Subobjective: Water Safe to Drink

Seventy-seven percent (77%) (10 of 13) of all drinking water measures met their commitments in FY 2013. Twenty-three percent (23%) (three of 13) of measures did not meet their commitments. EPA has maintained an average of 77% of commitments met and reported on all measures over the past six years under the Water Safe to Drink subobjective (Figure 1).

Figure 1: Drinking Water Subobjective Six-Year Trend

FY 2013 ACS Code	Abbreviated Measure Description	Results and Commitment Status = Met; = Indicator/Long-Term (No Commitment); = Not Met; = Measure Did Not Exist; = Data Not Available							Appendix Page Number (D-0)/ Figure Number
		2007	2008	2009	2010	2011	2012	2013	
Subobjective 2.1.1 Water Safe to Drink									
SDW-211	Percent population served by CWSs	92%	92%	92%	91%	93%	95%	92%	D-1/Fig. 2
SDW-SP1.N11	Percent CWSs meeting safe standards		89%	89%	90%	91%	91%	91%	D-1
SDW-SP2	Percent "person months" with CWSs safe standards	97%	97%	97%	97%	97%	98%	97%	D-2/Fig. 4
SDW-SP3.N11	Percent population served by CWSs Indian country	87%	83%	81%	87%	81%	84%	77%	D-2/Fig. 92
SDW-SP4a	Percent CWSs and source water protection	33%	32%	35%	37%	40%	43%	48%	D-3/Fig. 8
SDW-SP4b	Percent Population and source water protection		48%	54%	58%	55%	56%	59%	D-3
SDW-18.N11	Number Indian & Alaska Native homes provided safe drinking water					97,311	104,266	108,881	D-4/Fig. 96
SDW-01a	Percent CWSs with sanitary survey	92%	87%	88%	87%	92%	89%	93%	D-4/Fig. 6
SDW-01b	Number Tribal CWSs with sanitary survey	54	47	63	63	74	82	84	D-5
SDW-04	DWSRF fund utilization rate	88%	90%	92%	91%	90%	91%	91%	D-5/Fig. 10
SDW-05	Number DWSRF projects initiated (cumulative)	3,526	4,082	4,576	5,236	6,237	6,781	7,474	D-6
SDW-07	Percent Class I, II, or III wells with mechanical integrity						85%	89%	D-6
SDW-08	Number High Priority Class V wells closed/permitted (cumulative)							26,027	D-7
SDW-11	Percent DWSRF projects awarded to small PWS					71%	71%	71%	D-7
SDW-15	Number/Percent small CWS w/health-based violations					1,337	1,230	1,230	D-8/Fig. 12
SDW-17	Number/Percent schools/childcare meet safe standards					7,114	6,991	7,068	D-8
SDW-19a	Volume of CO2 sequestered through injection						40,380	47,781	D-9
SDW-19b	Number of permit decisions that result in CO2 sequestered through injection						0	0	D-9

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.

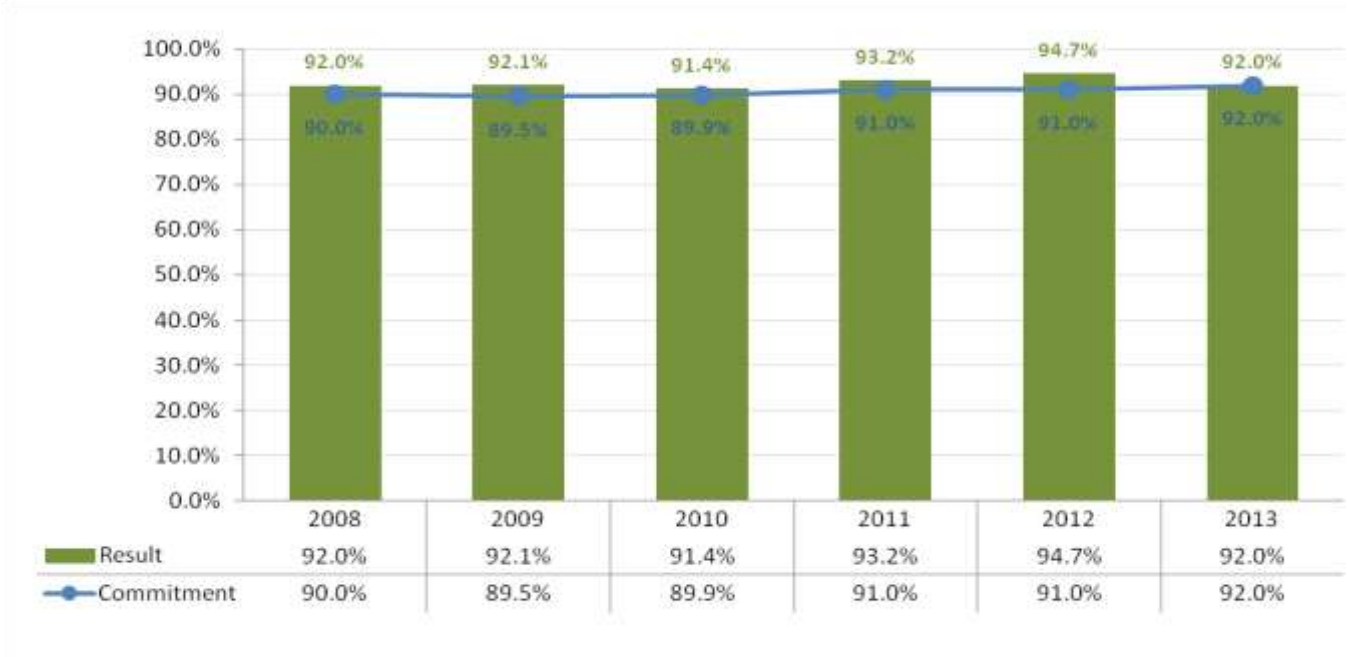
FY 2013 Performance Highlights and Management Challenges

Compliance with Drinking Water Standards: The overall objective of EPA's national drinking water program is to protect public health by ensuring that public water systems (PWSs) deliver safe drinking water to their customers. The drinking water program measures compliance with drinking water standards in three ways: 1) the percent of the population served by community water systems[1] (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 of drinking water standards. EPA, states, and CWSs work together to increase the percentage of the population served by CWSs and the percentage of CWSs that meet all health-based standards.

