

US EPA ARCHIVE DOCUMENT

FY 2011 National Water Program End of Year Performance by Subobjective

The following chapters provide a summary of the progress made toward accomplishing environmental and program goals for each subobjective described in the *FY 2011 National Water Program Guidance*. Each subobjective chapter includes the following information:

- A brief summary of overall performance in 2011 and the previous four years for measures under each subobjective.
- A description of performance highlights, including what commitments were met and what factors contributed to success.
- A description of management challenges, if appropriate, identifying key factors that led to measures not being met and next steps to improve performance for the future.

Each subobjective section focuses primarily on measures with FY 2011 commitments. Indicator measures are discussed where trends significantly differ from previous year's results. Annual Commitment System (ACS) measure codes (e.g., SP-1) are provided in the text in parentheses.

Key for Reading Performance Measure Charts and Tables

For all charts with national trend results, commitments are reflected by blue trend lines and results by vertical bars. For charts with regional FY 2011 results, a dotted line (in orange) indicates the national FY 2011 commitment for that particular measure. Although regions use the national commitment as a point of reference in setting their annual commitments, regional commitments may vary based on specific conditions within each region. Green bars in both national and regional charts identify commitments met, and red bars identify measures not met. A purple bar indicates that the Agency did not set a commitment for that year.

For the measure summary tables in each subobjective chapter, a green "up" arrow means that a measure met its FY 2011 commitment, and a red "down" arrow indicates that the annual commitment was not met. The letter "I" means that the measure is an indicator measure and did not have an annual commitment for FY 2011. Measures without data or not reporting in FY 2011 are indicated by "Data Unavailable." An "LT" symbol notes that the measure has a long-term goal and does not have an annual commitment. A gold star (★) in the past trends column highlights that the measure has met its annual commitment 100% of the time over the past four or five years. And finally, the appendix number represents the page in Appendix D (A-00) on the website where additional details about the measure can be found, and the figure number is the number of the chart in the chapter.

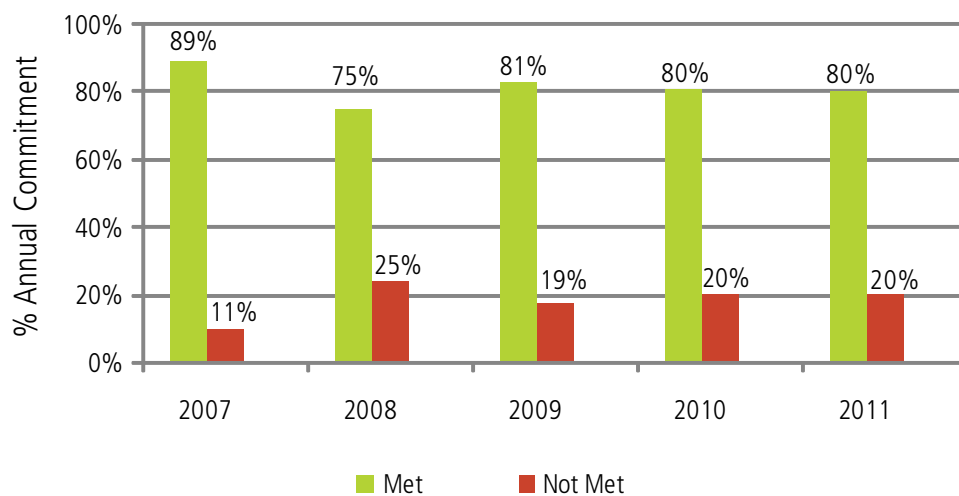




Subobjective: Water Safe to Drink

Eighty percent (80%) (12 of 15) of all drinking water measures met their commitments in 2011, while 20% (two of 15) of measures did not. EPA has maintained an average of 81% of commitments met under the Water Safe to Drink subobjective over the past five years. Data were available for all commitment measures for the fifth consecutive year (Figure 1).

