

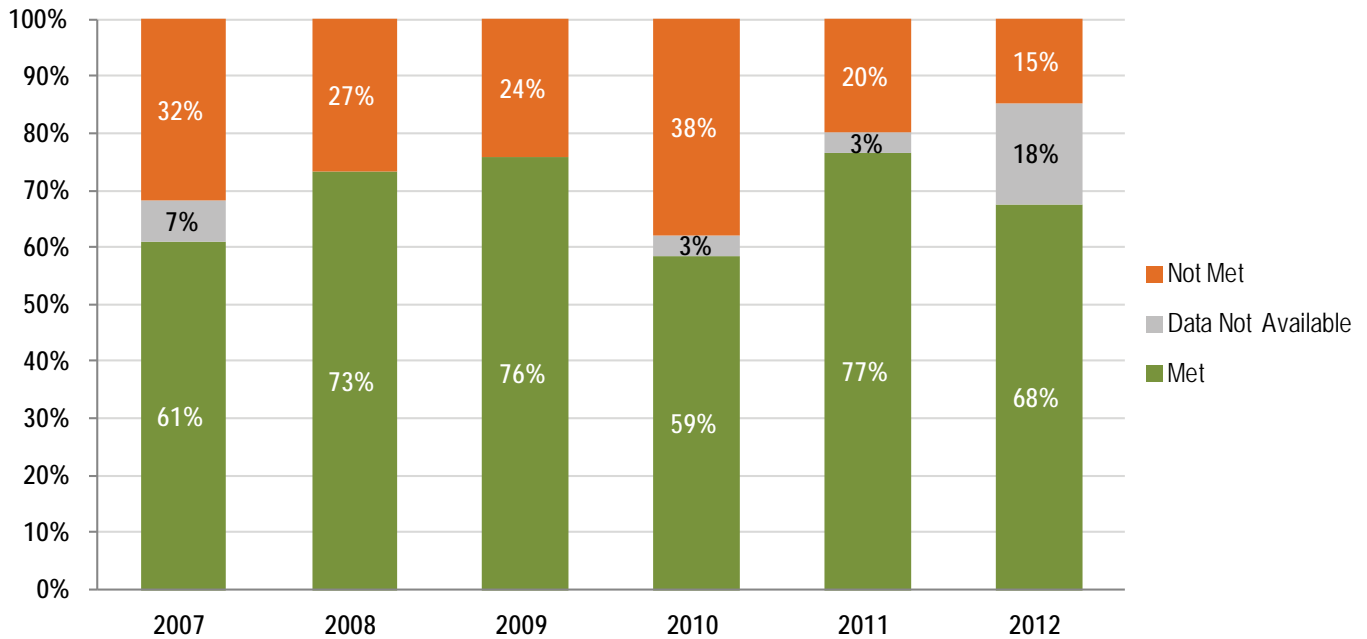
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Subobjective: Water Quality

EPA and states met 74% of their commitments under the Water Quality subobjective in FY 2012 and fell short on 15%; data were not available for 12%. The number of measures with commitments that were not met in FY 2012 was lower than 2011 (20%).¹¹ The FY 2012 results were close to the six-year average for the percent of commitment met (70%) (Figure 19).

Figure 19: Water Quality Subobjective Six-Year Trend



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¹¹ Although the percentage of measures with data unavailable appears higher in 2012, this is misleading. The FY 2012 results are incomplete due to data lags for some measures at the time of publication of this report. Previous year results include data received following the publication of each year's end of year report.

FY 2012 ACS Code	Abbreviated Measure Description	Results and Commitment Status						Appendix Page Number (D-0)/ Figure Number
		2007	2008	2009	2010	2011	2012	
Subobjective 2.2.1 Improve Water Quality on a Watershed Basis								
WQ-SP10.N11	Number formerly impaired waterbodies now meeting standards (cumulative)	3,251	2,165	2,505	2,909	3,119	3,527	D-16/Fig.20
WQ-SP11	Number causes of waterbody impairment removed (cumulative)		6,723	7,530	8,446	9,527	11,134	D-16
WQ-SP12.N11	Number impaired watersheds improved water quality (cumulative)	21	60	104	168	271	332	D-17/Fig.23
WQ-SP13.N11	Maintain and Improve nation's stream conditions						Not Maintained	D-17
WQ-SP14a.N11	Number of monitoring stations in tribal waters with improved water quality (cumulative)						15	D-18
WQ-SP14b.N11	Identify number monitoring stations in tribal waters with no degradation in water quality (cumulative)						7	D-18
WQ-24.N11	Number Indian & Alaska Native homes with access to sanitation					56,875	63,087	D-19/Fig.97*
WQ-01a	Number of numeric nutrient water quality standards approved or promulgated by EPA					45	42	D-20
WQ-01b	Number of numeric nutrient water quality standards proposed by states/territories					52	46	D-20
WQ-01c	Number State/Territories providing nutrient water quality standards milestones					21	14	D-21/Fig.27
WQ-02	Number Tribes with approved water quality standards	32	35	35	35	38	39	D-21/Fig.98*
WQ-03a	Number/Percent states/territories with updated water quality criteria	39	35	38	38	39	39	D-22/Fig.25
WQ-03b	Number/Percent Tribes with updated water quality criteria	17	19	17	18	13	14	D-22
WQ-04a	Percent states/territorial water quality standards revisions approved	86%	93%	93%	91%	92%	89%	D-23/Fig.29
WQ-05	Number states/territories adopted monitoring strategies	55	53	56	55	55	55	D-23/Fig.31
WQ-06a	Number Tribes implementing monitoring strategies	44	101	134	161	196	214	D-24/Fig.99*
WQ-06b	Number Tribes providing water quality data	44	60	86	106	171	184	D-24
WQ-07	Number states/territories using Assessment Database (ADB) (cumulative)	41	42	44	44	45	46	D-25
WQ-08a	Number/Percent total TMDLs established/approved EPA	4,191	8,696	5,887	4,951	2,846	2,922	D-25/Fig.33
WQ-08b	Number/Percent TMDLs developed by states/approved by EPA	3,998	8,553	5,829	2,262	2,482	2,702	D-26
WQ-09a	Number pounds nitrogen reduced from non-point sources (millions)	19.1	11.3	9.1	9.7	12.8	10.5	D-26
WQ-09b	Number pounds phosphorus reduced from non-point sources (millions)	7.5	3.5	3.5	2.6	4.8	4.4	D-27
WQ-09c	Number tons sediment reduction reduced from non-point sources (thousands)	3,900	2,100	2,300	2,055	2,007	919	D-27