Despite a growing population and new regulations becoming effective, EPA met its FY 2013 commitment (92%) by providing 92% of the population that was 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 2013 commitments (Figure 3). Although regions use the national target of the population served by CWSs receiving safe drinking water as a point of reference, regional commitments to this outcome goal might vary based on differing conditions in each EPA region.

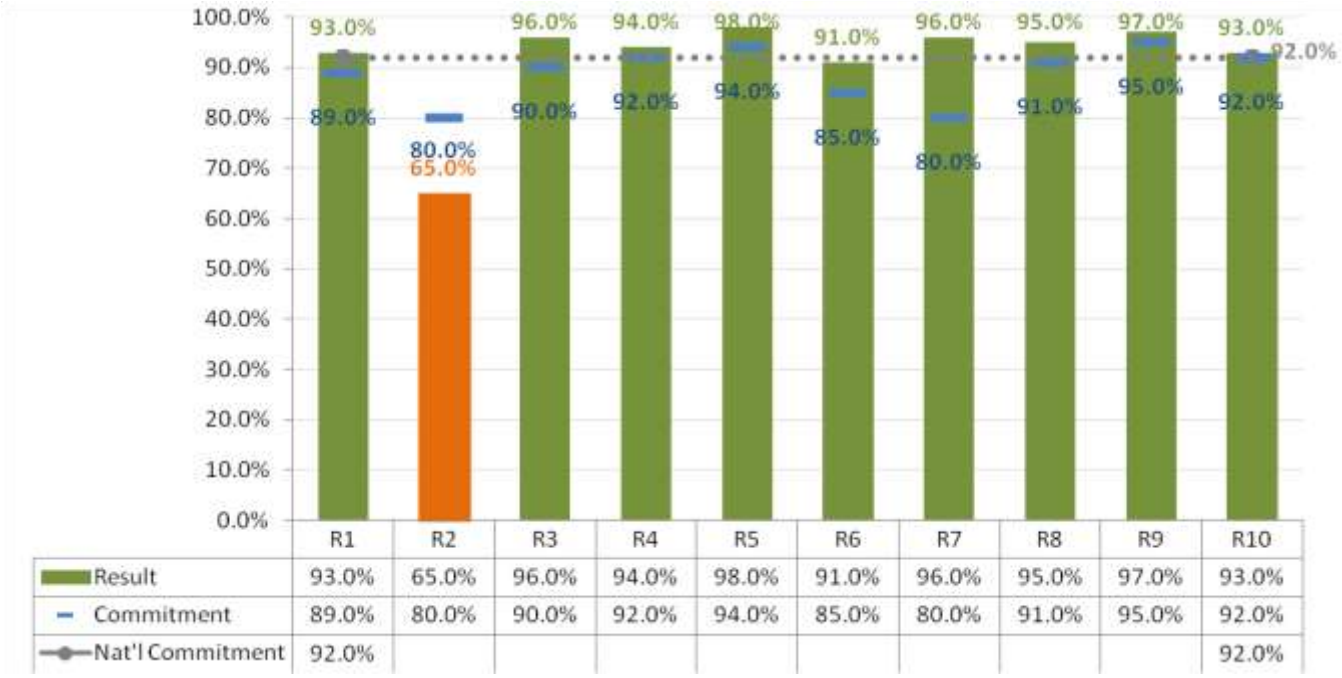
In Region 2, the New York City Public Water System experienced a Surface Water Treatment Rule violation on October 29, 2012, during Superstorm Sandy. The high winds associated with the storm led to the rapidly escalating turbidity at Kensico Reservoir. The population served by New York City's system is 8.27 million people. The NYDEP acted quickly and placed the Delaware Aqueduct on by-pass, which avoids using water from the Kensico Reservoir and provides an alternative source of water to the Delaware Aqueduct. In an effort to prevent future violations, New York City has installed a turbidity curtain or boom at the shoreline to mitigate potential future events.

Figure 2: Percent Population with Drinking Water Meeting Standards by Fiscal Year (SDW-211)



[1] A CWS is a public water system that provides water to the same population year-round. As of January 2012, there were 52,079 CWSs.

Figure 3: Percent Population with Drinking Water Meeting Standards (SDW-211) by Region for FY 2012