**Figure 1: Drinking Water Subobjective
Five-Year Trend by Fiscal Year**



FY 2011 ACS Code	Abbreviated Measure Description	Commitment Met/Not Met (I = Indicator) (Data Unavailable = No Data/Not Reporting) (LT = Long-Term Target)	Past Trends: # of Years Met	Appendix Page Number (D-0)/ Figure Number
Subobjective 2.1.1 Water Safe to Drink				
2.1.1	Population served by CWSs	▲	5/5★	D-1/Fig. 2
SP-1	CWSs meeting safe standards	▲	4/4★	D-1
SP-2	"Person months" with CWSs safe standards	▲	4/4★	D-2/Fig. 4
SP-3	Population served by CWSs Indian Country	▲	3/5	D-2/Fig. 72
SP-4a	CWSs and source water protection	▲	5/5★	D-3/Fig. 8
SP-4b	Population and source water protection	▲	4/4★	D-4
SP-5	Tribal households safe drinking water	I		D-4
SDW-18	Indian and Alaska Native homes with safe drinking water	▼	0/1	D-5/Fig. 74
SDW-1a	CWSs with sanitary survey	▲	1/5	D-5/Fig. 6
SDW-1b	Tribal CWSs with sanitary survey	▲	5/5★	D-6
SDW-2	Data for violations in SDWIS-FED	I		D-6
SDW-3	Lead/Copper Rule data in SDWIS-FED	I		D-7
SDW-4	DWSRF fund utilization rate	▲	5/5★	D-7/Fig. 10
SDW-5	DWSRF projects initiated	▲	5/5★	D-8
SDW-7a	Class I wells with mechanical integrity	▼	2/3	D-8
SDW-7b	Class II wells with mechanical integrity	▼	2/3	D-9
SDW-7c	Class III wells with mechanical integrity	▲	1/3	D-10
SDW-8	High priority Class V wells	▲	3/4	D-10
SDW-11	DWSRF projects awarded to small PWS	I		D-11
SDW-12	% DWSRF dollars to small PWS	I		D-11
SDW-13	% DWSRF loans to disadvantaged communities	I		D-11
SDW-14	#/% CWS serving < 500 people	I		D-11
SDW-15	#/% small CWS with health-based violations	I		D-12
SDW-16	Average time small CWS returned to compliance	I		D-12
SDW-17	#/% schools/childcare meet safe standards	I		D-12

Notes: CWS=community water system; SDWIS= Safe Drinking Water Information System; SDWIS-FED=Safe Drinking Water Information System/Federal; DWSRF=Drinking Water State Revolving Fund.

FY 2011 Performance Highlights and Management Challenges

Compliance with Drinking Water Standards: The overall objective of the drinking water program is to protect public health by ensuring that public water systems (PWSs) deliver safe drinking water to their customers. To achieve this objective, the program works to maintain the gains of the previous years' efforts; drinking water systems of all types and sizes that are currently in compliance work to remain in compliance. Efforts are made to bring noncomplying systems into compliance and ensure that all systems are prepared to comply with new regulations. The EPA national drinking water program measures

compliance with drinking water standards in three ways: 1) the percent of the population served by community water systems (CWSs) that meet drinking water standards, 2) the percent of CWSs meeting standards, and 3) the length of time a given population is served by a water system that is in violation with drinking water standards. EPA, states, and CWSs¹ work together to increase the percentage of the population served by CWSs that meet all health-based standards.

Despite a growing population and increasing demand for safe drinking water, EPA met its FY 2011 national commitment (91%) by providing 93.2% of the population served by CWSs with drinking water that met all applicable health-based drinking water standards (Subobjective 2.1.1) (Figure 2). Nine of 10 EPA regional offices met their FY 2011 commitments (Figure 3). Although regions use the national target as a point of reference, regional commitments to this and all other outcome goals might vary based on differing conditions within each EPA region.

