

Introduction to the 2015 Drinking Water Infrastructure Needs Survey and Assessment

What is the Needs Assessment?

The drinking water infrastructure needs survey and assessment is a 20-year forecast of capital spending on water system infrastructure construction, rehabilitation, and replacement necessary to meet the public health goals of the Safe Drinking Water Act. The U.S. Environmental Protection Agency (EPA) requires states to complete the Needs Assessment every four years.

EPA selected 55 of Washington's community water systems to participate in the 2015 survey ([see Table 1](#)). The selected systems include the 11 "large" systems in our state (defined as a community water system with a total population over 100,000) and a statistical sampling of "medium" systems (defined as a community water system where the total population falls between 3,301 and 100,000).

The aggregate capital improvement needs for our state will be determined by adding up the following:

- Each large system needs.
- Medium-sized system needs calculated by the defined needs of each surveyed system multiplied by the sampling weight assigned to that system. Medium-sized systems in this year's sampling pool have statistical weights ranging from two to nine.
- Past Needs Assessment cost data for small systems and non-community systems, updated to 2015 costs.

For the past 18 years, Congress appropriated funds to capitalize the national drinking water state revolving loan fund (DWSRF). Last year EPA distributed \$884 million in DWSRF funds to states, and Washington State received \$19.7 million (2.23 of the national total). [See Figure 1](#) for the history of annual congressional DWSRF appropriations and Washington's annual share of DWSRF funds.

Based on 2011 Needs Assessment data, EPA calculated the capital improvement needs of Washington's Group A public water systems through the year 2031 at \$9.5 billion. The final 2011 Needs Assessment report prepared by EPA can be viewed at http://water.epa.gov/grants_funding/dwsrf/upload/epa816r13006.pdf.

Why is the Needs Assessment Important to all of Washington's Water Utilities?

Washington's share of the national DWSRF appropriation will be determined by our share of the 2015 updated national 20-year need. A small change in Washington's share of the national need makes a big difference in how much we have available to loan to water utilities. In the 2007 Needs Assessment, Washington's need was 2.55 percent of the national need; in 2011 that value declined to 2.23 percent. Had Washington maintained its 2007 share, we would have received from EPA over \$3 million more per year to loan to Washington's public water systems.



So an accurate and complete needs assessment will result in more money available to Washington State water systems. Our success in working with participating utilities to identify every allowable 20-year capital expenditure directly affects how much money we will have available to loan during the next four-year period, and beyond.

We know it's important to make available every possible dollar to Washington's water utilities to help them meet their mounting capital investment needs. In the last DWSRF loan cycle, we were able to fund only 60 percent of the loan amount requested. [See Figure 2](#) for the history of loan requests and loan funds available. We are committed to do all we can so that utilities have access to the capital funding they need to ensure delivery of safe and reliable drinking water to the people of Washington State.

Why is the Needs Assessment Important to the Office of Drinking Water?

We use a portion of our annual DWSRF capitalization grant to fund our operations. Each year we may "set aside" a portion of our annual capitalization grant to meet the public health goals of the Safe Drinking Water Act. These funds provide us with flexibility to respond to the changing needs of water utilities. We've used this money to:

- Develop statewide source water protection mapping and data storage capabilities.
- Fund our source water protection, pre-construction, and consolidation/feasibility study grant programs.
- Pay third-party technical assistance contractors.
- Fund our treatment optimization program.
- Pay the salaries of certain staff and buy certain equipment.
- Support local health jurisdictions working on our behalf (subsidize the cost of sanitary surveys, technical assistance, special purpose investigations, emergency response).

[See Figure 3](#) for the history of how “set asides” have funded our state drinking water program operating costs.

Our Goal and Strategy

Our goal is to collect information about every allowable infrastructure cost from participating utilities in the most efficient and least disruptive way possible. Over 80 percent of the utilities participating in the 2015 Needs Assessment also participated in the 2011 Needs Assessment. Our goal with these systems is to update their 2011 information. We will need to invest more time to develop base-line information for the seven utilities that did not participate in 2011.