FY 2012 ACS Code	Abbreviated Measure Description	Results and Commitment Status						Appendix Page Number (D-0)/ Figure Number
		2007	2008	2009	2010	2011	2012	
<div style="display: flex; justify-content: space-between;"> ■ = Met ■ = Indicator/Long-Term (No Commitment) </div> <div style="display: flex; justify-content: space-between;"> ■ = Not Met ■ = Measure Did Not Exist </div> <div style="display: flex; justify-content: space-between;"> ■ = Data Not Available </div>								
Subobjective 2.2.1 Improve Water Quality on a Watershed Basis								
WQ-10	Number NPS-impaired waterbodies restored (cumulative)	48	97	147	215	358	433	D-28/Fig.41
WQ-11	Number/Percent NPDES follow-up actions completed	184	216	228	253	293	344	D-28
WQ-12a	Number/Percent Nontribal NPDES permits current	90%	90%	90%	89%	89%	90%	D-29/Fig.35
WQ-12b	Number/Percent Tribal permits current	83%	85%	85%	88%	87%	86%	D-29/Fig.100*
WQ-13a	Number facilities covered by MS-4 permit	6,632	7,080	6,541	6,919	6,952	6,888	D-30
WQ-13b	Number facilities covered by industrial storm water permit	86,826	89,530	81,660	88,788	84,718	87,060	D-30
WQ-13c	Number facilities covered by construction storm water permit	242,801	204,341	200,732	186,874	168,744	166,031	D-31
WQ-13d	Number facilities covered by CAFO permit	8,729	7,830	7,900	7,882	7,994	7,587	D-31
WQ-14a	Number/Percent POTWs SIUs control mechanisms in place	22,062	21,830	22,270	17,948	20,977	20,733	D-32
WQ-14b	Number/Percent POTWs CIUs control mechanisms in place	1,547	21,830	1,338	1,241	1,229	1,667	D-32
WQ-15a	Percent major dischargers in SNC	22.6%	24.0%	23.0%	24.0%	23.0%		D-33
WQ-16	Number/Percent POTWs comply wastewater discharge standards	3,645	3,645	86%		87%		D-33
WQ-17	CWSRF Fund utilization rate	97%	98%	98%	100%	98%	98%	D-34/Fig.39
WQ-19a	Number high priority state NPDES permits	484	930	1,309	1,008	943	850	D-34
WQ-19b	Number high priority state & EPA NPDES permits	11	61	1,118	1,063	1,005	925	D-35/Fig.37
WQ-20	Number facilities providing trading	127	368	407	442	461	481	D-35
WQ-21	Number impaired segments restoration planning complete	6,792	12,479	13,515	13,932	14,898	14,985	D-36
WQ-22a	Number regions completed Healthy Watershed Initiative strategy					4	7	D-36
WQ-22b	Number state completed Healthy Watershed Initiative strategy					5	13	D-37
WQ-23	Percent Alaska homes access to drinking water & sanitation							D-37
WQ-25a	Number urban water projects initiated addressing water quality issues in the community						46	D-38
WQ-25b	Number urban water projects completed addressing water quality issues in the community							D-38

*See "American Indian Drinking Water and Water Quality FY 2012 Performance" chapter.

Notes: NPS=nonpoint source; CAFO=concentrated animal feeding operation; POTW=publicly owned treatment works; SIU=significant industrial user; CIU=categorical industrial user; SNC=significant noncompliance; CWSRF=Clean Water State Revolving Fund.

FY 2012 Performance Highlights and Management Challenges

Attaining Water Quality Standards in Impaired Waters: The Agency continues to make progress in ensuring that water quality standards are fully attained in waterbodies listed as impaired. At the end of 2012, a cumulative 3,527 of the waters listed as impaired in 2002 met standards for all the impairments identified, thus exceeding the FY 2012 commitment of 3,324¹² (SP-10) (Figure 20). Nine of the 10 EPA regions met their 2012 commitments (Figure 21). The Agency has already achieved its FY 2015 goal of 3,360 waterbodies. Of a universe of 39,503 impaired waterbodies identified in 2002, about 9% were attaining standards by the end of FY 2012 (Figure 22).

By the end of 2012, EPA and states had removed 11,134 specific causes of waterbody impairments that states had identified in 2002 (SP-11). Factors contributing to exceeding the commitment in FY 2012 included removal of causes of impairments from impaired water lists that were submitted late in the biennial water quality assessment cycle. Some of the challenges EPA faces include:

- Reduced state budgets are slowing implementation activities that are necessary to improve impaired waterbodies.
- Meeting standards in a single waterbody segment impaired by multiple pollutants is more difficult than if just one or two pollutants were impairing the segment.

In the future, EPA expects results to be lower because many of the impairments that remain in waters identified in 2002 will require many years before restoration strategies result in full recovery of the waterbody segment. This is borne out by noting the gradual leveling off of yearly results over the past few years.

¹² Information for this commitment is based on CWA 305(b) reports submitted by states on a biannual basis. To some extent, EPA exceeded its commitment for this measure due to receiving late FY 2008 and timely FY 2010 Integrated Reports (IRs).

Figure 20: Formerly Impaired Waterbodies Meeting Water Quality Standards by Fiscal Year (WQ-SP10.N11)