Figure 2: Percent Population With Drinking Water Meeting Standards by Fiscal Year (2.1.1)

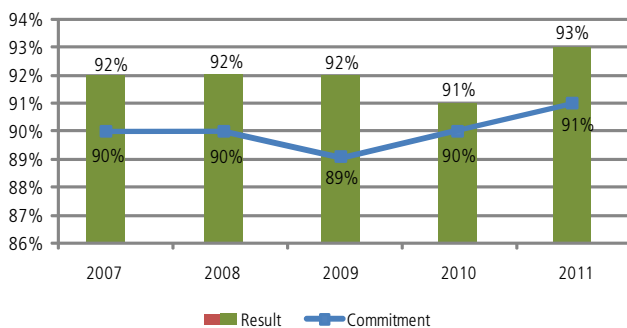
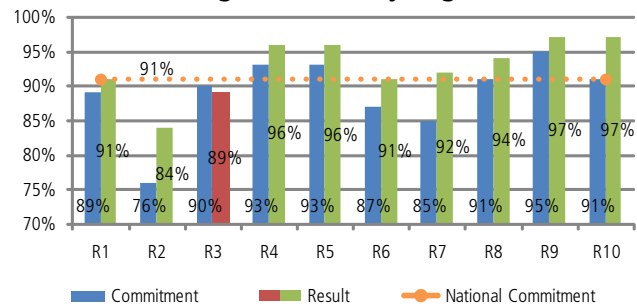


Figure 3: FY 2011 Percent Population With Drinking Water Meeting Standards by Region (2.1.1)



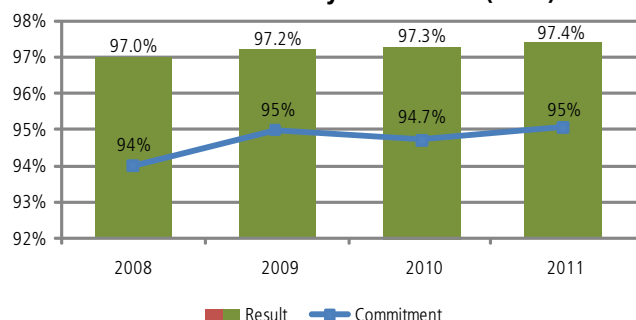
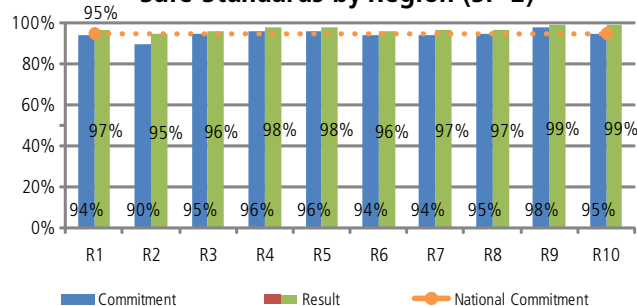
EPA met its commitment for the percent of CWSs meeting all applicable health-based standards (90.7% versus 88%) (SP-1). The success of this measure reflects the work by states and tribes to ensure that systems are in compliance with standards. Nine of 10 regions achieved their commitments for this measure, with six regions setting commitments above the national level.

EPA also measures the percent of “person months”² during which CWSs provide drinking water that meets all applicable health-based drinking water standards. This measure thereby allows EPA to identify the length of time during which a given population is served by a water system that is in violation with drinking water standards. In FY 2011, more than 97% of the population was served by CWSs that were in compliance with drinking water standards over a 12-month period (SP-2) (Figure 4). All EPA regions met their commitments for this measure (Figure 5). The measure continues to be successful, exceeding the goal of 95%, as well as the previous year’s performance for each of the last four years. This performance improvement is attributed to a national decrease in treatment technique violations³ that occur at the largest of water systems and more effective approaches by states in addressing background drinking water contaminants (e.g., arsenic) that chronically challenge water systems.

