
- New Aquifer Storage and Recovery Wells
- New Off-Stream Raw Water Storage
- New Treatment Plants and Treatment Components
- Replacement or Expansion/Upgrade of an Existing Treatment Plant
- New Raw and Finished Transmission Mains and New Distribution Mains
- Pipe Replacement and Rehabilitation in Excess of 10 percent of Your Pipe Inventory
- New Storage Tanks
- New Pump Stations

  B. Survey-generated – written specifically for the purposes of this Assessment. It must include project details such as age, condition, or associated problems to explain why the project is needed.

  Independent documentation often does not directly address the allowability of the need for the purposes of this Assessment; therefore, survey-generated documentation may be added to clarify the need for the project.

Example of Survey-generated Documentation:

"Project 1006 is for a well to replace the existing well. The existing well was drilled in 1957. It has never had major work done other than replacing the pump. It has lost production capacity substantially due to iron build-up on the screen. In addition, development with on-site septic systems in the area of the well has compromised the source's water quality. We need to replace this well with a new source in the northeast section of town."

Pipe Projects and Survey-generated Documentation:

If any pipe replacement or rehabilitation project relies solely on survey-generated documentation, please include:

- The total length of pipe in your system on the Transmission and Distribution inventory table or the questionnaire cover sheet, and
- Length (in feet) for each of your pipe rehab or replacement projects listed on the questionnaire.

- **Documentation of Need**

  – Documentation must provide enough information to indicate that the project is for an allowable need (i.e., project addresses a current or future water quality and/or water quantity deficiency facing existing customers). If an independent document is not available or does not specifically address why a project is needed, please provide survey-generated documentation which consists of a signed statement indicating why the project is needed (please refer to the example of survey-generated documentation).

  – Documentation of need must ***be less than 4 years old***. If you have documentation dated prior to January 1, 2011, it may be used if supplemented with a signed statement indicating the project is still needed, construction has not started as of January 1, 2015, and that the project is still within its original scope.

- **Documentation of Cost**

  - EPA needs either a cost estimate or sufficient information to model the cost of each project.

  - Cost estimates must be from independent documentation such as a CIP, Master Plan, or bid tabulation. See List 4 in the *Lists of Codes* for a list of common cost documentation types. Please indicate the date the estimate was generated (which is often the date of the documentation), and EPA will adjust to current year dollars. Do not adjust costs yourself.

  - Cost estimates must be less than 10 years old (after January 1, 2005).

  - If there is no independent estimate of cost for a project, simply include the modeling parameters (design capacity in MG or MGD, length and diameter in feet and inches, or number needed as applicable) so EPA can estimate the cost using cost models.

How do I submit large pieces of documentation?

If you're using a large document such as a CIP, you may submit the entire document or make copies of the pertinent pages.

If you choose to send only pertinent pages, be sure to include a copy of the cover page with the document title and date.

How Do I Represent a Project on the Questionnaire?

- Familiarize yourself with the *Lists of Codes* and the questionnaire.
  - Pages 1 and 2 of the *Lists of Codes* have important information about the data collected on the questionnaire.
  - See page 5 of these instructions for examples of how to list projects.
- Enter a project name and the appropriate codes across each row for each project you have identified.
- Document the need for all projects and any cost estimates that are recorded. Identify each piece of documentation by the related project number.
- Enclose the necessary documentation for each project with the completed questionnaire in your submittal.
- For project examples and helpful hints, refer to the following two pages.

An electronic version of this questionnaire package and other materials that may be useful for completing the questionnaire, such as a complete dictionary of types of need, are available for downloading at www.DWNeeds.com.

Also, if you have questions, please call your Assessment coordinator.

Project Examples and Helpful Hints

Descriptive project name is used.

The appropriate codes are identified in each column.

Regulation code or 'other' code is recorded when applicable, or 4A is used if none apply.

Two wells at 0.5 MGD capacity each need to be rehabilitated and the cost will be modeled.

All applicable types of documentation are recorded.

Project Number	Project Name	Type of Need	Reason for Need	N.E.R.H (New Expand Replace ReHab)	C or F (Current Future)	Regula-tion	Design Capacity (MG, MGD, or kW)	Diameter (inches)	Length (feet)	Number Needed	Cost Estimate	Cost Date (mm/yyyy)	Documen-tation
1000	Rehabilitate Wells 3 and 8	R1	A1	H	F	4A	0.5			2			6, 11
1001	New storage tank and pump station	S1, P2	A4	N	C	4A					$1,700,000	08/2014	1
2000	Replace 8" mains	M1	A1, A6	R	C	1B		8	50,000		$6,500,000	02/2015	1, 10
3000	Replace residiential meters	M8	A1	R	F	4A		0.625		13,865			10

More than one type of need may be appropriate if cost is provided. However, if you do not have a documented cost, please list only one type of need per project number so EPA can assign a cost.

Two reasons for need are recorded; more than one code can be used.

Modeling parameters are provided when available, even if cost is also provided.

Cost and date of cost provided. Date allows cost to be adjusted to 01/2015 dollars by EPA.