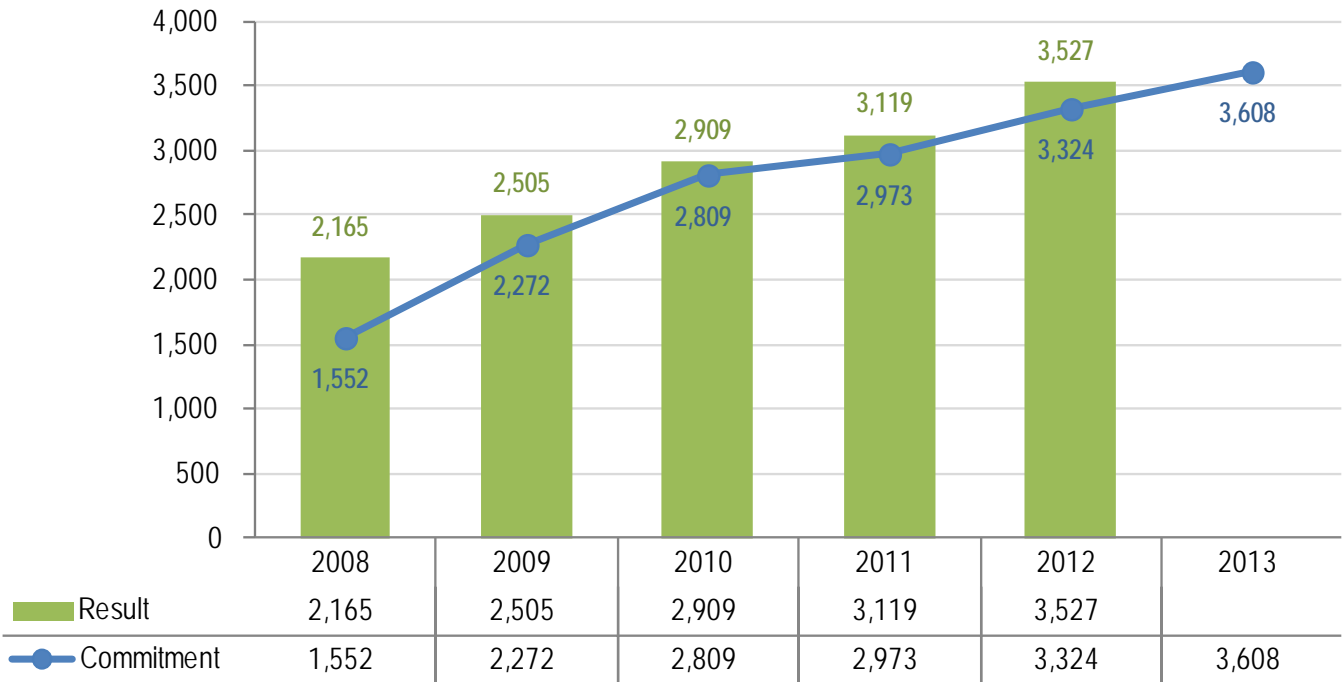


Figure 21: Formerly Impaired Waterbodies Meeting Water Quality Standards (WQ-SP10.N11) by Region for FY 2012

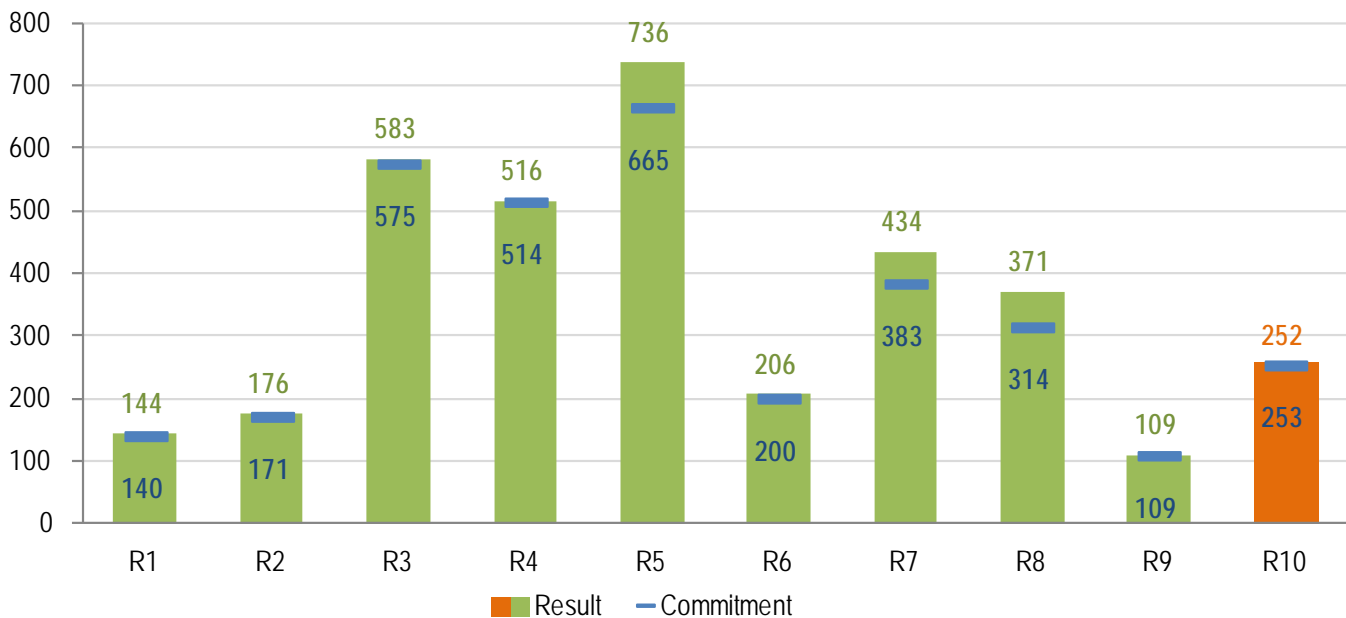
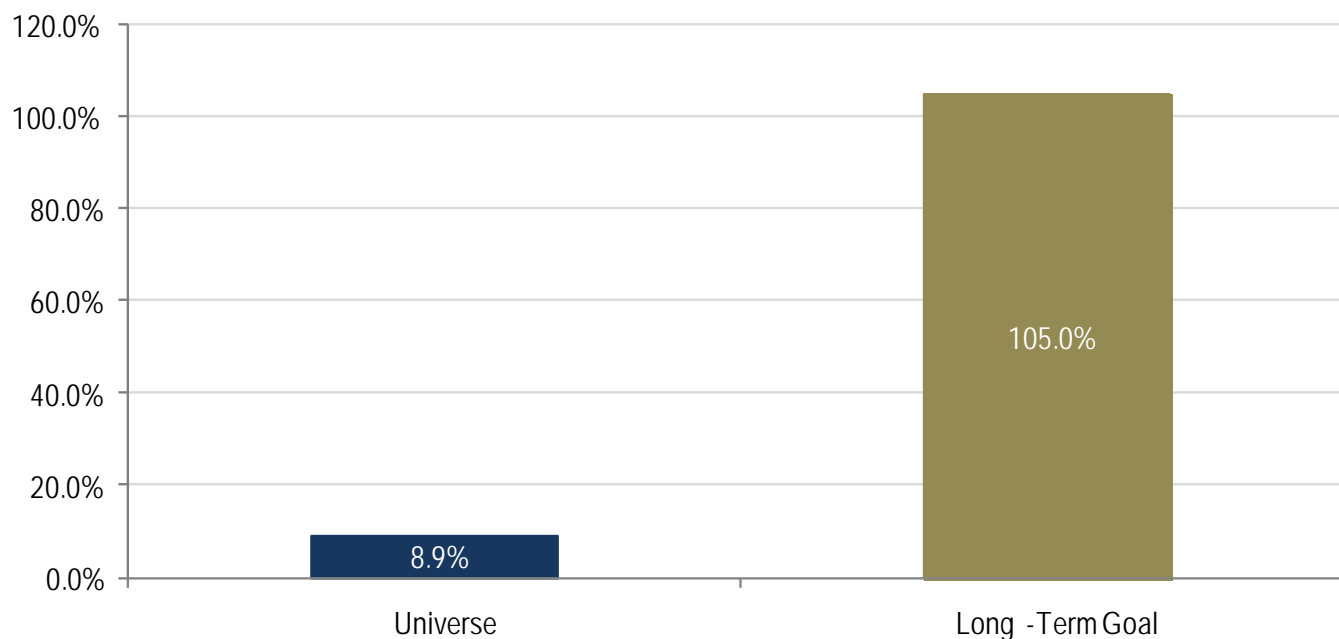