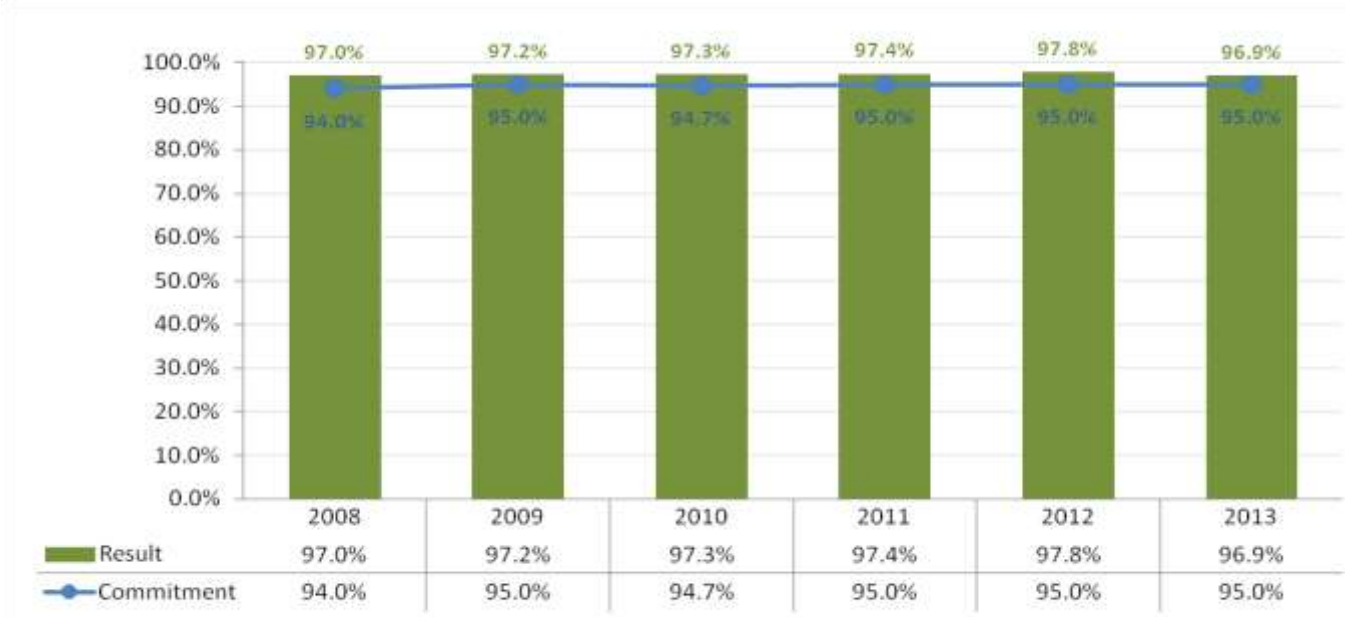
	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10
Result	93.0%	65.0%	96.0%	94.0%	98.0%	91.0%	96.0%	95.0%	97.0%	93.0%
Commitment	89.0%	80.0%	90.0%	92.0%	94.0%	85.0%	80.0%	91.0%	95.0%	92.0%
Nat'l Commitment	92.0%									92.0%

EPA met its commitment for the percent of CWSs meeting all applicable health-based standards (91.4% versus 90%) (SP-1). The success of this measure reflects the work by states and tribes to ensure that systems are in compliance with standards. All 10 regions achieved their commitment for this measure, with six regions setting commitments below 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. The purpose of this measure is to capture the length of time a given population is served by a water system that is in violation of drinking water standards. In FY 2013, almost 97% of the population was served by CWSs over a 12-month period that were in compliance with drinking water standards (SP-2) (Figure 4). Nine out of ten EPA regions met their commitments for this goal (Figure 5). The reason Region 2 did not achieve its 2013 commitment is due to the problems stated above in reference to Super Storm Sandy. If the Region 2 end of year result matched their historical performance trend of 95% the national total would have increased from 96.9% to 97.5%.

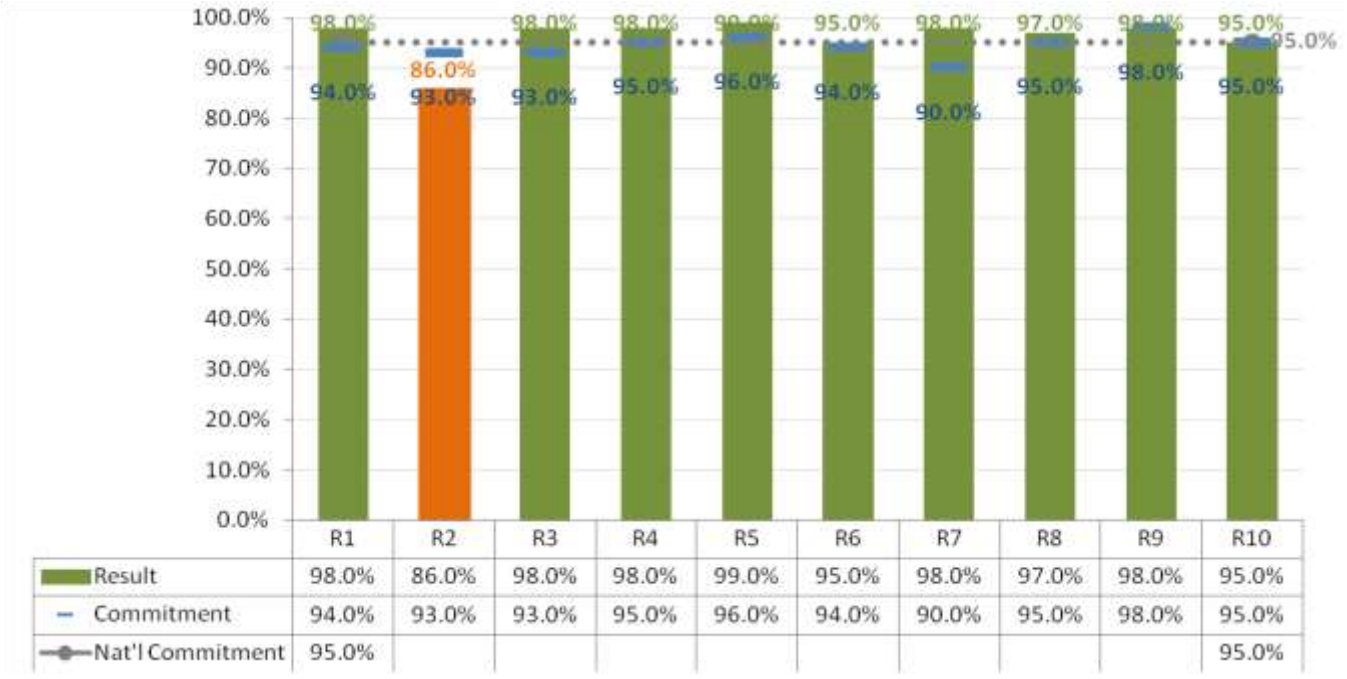
[2] "Person-months" for each CWS is calculated as the number of months in the most recent four-quarter period in which health-based violations overlap, multiplied by the retail population served.