Our strategy to work with participating utilities:

- We’ve assigned a main point of contact to work with each water utility. [See Table 1](#) for assignments.
- Communicate by phone and in writing with each water utility, and request the utility assemble records. [See Table 2](#) for a summary of information we need utilities to assemble for us.
- We’ve assigned participating utilities into three groups, and will complete data collection from utilities in each group within a two-month period (April-May, June-July, or August-September)
- Meet at the utility and collect inventory and project information. [See Table 1](#) for proposed field visit schedule.
- Update 2011 Needs Assessment survey information (for systems that participated in 2011)
- Assemble inventory information and project documentation, confirm with the utility, and submit to EPA

Project Schedule

EPA released the Needs Assessment to states on June 10, so we can now begin working with our water utilities collecting data. Our data collection work with utilities, and preparing final documentation to EPA, must be complete by the end of January 2016.

- Complete site visits by staff within the assigned two-month period. See site visit schedule on Table 1.
- Complete survey documentation, confirm information with utility, and submit to EPA within two months after site visit.

**Table 1
List of Participating Utilities**

Region	PWS ID	WS Name	County	ODW Lead Contact	2011 Survey	Site Visit Period
Eastern	12300	CHELAN, CITY OF	Chelan	Ben Serr	No	Aug. - Sept.
Eastern	12400	CHENEY, CITY OF	Spokane	Ben Serr	Yes	June - July
Eastern	38100	KENNEWICK, CITY OF	Benton	Brian Saysr	Yes	June - July
Eastern	66400	PASCO WATER DEPARTMENT	Franklin	Brian Saysr	Yes	June - July
Eastern	69750	PROSSER, CITY OF	Benton	Brian Saysr	Yes	Oct-Nov
Eastern	70450	QUINCY, CITY OF	Grant	Brian Saysr	No	Aug. - Sept.
Eastern	77400	SELAH, CITY OF	Yakima	Brian Saysr	No	Aug. - Sept.
Eastern	83100	SPOKANE, CITY OF	Spokane	Ben Serr	Yes	June - July
Eastern	92500	WALLA WALLA WATER DIVISION	Walla Walla	Brian Saysr	Yes	Aug. - Sept.
Eastern	06029	YAK CO - TERRACE HEIGHTS	Yakima	Brian Saysr	Yes	Oct-Nov
Northwest	01300	ALDERWOOD WATER DISTRICT	Snohomish	Richard Rodriguez	Yes	June - July
Northwest	02200	ANACORTES, CITY OF	Skagit	Nancy Feagin	Yes	Aug. - Sept.
Northwest	05575	BELLEVUE, CITY OF	King	Nancy Feagin	Yes	Aug. - Sept.
Northwest	05600	BELLINGHAM, CITY OF	Whatcom	Jolyn Leslie	Yes	June - July
Northwest	07300	BLAINE, CITY OF	Whatcom	Jolyn Leslie	Yes	Aug. - Sept.
Northwest	AA374	CASCADE WATER ALLIANCE	King	Bob James	No	June - July
Northwest	41800	CEDAR RIVER W & S DISTRICT	King	Richard Rodriguez	Yes	Oct. - Nov.
Northwest	20750	DUVALL, CITY OF	King	Scott Torpie	Yes	June - July
Northwest	22500	EDMONDS, CITY OF	Snohomish	Steve Deem	Yes	Oct. - Nov.
Northwest	24050	EVERETT, CITY OF	Snohomish	Erica Lindsey	Yes	June - July