Figure 22: Formerly Impaired Waterbodies Meeting Water Quality Standards as a Percent of Universe and Long-Term Goal (WQ-SP10.N11)



EPA and states were successful in improving water quality conditions in 332 impaired watersheds nationwide cumulatively through 2012 using the watershed approach (SP-12) (Figure 23). This was a 23% increase over the 2011 result of 271 improved watersheds nationwide. Despite setting the most ambitious commitment in five years, EPA met its goal by a comfortable margin. Nine of 10 regions met their commitments last year (Figure 24). The majority of the increase was due to improvement within the Tualatin watershed in Oregon. In the future, EPA anticipates that the results for this measure will be steady or lower.

Figure 23: Impaired Watersheds Showing Improved Water Quality Conditions by Fiscal Year (WQ-SP12.N11)

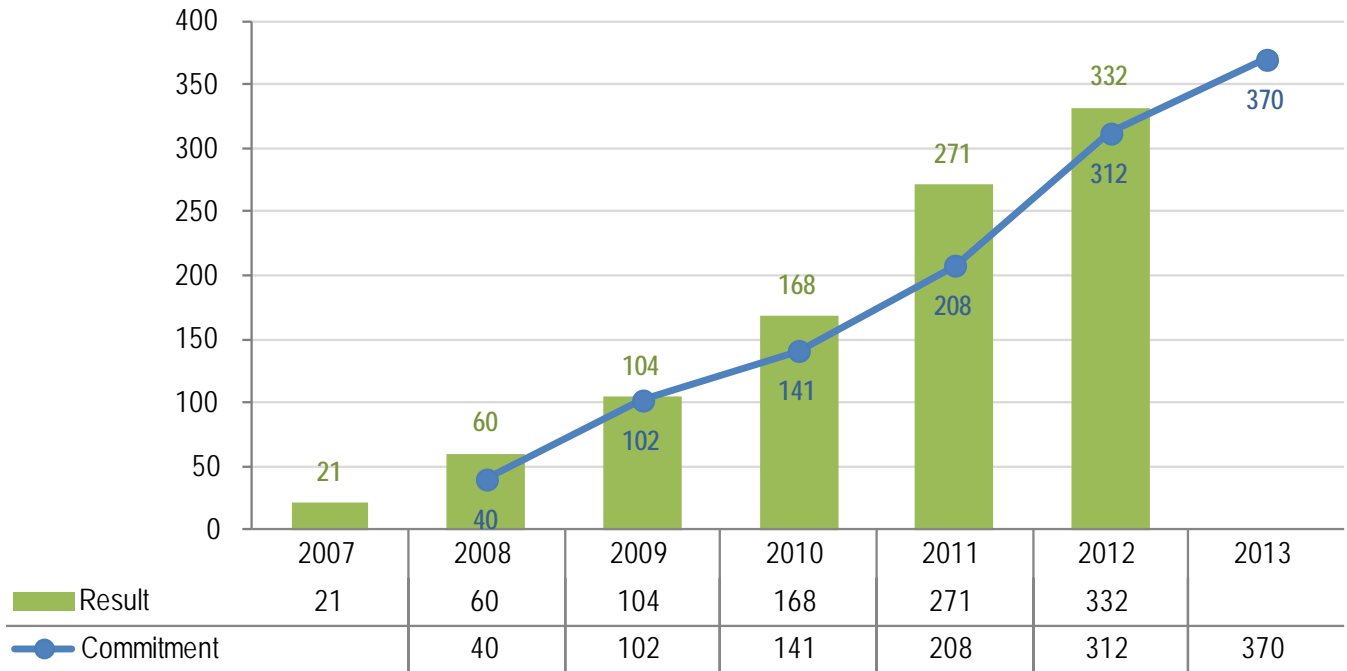
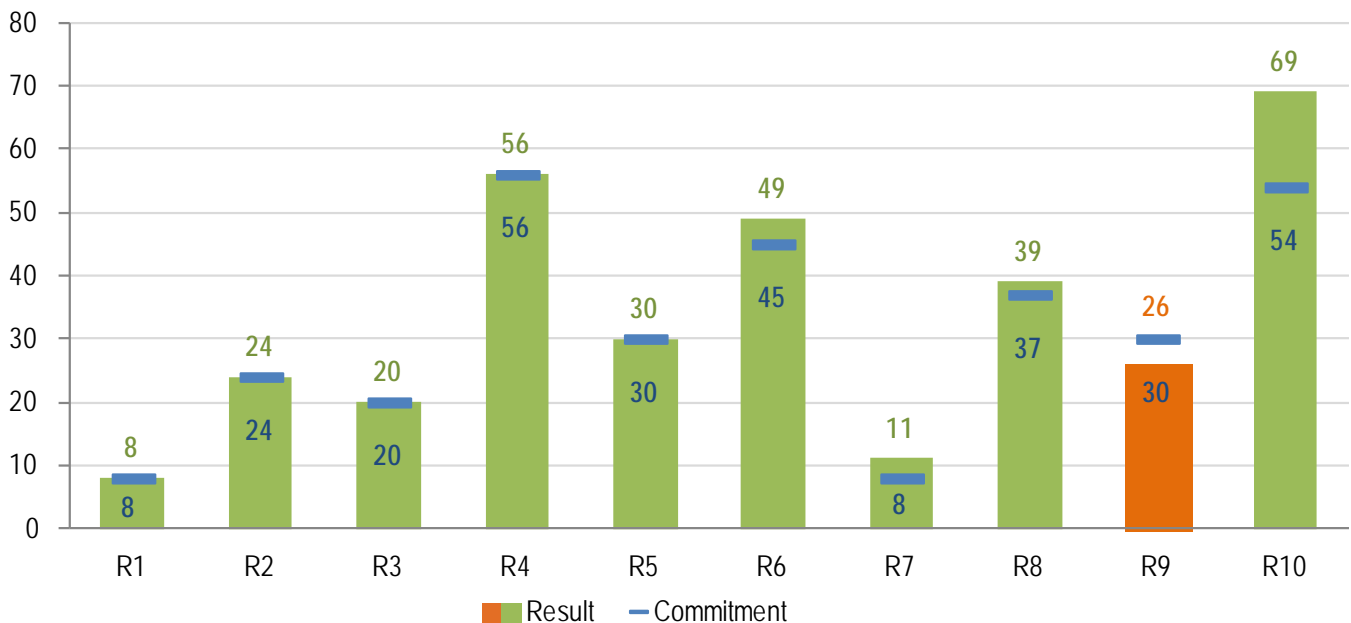