Figure 4: "Person Months" with CWSs Meeting Safe Standards by Fiscal Year (SDW-SP2)



	2008	2009	2010	2011	2012	2013
Result	97.0%	97.2%	97.3%	97.4%	97.8%	96.9%
Commitment	94.0%	95.0%	94.7%	95.0%	95.0%	95.0%

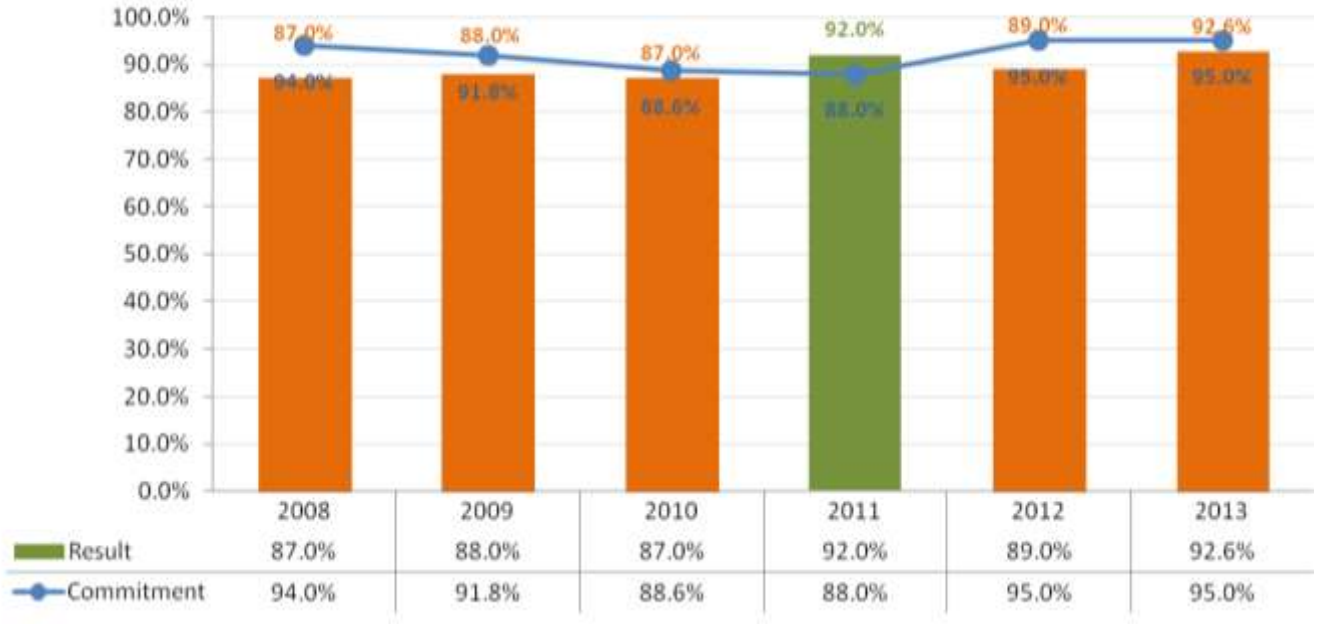
Figure 5: "Person Months" with CWSs Meeting Safe Standards (SDW-SP2) by Region for FY 2012



	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10
Result	98.0%	86.0%	98.0%	98.0%	99.0%	95.0%	98.0%	97.0%	98.0%	95.0%
Commitment	94.0%	93.0%	93.0%	95.0%	96.0%	94.0%	90.0%	95.0%	98.0%	95.0%
Nat'l Commitment	95.0%									95.0%