Region	PWS ID	WS Name	County	ODW Lead Contact	2011 Survey	Site Visit Period
Northwest	26800	FRUITLAND MUTUAL WATER CO.	Pierce	Jennifer Kropack	No	June - July
Northwest	40650	HIGHLINE WATER DISTRICT	King	Jennifer Kropack	No	Oct. - Nov.
Northwest	36350	ISSAQUAH WATER SYSTEM	King	Bob James	Yes	Aug. - Sept.
Northwest	41997	LAKEHAVEN UTILITY DISTRICT	King	Sam Perry	Yes	June - July
Northwest	49150	LYNDEN WATER DEPARTMENT	Whatcom	Jolyn Leslie	Yes	Oct. - Nov.
Northwest	51900	MARYSVILLE UTILITIES	Snohomish	Derek Pell	Yes	Aug. - Sept.
Northwest	57250	MOUNTLAKE TERRACE, CITY OF	Snohomish	Steve Deem	Yes	Oct. - Nov.
Northwest	39600	NORTH CITY WATER DISTRICT	King	Steve Deem	Yes	Aug. - Sept.
Northwest	40800	NORTHSHORE UTILITY DISTRICT	King	Steve Deem	Yes	Aug. - Sept.
Northwest	63600	OLYMPIC VIEW W & S DISTRICT	Snohomish	Derek Pell	No	Oct. - Nov.
Northwest	65300	PACIFIC, CITY OF	King	Sam Perry	Yes	Oct. - Nov.
Northwest	70850	RAINIER SCHOOL	Pierce	Scott Torpie	Yes	Aug. - Sept.
Northwest	71650	REDMOND, CITY OF	King	Bob James	Yes	June - July
Northwest	71850	RENTON, CITY OF	King	Sam Perry	Yes	Aug. - Sept.
Northwest	40900	SAMMAMISH PLATEAU W & S	King	Nancy Feagin	Yes	June - July
Northwest	77050	SEATTLE PUBLIC UTILITIES	King	Steve Deem	Yes	June - July
Northwest	38800	SKYWAY WATER & SEWER	King	Bob James	Yes	Oct. - Nov.
Northwest	40100	SOOS CREEK W & S DISTRICT	King	Richard Rodriguez	Yes	Aug. - Sept.
Northwest	82844	SOUTHWOOD WATER SYSTEM	Pierce	Virpi Salo-Zieman	Yes	Oct. - Nov.
Northwest	86800	TACOMA, CITY OF	Pierce	John Ryding	Yes	June - July

Region	PWS ID	WS Name	County	ODW Lead Contact	2011 Survey	Site Visit Period
Southwest	15650	BEACON HILL W & S DISTRICT	Cowlitz	Susan Clark	No	Aug. - Sept.
Southwest	10800	CAMAS, CITY OF	Clark	Susan Clark	Yes	Aug. - Sept.
Southwest	12250	CHEHALIS WATER DEPARTMENT	Lewis	Mark Mazeski	Yes	Oct. - Nov.
Southwest	26000	FORKS MUNICIPAL WATER DEPT	Clallam	Mark Mazeski	Yes	Oct. - Nov.
Southwest	35500	ILWACO, CITY OF	Pacific	Mark Mazeski	Yes	Aug. - Sept.
Southwest	38000	KELSO, CITY OF	Cowlitz	Susan Clark	Yes	Aug. - Sept.
Southwest	43500	LACEY WATER DEPARTMENT	Thurston	Mark Mazeski	Yes	June - July
Southwest	50700	MANCHESTER WATER DISTRICT	Kitsap	Susan Clark	Yes	Oct. - Nov.
Southwest	63000	NORTH BEACH WATER	Pacific	Mark Mazeski	Yes	Aug. - Sept.
Southwest	63450	OLYMPIA, CITY OF	Thurston	Mark Mazeski	Yes	June - July
Southwest	68900	PORT ORCHARD WATER DEPT	Kitsap	Susan Clark	Yes	Oct. - Nov.
Southwest	04397	TANGLEWILDE-THOMPSON	Thurston	Mark Mazeski	Yes	Aug. - Sept.
Southwest	89700	TUMWATER, CITY OF	Thurston	Mark Mazeski	Yes	June - July
Southwest	91200	VANCOUVER, CITY OF	Clark	Susan Clark	Yes	June - July
Southwest	93400	WASHOUGAL, CITY OF	Clark	Susan Clark	Yes	June - July

Table 2
Information Needed from Utility

Inventory of Existing Infrastructure¹	Comment
Distribution and transmission mains	Length (feet) broken down by size (pipe diameter)
Reservoirs (raw water storage and finished water storage)	Elevated (stored volume is above the ground) or Ground-level (bottom of tank is in contact with the ground); and volume of each reservoir
Hydropneumatic (pressurized) storage	Volume of each tank
Well or spring (each source)	Rated production capacity (MGD) of each source
Well or spring pump (each pump)	Rated capacity (MGD) of each source pump
ASR well (each well)	Rated withdrawal capacity (MGD) of each well
Raw water source pump (each pump)	Rated production capacity (MGD) of each source pump
Booster pump station	Rated capacity of each station (MGD)
Customer service connections	Number broken down by size (diameter)
Customer service meters	Number broken down by size (diameter)
Emergency power (gen sets)	Rated kW of each unit
Backflow valves owned by the utility	Number broken down by size (diameter)
Distribution system control valves (PRVs)	Number broken down by size (diameter)
Treatment – complete system	Rated treatment capacity (MGD) of each treatment plant
Treatment – limited to chemical injection (e.g., disinfection, fluoridation)	Rated treatment capacity (MGD) of each treatment system
SCADA	Yes, utility has SCADA; or No, utility doesn't have SCADA