Figure 24: Impaired Watersheds Showing Improved Water Quality Conditions (WQ-SP12.N11) by Region for FY 2012



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Water Quality Criteria and Standards: Water quality standards are the regulatory and scientific foundation of water quality protection programs under the Clean Water Act (CWA). Under the CWA, states, territories, and authorized tribes establish water quality standards that define the designated uses (and water quality criteria to protect those uses) for waters within their jurisdictions. The standards are used to determine which waters must be cleaned up, how much may be discharged, and what is needed for protection.

For the fourth year in a row, states and territories met regional commitments for submitting new or revised water quality criteria acceptable to EPA that reflect new scientific information (WQ-3a) (Figure 25). The FY 2012 result of 39 states and territories met the national goal, with all regions meeting their commitments (Figure 26). However, complex science and policy issues—including those raised in litigation and difficult Endangered Species Act consultations—will continue to pose challenges.

Figure 25: States/Territories with Updated Water Quality Criteria by Fiscal Year (WQ-03a)

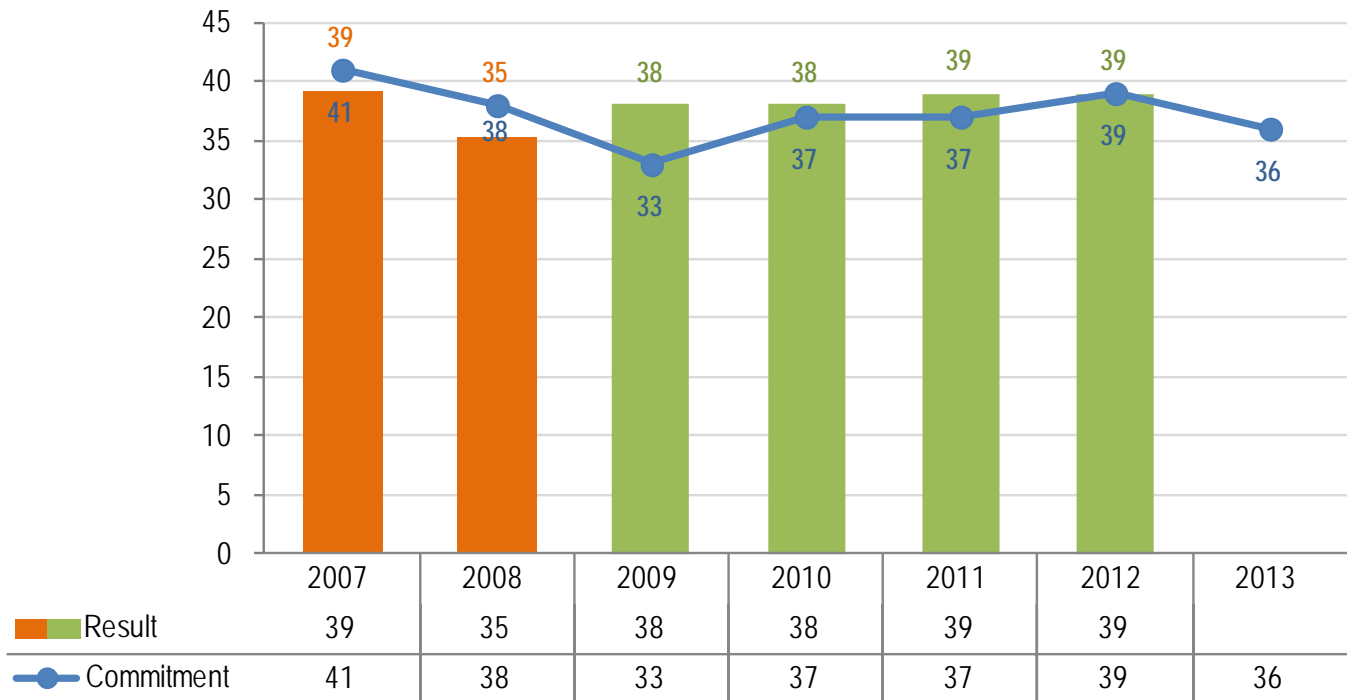
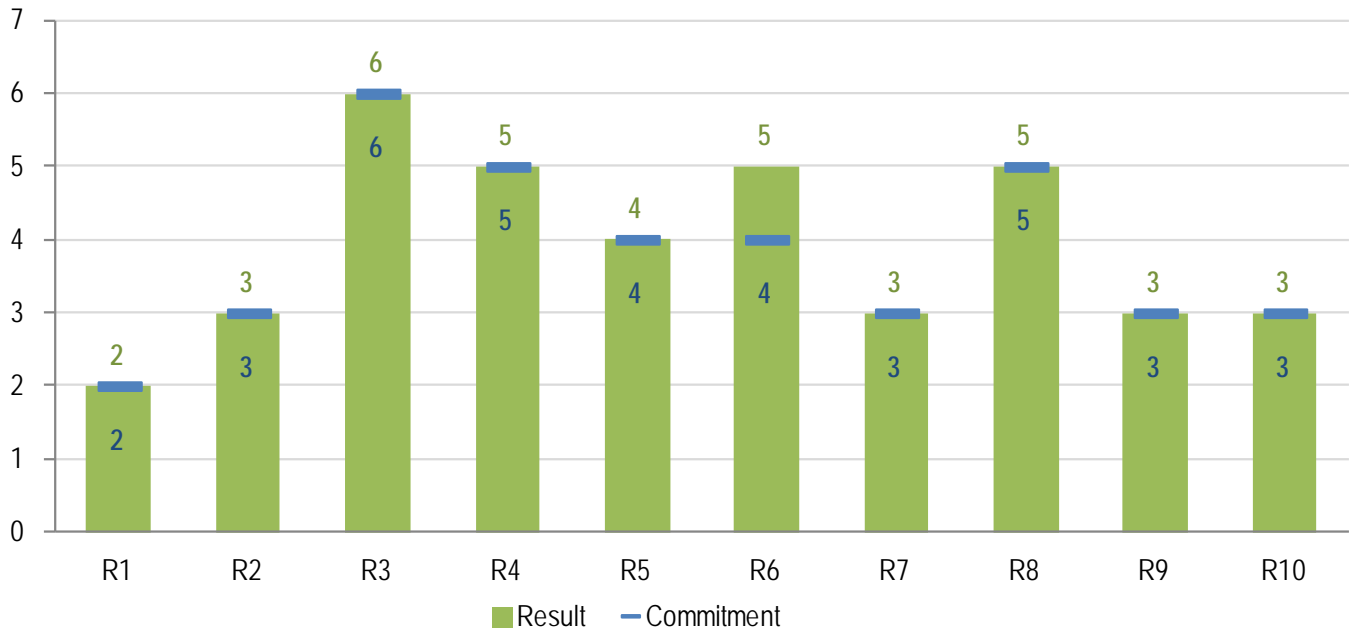