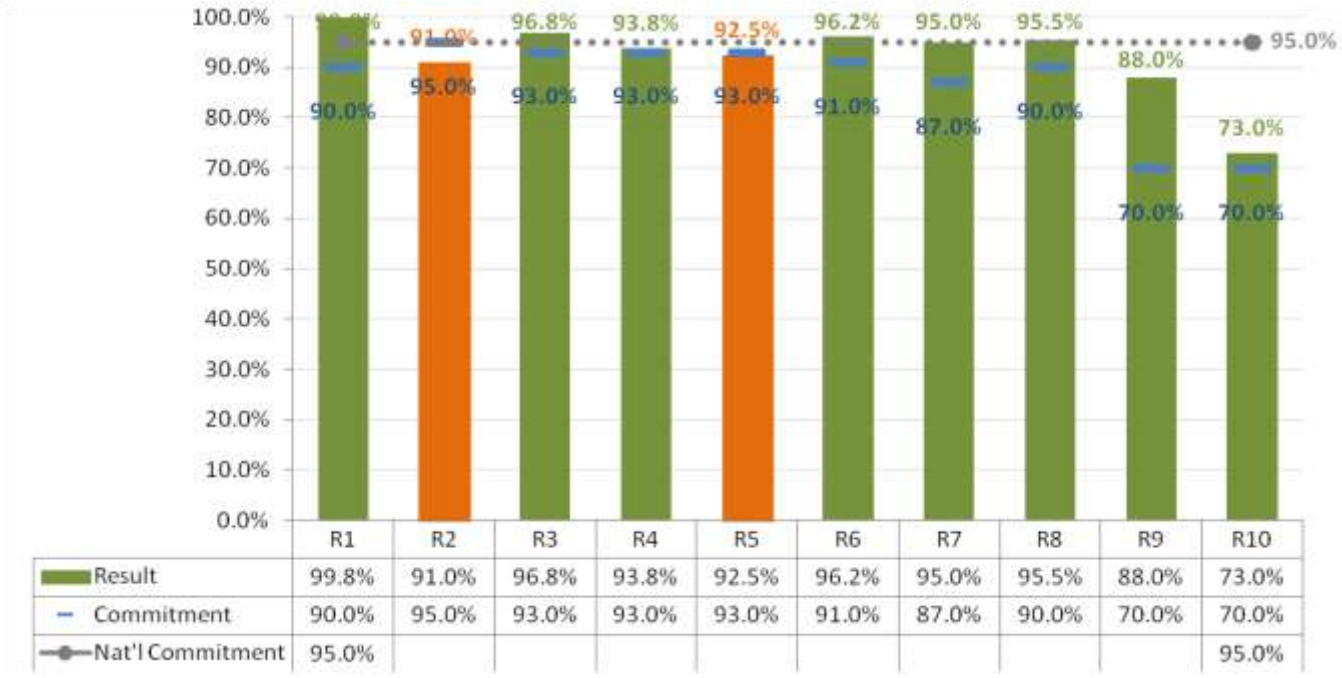
According to EPA regulations,[3] CWSs are required to undergo a sanitary survey within three years of their last survey (five years for outstanding performers). Sanitary surveys are onsite reviews of the water sources, facilities, equipment, operation, and maintenance of PWSs. EPA estimates that in 2013, approximately 93% of community systems underwent a survey (SDW-1a). The Agency fell short of its commitment of 95%. (Figure 6). Eight of 10 regions met their annual targets (Figure 7). State budget cuts, staff shortages, and furloughs have impacted the performance of this measure over the past few years.

Figure 6: CWSs with Sanitary Surveys by Fiscal Year (SDW-01a)



[3] Interim Enhanced and Long-Term 1 Surface Water Treatment Rules.

Figure 7: CWSs with Sanitary Surveys (SDW-01a) by Region for FY 2013

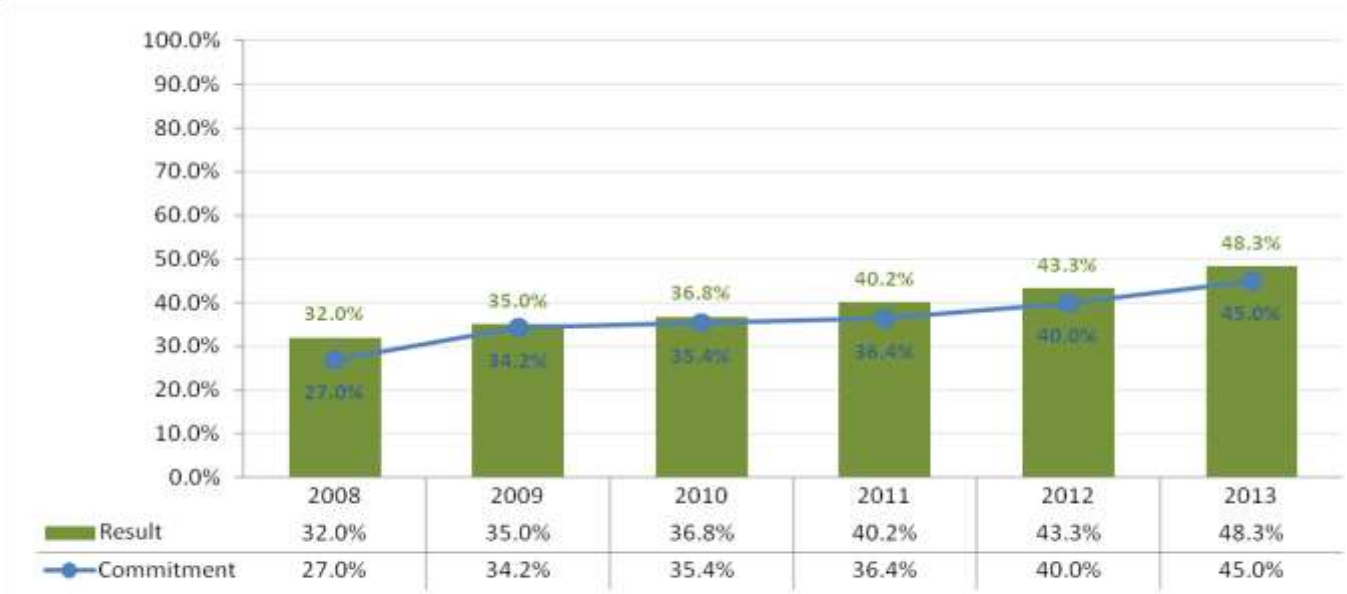


	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10
Result	99.8%	91.0%	96.8%	93.8%	92.5%	96.2%	95.0%	95.5%	88.0%	73.0%
Commitment	90.0%	95.0%	93.0%	93.0%	93.0%	91.0%	87.0%	90.0%	70.0%	70.0%
Nat'l Commitment	95.0%									95.0%

Source Water Protection: CWSs minimized the risk[4] to public health for more than 48% of the nation's source water areas (both surface and ground water) (SP-4a) (Figure 8). This was above the FY 2013 commitment of 45%. EPA met its commitment for this measure for the sixth year in a row and has made significant progress against the FY 2005 baseline of 20%. All ten EPA regions met their commitments in FY 2013 (Figure 9). When looked at on a population basis, 59% of the population was served by CWSs where risk to public health is minimized through source water protection (SDW-SP-4b). This was an 11% increase over the FY 2008 baseline year result of 48%.