Specific projects ² planned through 2035	Comment
Specific projects identified in 2011 Needs Assessment ³	See footnote 3 below.
Pipeline replacement program	Length and size of pipe; phasing (if appropriate). Provide documentation of need (see footnote below); include cost estimate and estimate date.
New or replacement source, ASR project, reservoir, booster pump station, pumps, or treatment (complete or chemical injection)	Project need cannot be to primarily driven by growth or provision of fire flow. Provide documentation of need; include cost estimate and estimate date.
Membrane replacement or filter media replacement	Rated capacity (MGD) of membrane plant and replacement frequency
Upgrade to existing treatment plant	New treatment element (e.g., add UV or corrosion control) to an existing treatment process; include rated capacity (MGD).
Addition of new treatment	Example: adding disinfection or fluoridation treatment; include rated treatment capacity (MGD)
New emergency power facilities (no emergency power exists at present)	Rated kW per new unit

1. Also includes any component under construction before 01/01/2015 but not yet in service.
2. Each of these projects requires documentation of need. Documentation of need is project-specific documentation that describes the project scope and why the project is needed. Such documentation must be dated since 01/01/2011, or the utility must provide us pre-01/01/2011 documentation plus a signed statement affirming that the project is of the same scope, did no begin construction before 01/01/2015, and is still needed.
3. Applies only to those systems that participated in the 2011 Needs Assessment. During our field visit, our staff will review with the utility the following:
 - a. Inventory changes within the utility since 2011 (e.g., added a new reservoir, increased the capacity of a pump station, added new connections, installed new (not replacement) pipelines).
 - b. Identify capital projects listed in the 2011 Needs Assessment:
 - i. Started before January 1, 2015.
 - ii. Not started before January 1, and the utility is still committed to completing the project:
 1. Scope of project is unchanged.
 2. Scope of project changed since 2011 (e.g., new reservoir size increased from 1 MG to 2 MG).
 - iii. Not started, and the utility decided to abandon the project.