Figure 26: States/Territories with Updated Water Quality Criteria (WQ-03a) by Region for FY 2012



The adoption and proposal of numeric water quality standards for total nitrogen and phosphorus by states and territories was a top priority for the National Water Program in FY 2012. In FY 2012, one state adopted a total phosphorus criterion for its lakes that was EPA-approved, bringing the cumulative total for WQ-1a to 42 criteria; no new proposed criteria were added under WQ-1b.¹³ Commitments for WQ-1a and WQ-1b were met. EPA did not, however, meet its commitment for state and territories supplying performance milestones to EPA on the development, proposal, and adoption of numeric water quality standards for total nitrogen and phosphorus (WQ-1c) (Figure 27). Many states have not provided complete information due to the scientific, programmatic, and policy complexities of developing nitrogen and phosphorus criteria. Additionally, this measure does not allow partial credit to acknowledge state milestone accomplishments toward the criteria development for major water types.¹⁴

¹³ During FY 2012, the results for FY 2011 were adjusted because some criteria did not fully qualify under the WQ-1a and WQ-1b definitions.

¹⁴ While measure WQ-1c was discontinued for FY 2013, it has been adapted as part of the new Nutrient Framework measure to include more flexibility (see FY 2013 National Water Program Guidance, http://water.epa.gov/resource_performance/planning/FY-2013-National-Water-Program-Guidance.cfm).

Figure 27: States/Territories Supplying Performance Milestones by Fiscal Year (WQ-01c)

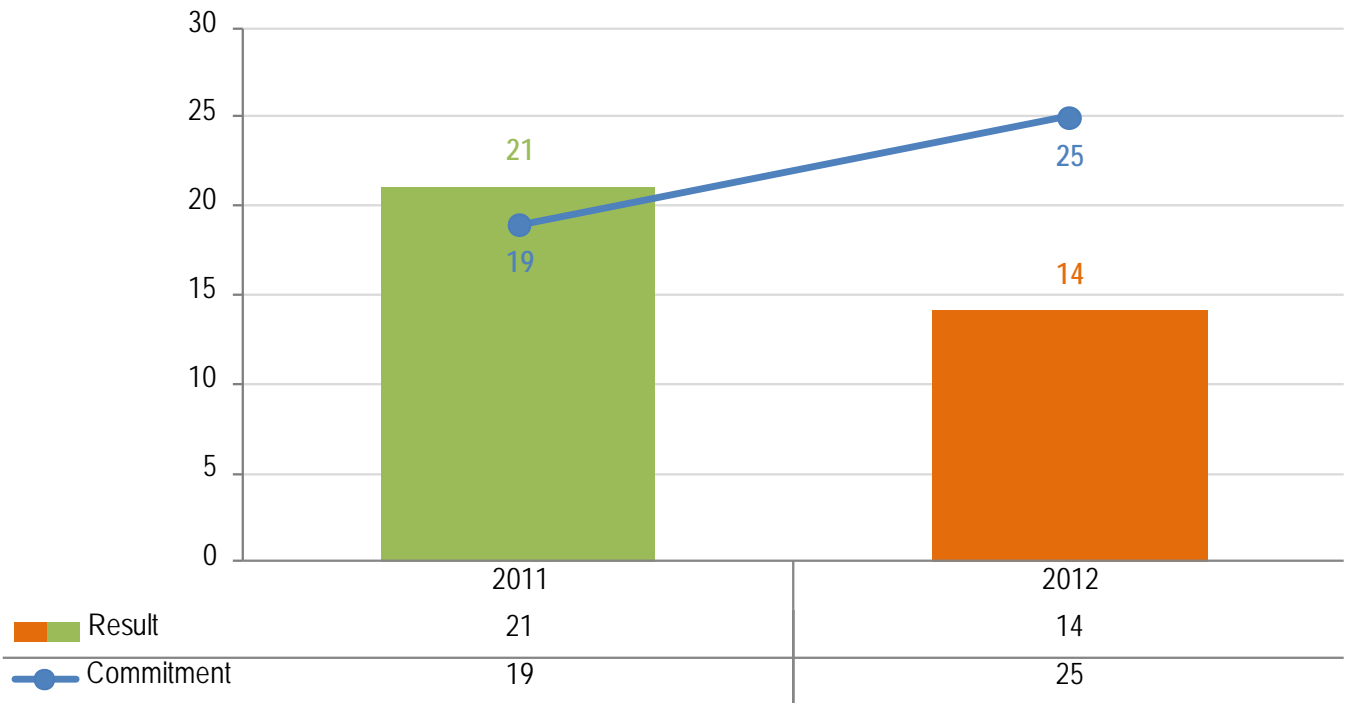
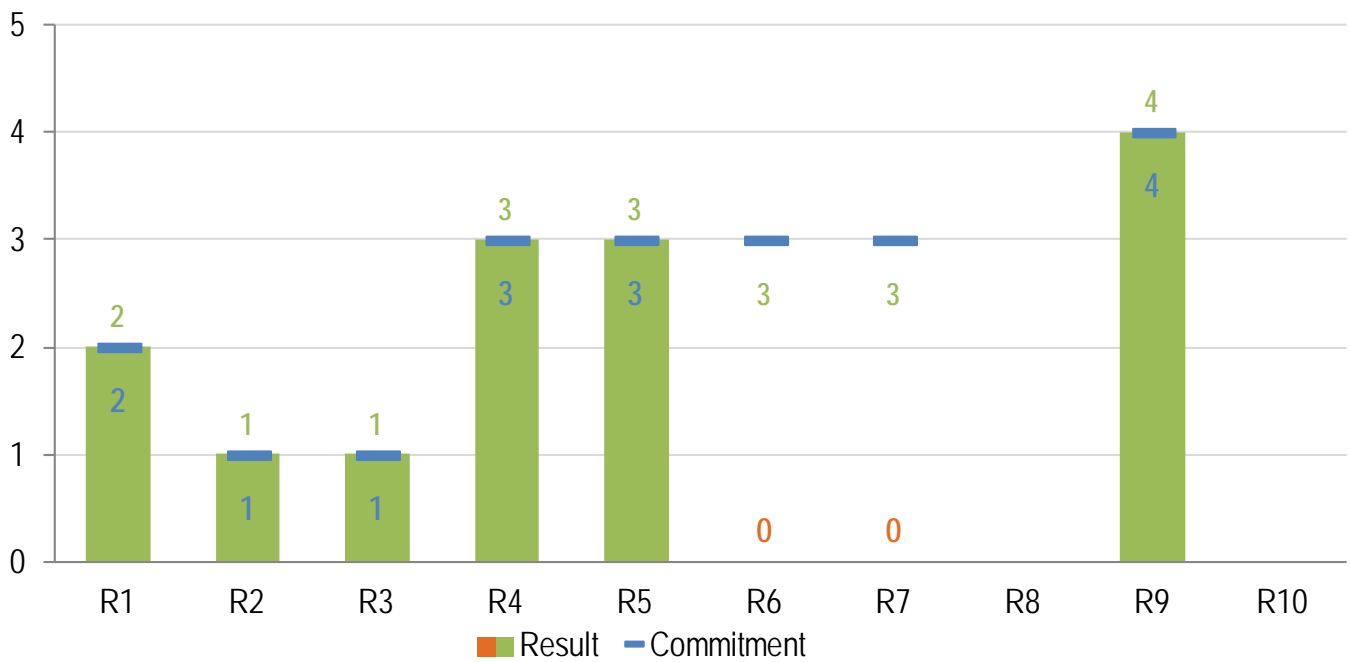