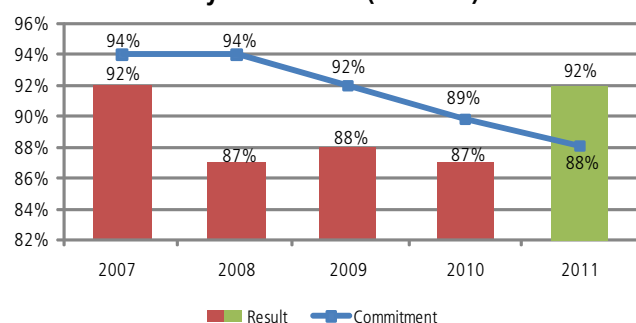
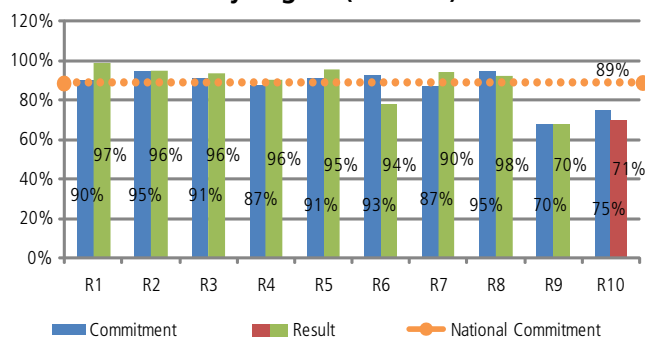
¹ A CWS is a public water system that provides water to the same population year-round. As of January 2011, there were 51,297 CWSs.

² “Person-months” for each CWS are calculated as the number of months in the most recent four-quarter period in which health-based violations overlap, multiplied by the retail population served.

³ A treatment technique is a required process intended to reduce the level of a contaminant in drinking water. These techniques may include disinfection, filtration, and aeration. A violation occurs when a water system fails to treat its water in the way EPA prescribes.

Figure 4: "Person Months" With CWSs Safe Standards by Fiscal Year (SP-2)**Figure 5: "Person Months" With CWSs Safe Standards by Region (SP-2)**

According to EPA regulations,⁴ a CWS is required to undergo a sanitary survey within three years of its last survey⁵ (five years for outstanding performers). EPA estimates that in 2011, surveys were conducted at 92% of community systems (SDW-1a) (Figure 6). Not only did this exceed the percentage of CWSs surveyed in 2010 (87%), but it marked the first time in five years that the Agency met its annual commitment (88%) for this measure. Nine of 10 regions met their targets, a significant improvement in performance over previous years (Figure 7). Despite budget constraints, states' dedication and attention to conducting sanitary surveys is reflected in the end of year result.

Figure 6: CWSs With Sanitary Surveys by Fiscal Year (SDW-1a)**Figure 7: CWSs With Sanitary Surveys by Region (SDW-1a)**

Source Water Protection: Protection of the nation's source water areas minimized the risk⁶ to public health at 40.2% of CWSs (both surface and ground water) (SP-4a) (Figure 8). This was well above the FY 2011 commitment of 36%. EPA met this measure's commitment for the sixth year in a row and has made significant progress against the FY 2005 baseline of 20%. Nine of 10 regions met their commitments in FY 2011 (Figure 9). At the community level, 55.2% of the population served by the 40.2% of CWSs have minimized public health risks through source water protection (SDW-SP-4b). Although states remain committed to implementing their voluntary state-specific strategies for protecting drinking water sources, progress remains slow due to state resource constraints.

⁴ Interim Enhanced and Long-Term 1 Surface Water Treatment Rules.

⁵ Sanitary surveys are onsite reviews of the water sources, facilities, equipment, operation, and maintenance of public water systems.

⁶ "Minimized risk" is achieved by the substantial implementation, as determined by the state, of source water protection actions in a source water protection strategy.

Figure 8: CWSs and Source Water Protection by Fiscal Year (SP-4a)

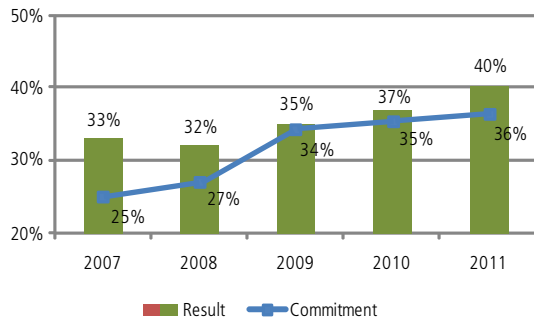
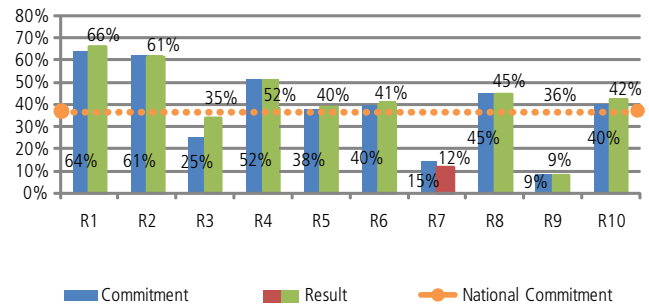