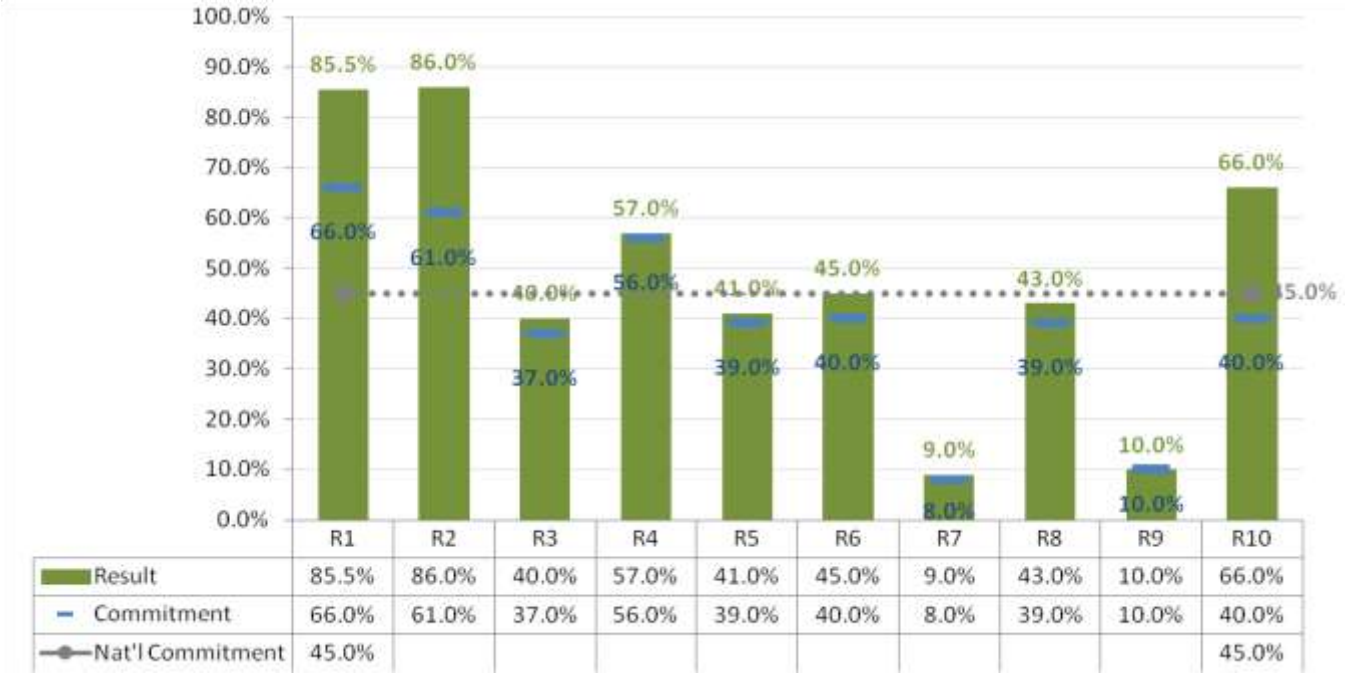
[4] "Minimized risk" is achieved by the substantial implementation, as determined by the state of source water protection actions in a source water protection strategy.

Figure 8: CWSs and Source Water Protection by Fiscal Year (SDW-SP4a)



	2008	2009	2010	2011	2012	2013
Result	32.0%	35.0%	36.8%	40.2%	43.3%	48.3%
Commitment	27.0%	34.2%	35.4%	36.4%	40.0%	45.0%

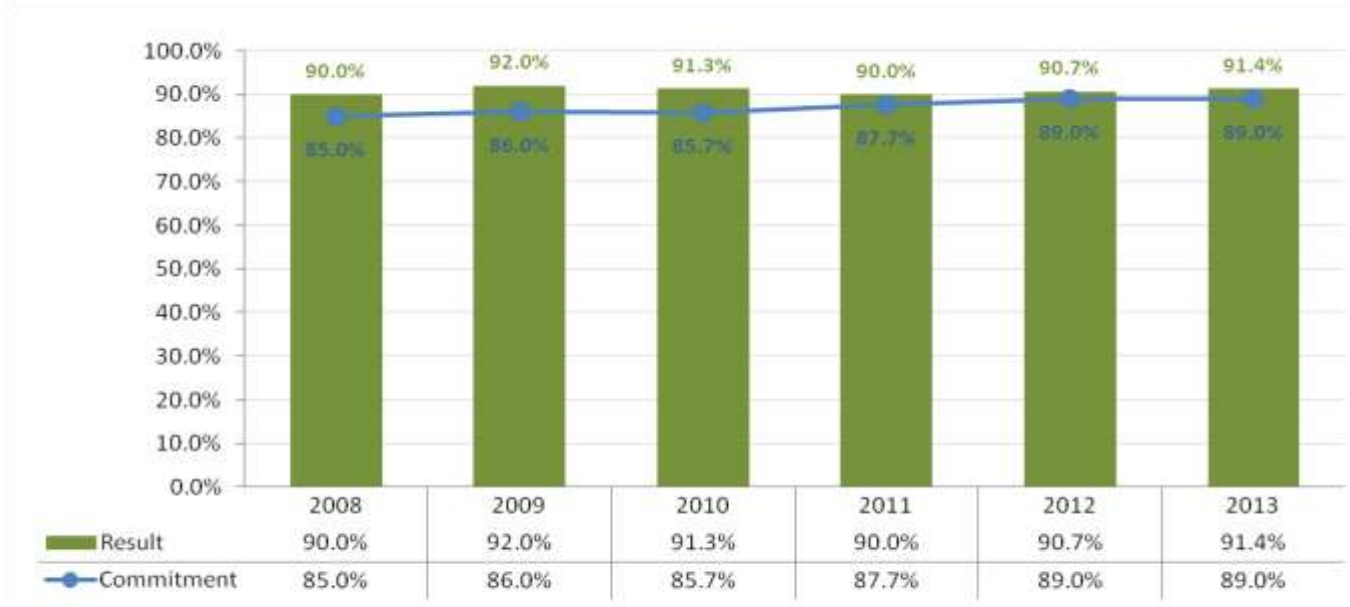
Figure 9: CWSs and Water Protection (SDW-SP4a) by Region for FY 2013