Figure 28: States/Territories Supplying Performance Milestones (WQ-01c) by Region for FY 2012



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EPA exceeded its FY 2012 national commitment (85%) by approving 89% of water quality standard revisions submitted by states and territories (WQ-4a) (Figure 29). EPA has exceeded commitments for this measure for the past six years. Nonetheless, the trend declined slightly in FY 2012 from 92% in FY 2011. This may reflect the fact that states are tackling more difficult environmental problems and issues in their standards revisions. All regions met their commitments for this measure in FY 2012 (Figure 30).

Figure 29: States/Territories with Water Quality Standards Revisions Approved by Fiscal Year (WQ-04a)

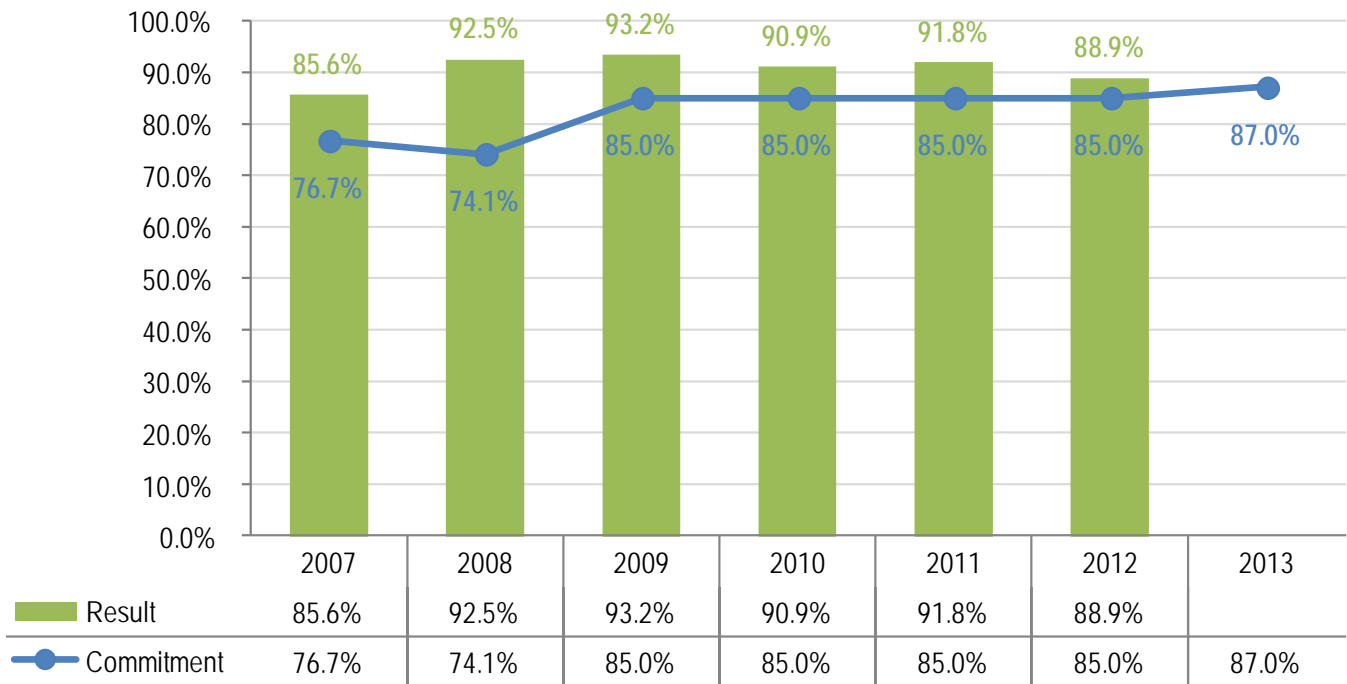
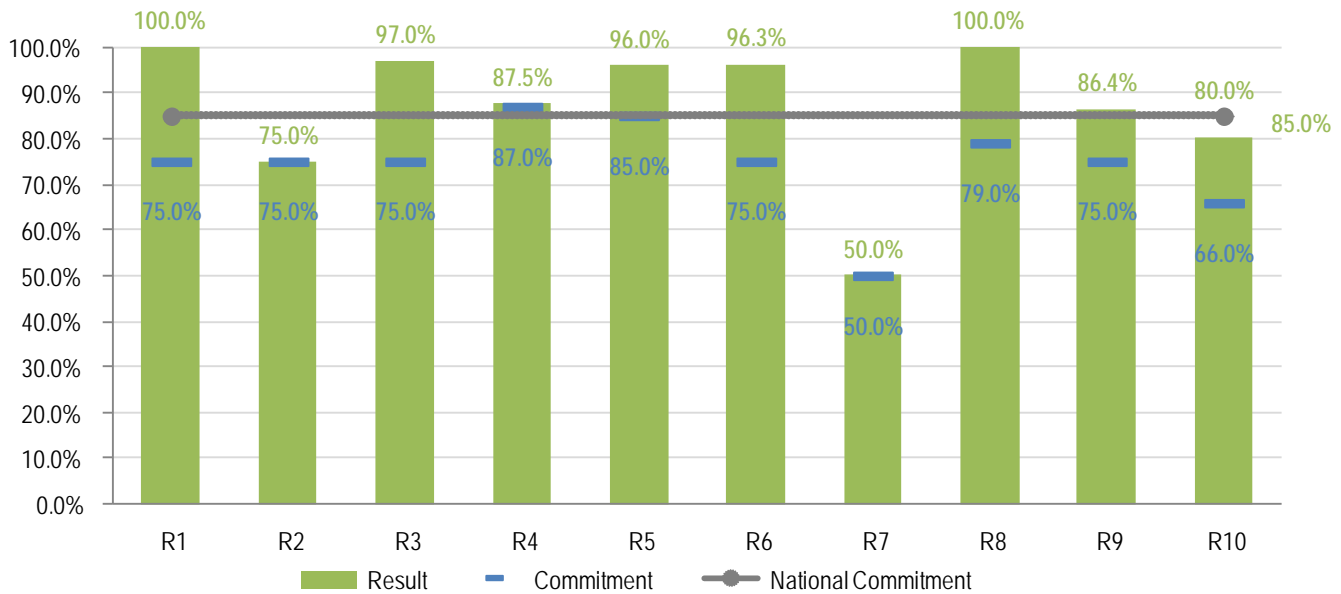


