

2011 Drinking Water Infrastructure Needs Survey and Assessment

Quick Reference Sheet

Important Definitions for the Assessment

Climate Readiness: Adapting to and addressing climate change impacts on infrastructure and systems' ability to provide a safe, reliable supply of water.

Consecutive System: A water system that purchases finished water from another system (not including water purchased for emergency uses).

Current Need: A project that is needed now so that the system can continue to provide water to its consumers or to avoid a threat to public health. A need can be considered current even if the system is unable to address it immediately for any reason (e.g., funding, competing priorities).

Design Capacity: The flow that can be produced or volume that can be accommodated by a recorded project. Compare to "Total Design Capacity."

Distribution: Water mains that transport water through a piping grid serving customers. Compare to "transmission."

Expansion/Upgrade: As defined for the Assessment, a project to provide major improvements to an existing complete treatment plant. It may add or change unit processes and may or may not result in an increase in capacity. Compare to "New," "Rehabilitate," and "Replace."

Future Growth: Projected expansion of a system's population, service area, or industrial users. Capital improvement needs that substantially accommodate projected future growth are not included in the Assessment. However, projects that are needed to address a problem facing existing customers can be designed for growth expected during the design life of the project.

Future Need: A project that is not necessary at the current time but the system expects to address in the next 20 years due to predictable deterioration of facilities or other predictable events.

Green Infrastructure: Products, technologies, and practices that use natural systems – or engineered systems that mimic natural processes – to enhance overall environmental quality and provide utility services. Categories include green infrastructure, water efficiency, energy efficiency, and environmentally innovative.

Independent Documentation: Documentation generated through a process independent of the Assessment.

Need: A project related to installation or significant rehabilitation of capital infrastructure required now or within the next 20 years. Infrastructure needs are those that will preserve the physical integrity of the water system and protect public health.

New: As defined for the Assessment, a project to install infrastructure where none currently exists. Compare to "Expansion/Upgrade," "Rehabilitate," and "Replace."

Population Served: The sum of the population served directly by the system and the population served by water systems that regularly buy finished water from the system.

Rehabilitate: Existing infrastructure will be restored to near-new condition. Compare to "Expansion/Upgrade," "New," and "Replace."

Replace: Existing infrastructure will be replaced with new, similar components (e.g., a 4-inch pipe may be replaced by a 6-inch pipe). Compare to "Expansion/Upgrade," "New," and "Rehabilitate."

Survey-Generated Documentation: Documentation written specifically for the Assessment.

Total Design Capacity: The flow, in MGD, of the system including design capacity of all permanent sources and treatment facilities. It does not include emergency capacity. Compare to "Design Capacity."

Transmission: Water mains that transport raw water to the treatment plant or treated water from the plant to the distribution system grid. Compare to "distribution."

Weight of Evidence: When the adequacy of documentation of need will be determined based on a high level of system-specific and project-specific detail.

Documentation of Need Categories

Projects to which weight of evidence review is applied

- Sources – wells, well houses, or springs; and replacement or rehabilitation of aquifer storage and recovery wells or surface water intakes
- Sources – new surface water intakes, new aquifer storage and recovery wells, new off-stream raw water storage (**independent documentation required**)
- Treatment – new complete treatment plants; and replacement or expansion/upgrade of complete treatment plants (**independent documentation required**)
- Treatment – new disinfection equipment or new treatment plant components (**independent documentation required**)
- Storage – new ground or elevated storage tanks (**independent documentation required**)
- Storage – new hydropneumatic tanks; and replacement of ground or elevated storage tanks
- Pipe – new pipe (independent documentation required)
- Pipe rehabilitation and replacement rate in excess of 10% total if survey-generated documentation is used for any replacement or rehabilitation of pipe project (**independent documentation required**)
- Hydrants and valves (excluding control valves)
- Pumps – new pump stations (independent documentation required)
- Pumps – new raw water, new well pump, or new finished water pump; and replacement of pump station
- New emergency power
- Security projects

Projects for which all forms of documentation are accepted

- Sources – eliminate well pit, abandon well, de-stratification, and replacement or rehabilitation of off-stream raw water storage
- Treatment – complete treatment plant rehabilitation; and replacement or rehabilitation of disinfection equipment or treatment plant components
- Storage – ground or elevated storage tank rehabilitation, tank covers, cisterns, replacement or rehabilitation of hydropneumatic tanks
- Pumping – replacement or rehabilitation of raw water, well, or finished water pumps; and rehabilitation of pump stations
- Pipe – rehabilitation and replacement within 10% policy limits
- Others including service lines, lead service line replacements, control valves, backflow prevention, meters, controls, replacement of emergency power, and laboratory capital costs

Allowable and Unallowable Needs

- Capital improvement projects to continue to provide adequate water quality and quantity to existing customers are generally **allowable** with exceptions listed below (not intended to be a complete list).
- The following are examples of **unallowable** needs:
 - Projects that are not SRF eligible such as projects where a **substantial portion** is intended to serve future growth or to promote future system expansion; a **substantial portion** is planned for fire protection; for source water protection; or for dams and reservoirs.
 - Projects that are not for capital improvements such as O & M expenses, development of master plans or studies, water rights, administrative costs, or laboratory fees.
 - Projects that do not directly support the goals of the SDWA such as demolition of abandoned facilities unless integral to an allowable project (except well abandonment), building appearance or aesthetics, land acquisition unless integral to an allowable project, vehicles and tools (except for those used for treatment or waste disposal).
 - Projects that have begun construction as of January 1, 2011.
 - Multiple projects that meet the same need or repeated projects that address the same piece of infrastructure such as a project for a new well and another separate project to replace the well pump at a later date (because the well code includes the well pump).
 - Others including acquisition of existing infrastructure, projects driven by a non-water-related need, and projects for compliance with proposed or recently promulgated regulations.

Projects for Which Costs Cannot Be Modeled

- Generally if a cost is not available for a project, the cost can be modeled by EPA. However, costs cannot be modeled for the following types of need (a documented cost estimate must be provided for the project):
 - Off-stream raw water storage
 - De-stratification
 - Laboratory equipment
 - Security projects other than fencing (W6 – W9)
 - Land acquisition incidental to another project
 - Projects coded as other in List 1, *Lists of Codes* (T46, W10)