	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10
Result	85.5%	86.0%	40.0%	57.0%	41.0%	45.0%	9.0%	43.0%	10.0%	66.0%
Commitment	66.0%	61.0%	37.0%	56.0%	39.0%	40.0%	8.0%	39.0%	10.0%	40.0%
Nat'l Commitment	45.0%									45.0%

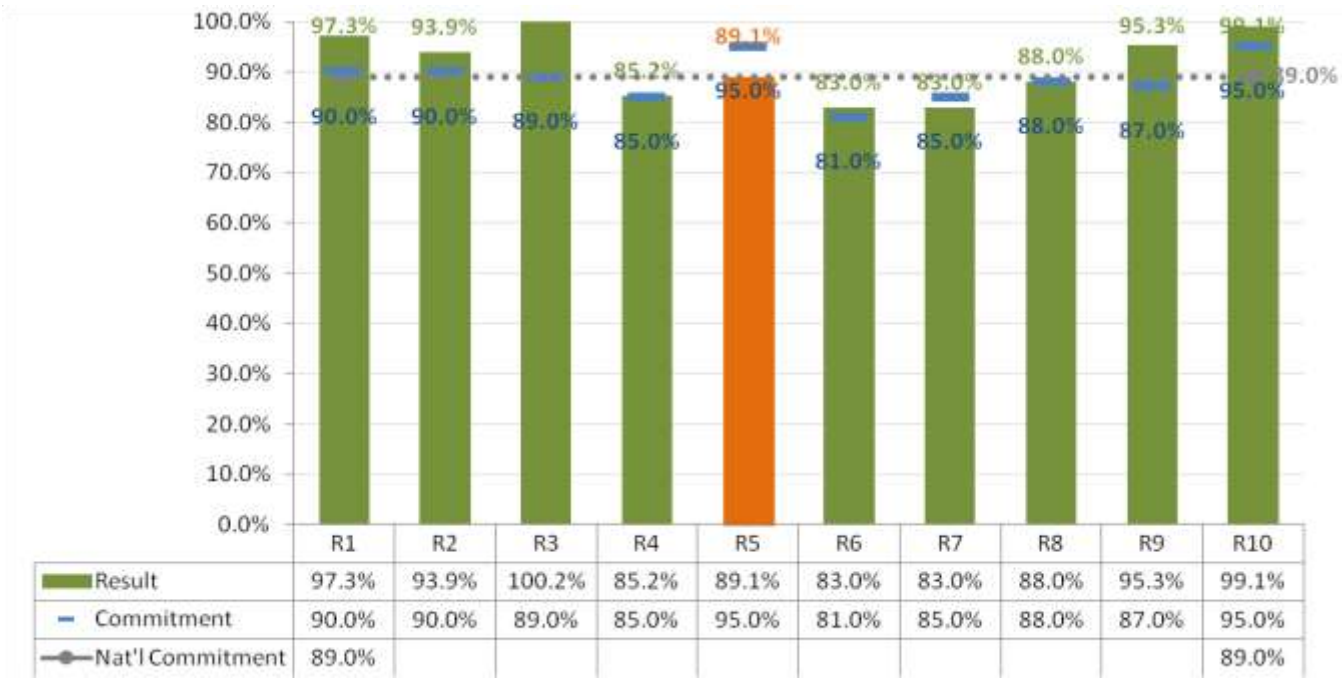
Water System Financing: Financing is a key component of the national drinking water program. The Drinking Water State Revolving Fund (DWSRF), in place since 1997, provides low-interest loans to communities for building and upgrading drinking water facilities. The SRF fund utilization rate—the dollar 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 2013 goal by establishing loan agreements for 91.4% of the cumulative amount of funds available (commitment of 89%). EPA has met its commitments for this measure for six consecutive years (SDW-4) (Figure 10). Nine of 10 regions met their commitments in FY 2013, with a range from 82.3% to 103% of funds obligated (Figure 11). More than 7,474 SRF projects have initiated operations to date, up from 6,781 in FY 2012 (SDW-5).

Figure 10: Fund Utilization Rate for the DWSRF by Fiscal Year (SDW-04)



	2008	2009	2010	2011	2012	2013
Result	90.0%	92.0%	91.3%	90.0%	90.7%	91.4%
Commitment	85.0%	86.0%	85.7%	87.7%	89.0%	89.0%

Figure 11: Fund Utilization Rate for the DWSRF by Fiscal Year (SDW-04)



	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10
Result	97.3%	93.9%	100.2%	85.2%	89.1%	83.0%	83.0%	88.0%	95.3%	99.1%
Commitment	90.0%	90.0%	89.0%	85.0%	95.0%	81.0%	85.0%	88.0%	87.0%	95.0%
Nat'l Commitment	89.0%									89.0%

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 met its FY 2013 commitment (85%), with 89% of Class I, II, and III wells (SDW-7) that lost mechanical integrity returning to compliance within 180 days. Success in this commitment is achieved through active engagement of primacy agencies in direct program management. For example, when a well fails a mechanical integrity test, states help make sure that owner/operators return to compliance by taking actions such as increased inspections, witnessing of MIT testing, or training.