Figure 1

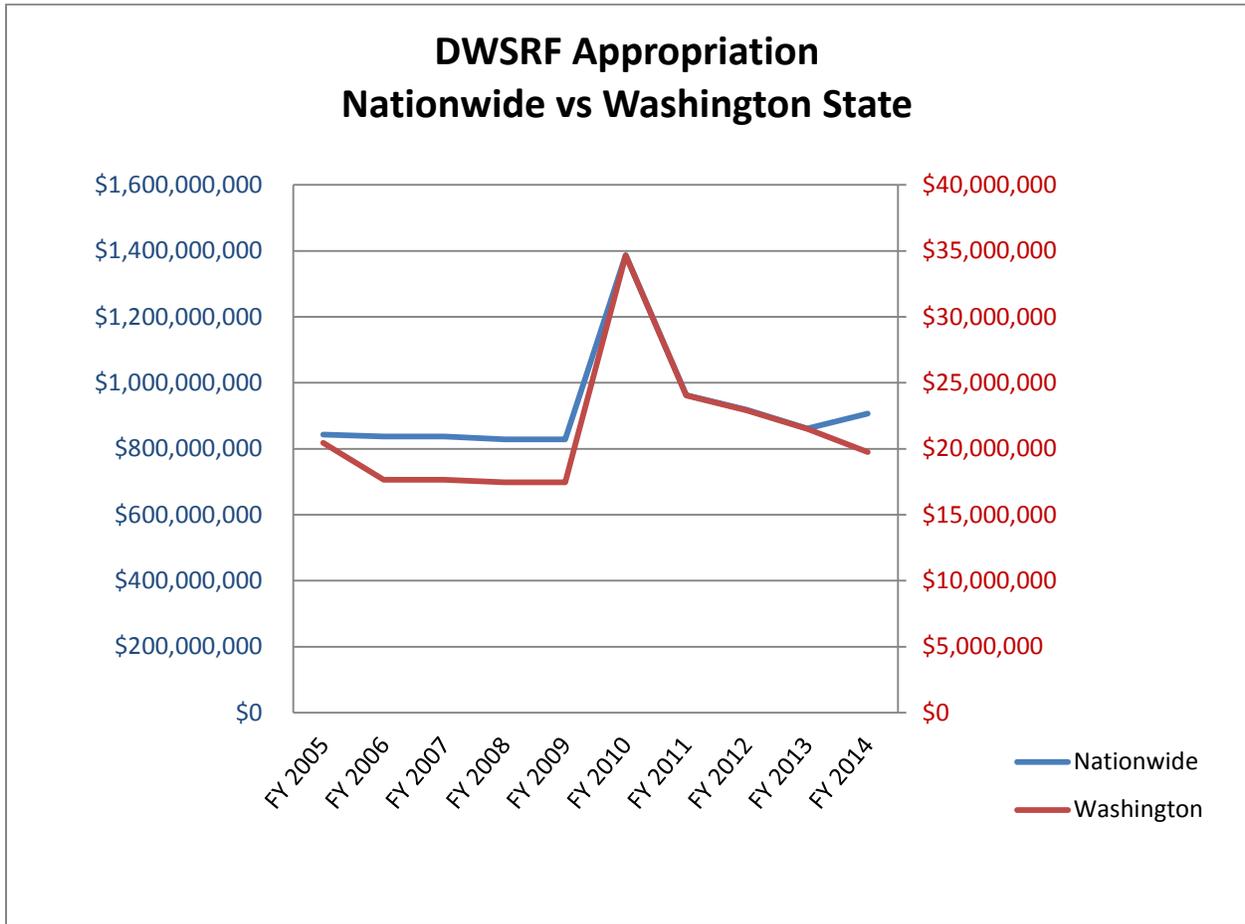


Figure 2

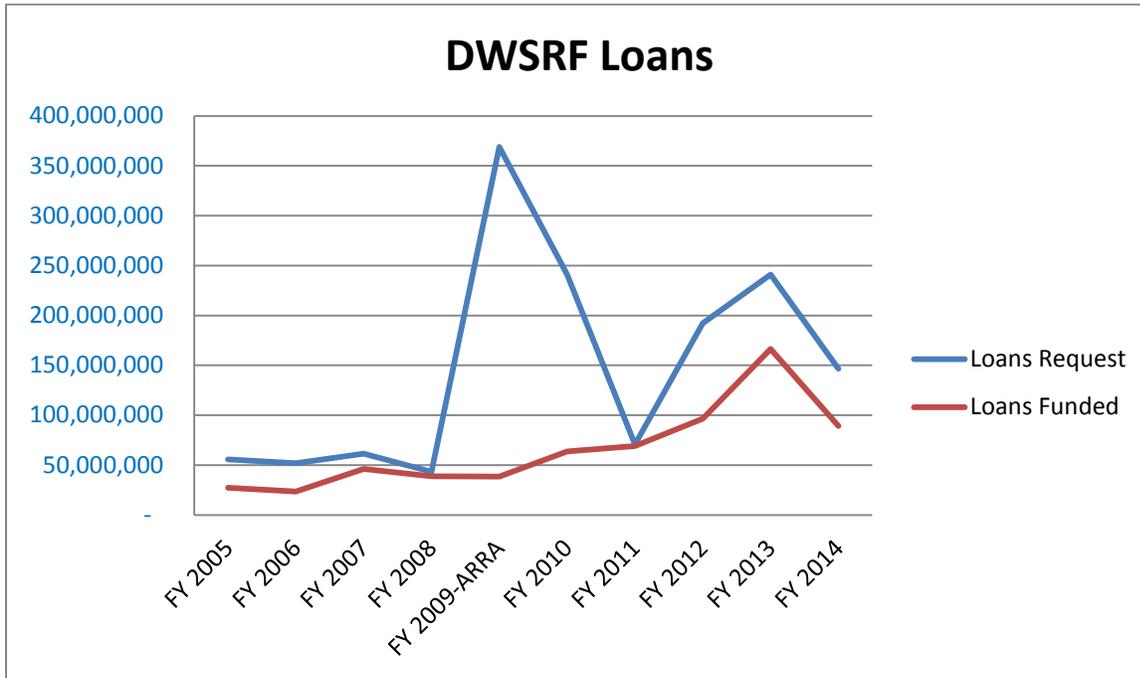


Figure 3