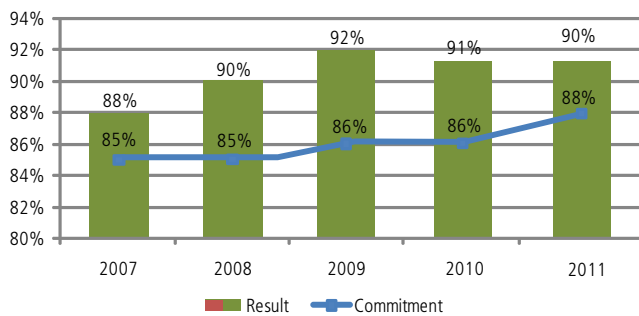
Figure 9: CWSs and Source Water Protection by Region (SP-4a)



Water System Financing: Financing is a key component of the national drinking water program. Since 1997, the Drinking Water State Revolving Fund (DWSRF) has provided low-interest loans to communities for building and upgrading drinking water facilities. The SRF fund utilization rate—the dollar amount of loan agreements per funds available for projects—is a valuable way to measure states’ effectiveness in obligating grant funds for drinking water projects. EPA met its FY 2011 goal by establishing loan agreements for 90% of the cumulative amount of funds available (commitment of 87.7%). EPA has met this measure’s commitments for five consecutive years (SDW-4) (Figure 10). Six of 10 regions met their commitments in FY 2011, with a range of 85% to 101% of funds obligated (Figure 11). More than 6,237 SRF projects have initiated operations to date, up from 5,236 in FY 2010 (SDW-5).

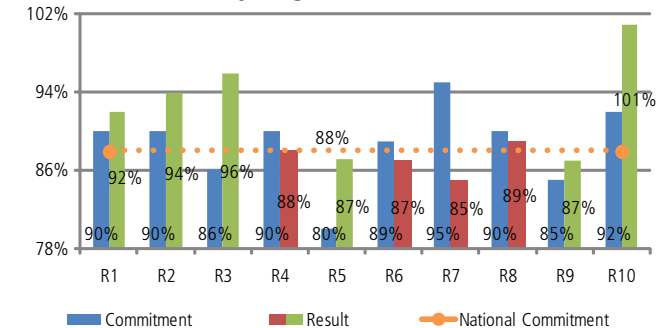
The American Recovery and Reinvestment Act (ARRA) provided \$2 billion to states in FY 2009 for the DWSRF to finance high-priority infrastructure projects that would ensure safe drinking water for local communities. Despite the significant increases in SRF funding through ARRA, the FY 2011 utilization rate of 90% showed only a slight drop from the 91% rate in FY 2010. For more information on ARRA measures and results, see Appendix B to the *FY 2011 Best Practices and End of Year Performance Report* at http://water.epa.gov/resource_performance/performance/index.cfm.

Figure 10: DWSRF Fund Utilization Rate by Fiscal Year (SDW-4)



(Results include ARRA funds)

Figure 11: FY 2011 DWSRF Fund Utilization Rate by Region (SDW-4)



(Region-specific results may not include ARRA funds)

Underground Injection Control: EPA works with states to monitor the injection of fluids—both hazardous and nonhazardous—to prevent contamination of underground sources of drinking water. One way to prevent contamination is for states to maintain the mechanical integrity of underground injection wells. EPA fell short of meeting its FY 2011 commitments, with 83% (19 of 23 wells) and 86% (2,170 of 2,484 wells) of its Class I and II wells, respectively (SDW-7a,b), that lost mechanical integrity returning to compliance within 180 days. Establishing a target for this measure is difficult because the universe of Class II wells, characterized by oil and natural gas recovery, is complex and variable. EPA met its annual goal

of 100% (five of five wells) for Class III wells. For FY 2012, these measures have been consolidated into one measure that combines the universes of Class I, II, and III wells.