EPA also 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. More than 26,000 high-priority Class V wells were closed or permitted in 2013 (SDW-8). This was above the 2013 commitment of 25,225 wells.

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 understanding existing or new regulatory requirements. As a result, small systems may experience frequent or long-term compliance challenges in providing safe water to their communities. In FY 2013, EPA continued its efforts to enhance small system capacity through a comprehensive small system strategy. http://water.epa.gov/type/drink/pws/smallsystems/basicinformation.cfm

To support implementation of the strategy, the Agency continues to track a several indicators on small CWSs serving fewer than 10,000 people. These indicators correspond to the major components of the small system strategy: state DWSRF projects targeting 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 for which EPA continues to provide special emphasis to ensure that children receive water that is safe to drink.

The results in Table 1 provide a snapshot of these indicators regarding the level of support provided by the DWSRF program to small systems and the violation rate of small systems with regard to health-based drinking water standards. Seventy-one percent (71%) of the projects funded by the DWSRF went to small PWSs serving fewer than 10,000 people. This was almost identical to the FY 2009 baseline of 72%. Two percent (2%) (1,263) of small systems had repeat health-based violations[5] in FY 2013. Over ninety-three percent (7,068) of schools and childcare centers met all health-based drinking water standards in FY 2013.

Table 1: FY 2013 Indicators of Small Public Water Systems

FY 13 ACS Code	Abbreviated Measure Description	FY 2013 Result	FY 2009 Baseline	Universe
SDW-11	DWSRF projects awarded to small PWS	71%	72%	698
SDW-15	#/% small CWS with health-based violations	1263 CWS	1,904[6]	66,165 CWS and NTNCWS <10,000
		2%	3%	
SDW-17	#/% schools/childcare meet safe standards[7]	7,068	7,260	7,664
		93.3%	94%	

Trend data for repeat health-based violations at small CWS and NTNCWS reveal a slight drop in the number of violations over the past three years, although 2013 saw a slight uptick from the previous year (Figure 12). EPA Region 6 had the highest number of small systems with violations with almost all regions showing a decline from the previous year. Some reason for Region 6"s performance include: (1) Texas has the most CWS in the country and many of them are small, so there will be a greater likelihood of violations; and (2) Region 6 has been working with the Texas Center of Environmental Quality for the past couple of years on better using SDWIS and improving both the completeness and accuracy of the data. This means that EPA is getting a more accurate picture of the violations in the state than in the past, which could explain the increase in FY 2013.

[5] 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) occurring at a particular system more than once in a fiscal year.

[6] CWSs and NTNCWS serving a population less than 10,000 with repeated health-based violations.

[7] 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.

Figure 12: Small CWS and NTNCWS with Repeat Health-Based Violations by Fiscal Year (SDW-15)

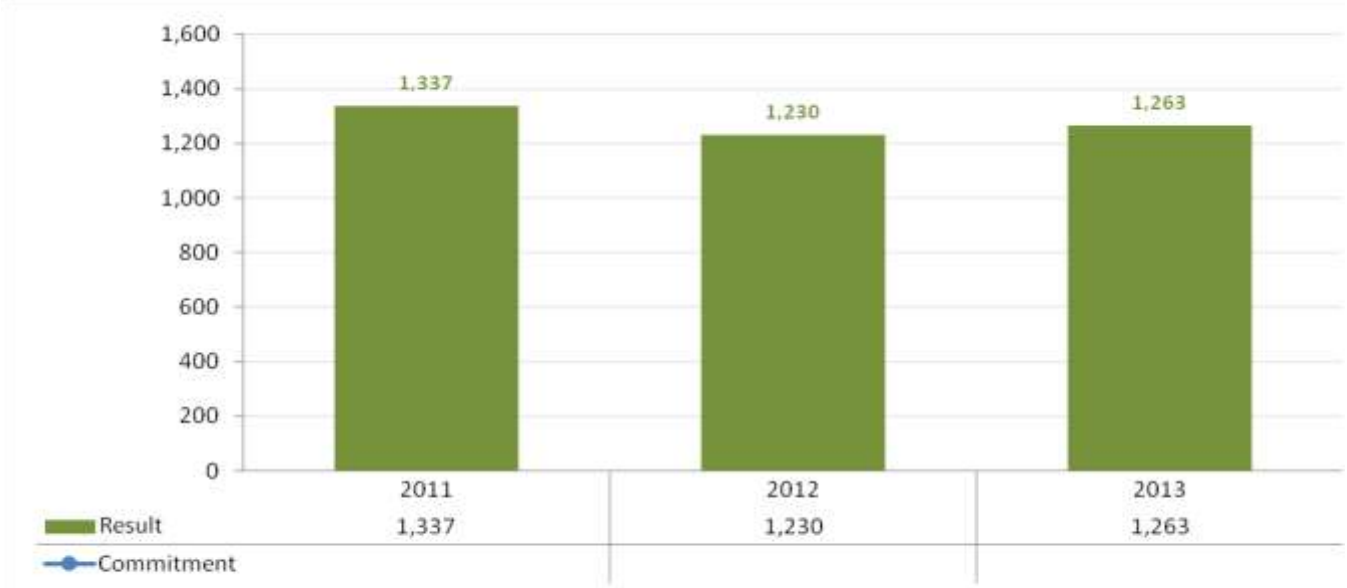


Figure 13: Number of Small Public Water Systems with Repeat Health Based Violations by EPA Region (SDW-15)