Additionally, EPA works with states to monitor the number and percentage of high-priority Class V wells identified in ground-water-based CWS source water areas that are closed or permitted. High-priority Class V wells include motor vehicle waste disposal wells, cesspools, industrial wells, and other wells so designated by the state or regional program. In 2011, 92% of high-priority Class V wells were closed or permitted, which was above the commitment of 81% (SDW-8). Notably, although this measure is fairly complex, the data indicate that wells are being addressed at a faster rate than they are being identified.

Supporting Small CWSs: Small CWSs face many challenges in providing safe drinking water and in meeting the requirements of the Safe Drinking Water Act (SDWA). Some of these challenges include lack of adequate revenue, aging infrastructure, and difficulty in understanding existing or new regulatory requirements. As a result, small systems may experience frequent or long-term compliance issues in providing safe water to their communities. During FY 2011, EPA renewed and reinforced its efforts to enhance small system capacity through a comprehensive small system strategy.

To support implementation of the strategy, the Agency developed a suite of new indicators for FY 2011 that track CWSs serving fewer than 10,000 people. These indicators correspond to the three major components of the small system strategy: inventory of existing and new small water systems; state DWSRF projects that target small systems; and small system noncompliance and capacity to quickly return to compliance with health-based standards. Schools and daycare centers are a critical subset of small systems, and EPA placed special emphasis on these in FY 2011 to ensure that children can access safe drinking water.

The results in Table 1 provide a snapshot of key indicators that track the level of support provided by the DWSRF program to small systems and the violation rate of small systems as determined against health-based drinking water standards. Seventy-one percent (71%) of the projects funded by the DWSRF were awarded to small public water systems serving fewer than 10,000 people. This was almost identical to the FY 2009 baseline of 72%. As of FY 2011, 38% of the DWSRF funds were distributed to small public water systems, a figure slightly below the FY 2009 baseline of 44%. Thirty-one percent (31%) of DWSRF loans include assistance to disadvantaged communities.

Approximately 2% (1,337) of small systems had repeat health-based violations⁷ in FY 2011, with an average of 168 days spent in violation before returning to compliance. This was an increase over the FY 2009 baseline of 88 days. Ninety-two percent (7,114) of schools and childcare centers met all health-based drinking water standards in FY 2011.

⁷ Repeat violations are defined as repeats of the same combination of violation code (e.g., 21 – Total Coliform Rule Maximum Contaminant Level) and contaminant type (e.g., Total Coliform Rule). If a particular combination of violation code and contaminant type occurs at a particular system more than once in a fiscal year, this constitutes a repeat violation.

Table 1: FY 2011 Indicators of Small Public Water Systems

FY 2011 ACS Code	Abbreviated Measure Description	FY 2011 Result	FY 2009 Baseline	Universe
SDW-11	DWSRF projects awarded to small PWS	71%	72%	698
SDW-12	% DWSRF dollars to small PWS	38%	44%	\$1,522.3 millions
SDW-13	% DWSRF loans to disadvantaged communities	31%	31%	698
SDW-14	# and % CWS serving < 500 people	43,728 CWS (605 new)	44,673 ⁸	70,347 CWS and NTNCWS < 500
		63%	65%	
SDW-15	# and % small CWS with health-based violations	1,337 CWS	1,904 ⁹	66,165 CWS and NTNCWS < 10,000
		2.1%	3%	
SDW-16	Average time small CWS returned to compliance	168 days	99 ¹⁰	66,165 CWS and NTNCWS < 10,000
			88 days	
SDW-17	# and % schools/childcare meet safe standards ¹¹	7,114	7,260	7,703
		92%	94%	



⁸ CWSs and non-transient non-community water systems (NTNCWSs) serving a population under 500 in FY 2009.

⁹ CWSs and NTNCWSs serving populations under 10,000 with repeated health-based violations in FY 2009.

¹⁰ Total number of CWSs and NTNCWSs serving populations under 10,000 with acute health-based violations in FY 2009.

¹¹ Schools are defined as CWS or NTNCWS with a primary service area equal to SC (school) or DC (daycare). Puerto Rico systems were not included. California systems were based on a list of school systems provided by California.