Figure 30: States/Territories with Water Quality Standards Revisions Approved (WQ-04a) by Region for FY 2012



Water Quality Monitoring: Throughout FY 2012, EPA continued to work with states, tribes, interstate agencies, and territories to strengthen their monitoring programs. Activities included technical support from EPA regions and the Office of Water in monitoring, data management, assessment and reporting. To expand access to ambient water quality data, EPA continues to support states and tribes in joining the Water Quality Exchange. In FY 2012, EPA, in partnership with the National Water Quality Monitoring Council and the U.S. Geological Survey, launched the Water Quality Data Portal providing seamless access to data holdings managed by both agencies. This includes more than 100 million records from states, tribes, EPA, and others housed in the WQX/STORET data warehouse.

One of the long-standing gaps in EPA and state monitoring is being addressed through the National Aquatic Resource Surveys (NARS), an EPA, state, and tribal partnership to produce cross-jurisdictional, representative assessments of the condition of the nation's waters. These statistical surveys are a cost-effective and scientifically credible means for assessing and reporting on the current status of a water resource and, over time, changes and trends for that water resource. Initiated in 2005, the NARS program relies on collective EPA, state, and tribal efforts to conduct annual surveys that rotate through each waterbody type (streams, rivers, lakes, coasts/estuaries, or wetlands) and repeat on a five-year cycle. In March 2013, EPA published the results of the second survey of streams (see text box). In FY 2012, EPA, states, and tribes also completed sampling for the second survey of lakes. Samples collected at more than 1,000 lakes have been sent to laboratories for processing.

NARS National Rivers and Streams Assessment

On March 26, 2013, EPA released the draft National Rivers and Streams Assessment for public comment. This report is the first combined report on rivers and streams. It is the second national assessment of streams. Key findings include:

- **More than half (55%) of river and stream miles are in poor condition for aquatic life.** Key stressors include nutrients that increase the risk of degraded biology.
- **Nitrogen and phosphorus are at excessive levels.** Twenty-seven percent (27%) of the nation's rivers and streams have excessive levels of nitrogen, and 40% have high levels of phosphorus. High levels of nutrients have local and downstream impacts. Nutrients stimulate algal growth. Severe algal blooms can produce unpleasant odors and create algal mats, reducing the appeal of lakes for recreational activities. As algae die and decompose, they remove oxygen from the water, reducing the amount available to fish and other organisms. Removing algae from drinking water can significantly increase water treatment costs.
- **Streams and rivers are at an increased risk due to decreased riparian vegetation cover.** Vegetation along rivers and streams is a key factor in slowing the velocity of rainwater so it doesn't scour and erode stream banks, removing pollutants carried by rainwater, and providing shade to maintain temperatures that support healthy stream biology. Almost one-quarter (24%) of rivers and streams are rated as poor because of the loss of healthy vegetative cover.
- **Increased bacteria levels.** High bacteria levels were found in 9% of stream and river miles, making those waters potentially unsafe for swimming and other recreation.
- **Elevated mercury levels.** A subset of rivers and larger streams was sampled for fish tissue contaminants. Many of those waters, equivalent to more than 13,000 miles of rivers, have fish with mercury levels that may be unsafe for human consumption.

Compared to a 2004 assessment of wadeable streams, this new assessment finds that stream condition is different than it was during a similar survey that focused only on streams. The new survey reports that 7% fewer stream miles rate good for biological condition based on the same macroinvertebrate indicator of stream health. For nutrients, the results are mixed, with a 9% increase in stream miles rated good for low levels of nitrogen, but 19% fewer stream miles rated good for having low levels of phosphorus. Looking at indicators of habitat quality, the new survey finds improvements for streams, with 17% more stream miles in good condition for fish habitat and 12 percent more stream miles in good condition for vegetation along the banks.

The number of states and territories implementing comprehensive monitoring strategies in keeping with established schedules has remained just short of its annual goal for the past three years (WQ-5) (Figure 31). This is primarily due to the U.S. Virgin Islands' (VI) struggle to manage a successful monitoring program. The VI is currently under a Corrective Action Plan (CAP), and all monitoring work funded by the CWA Water Pollution Control (Section 106) grants program will be conducted by contractors in FY 2013.

Figure 31: States/Territories That Have Adopted Monitoring Strategies by Fiscal Year (WQ-05)

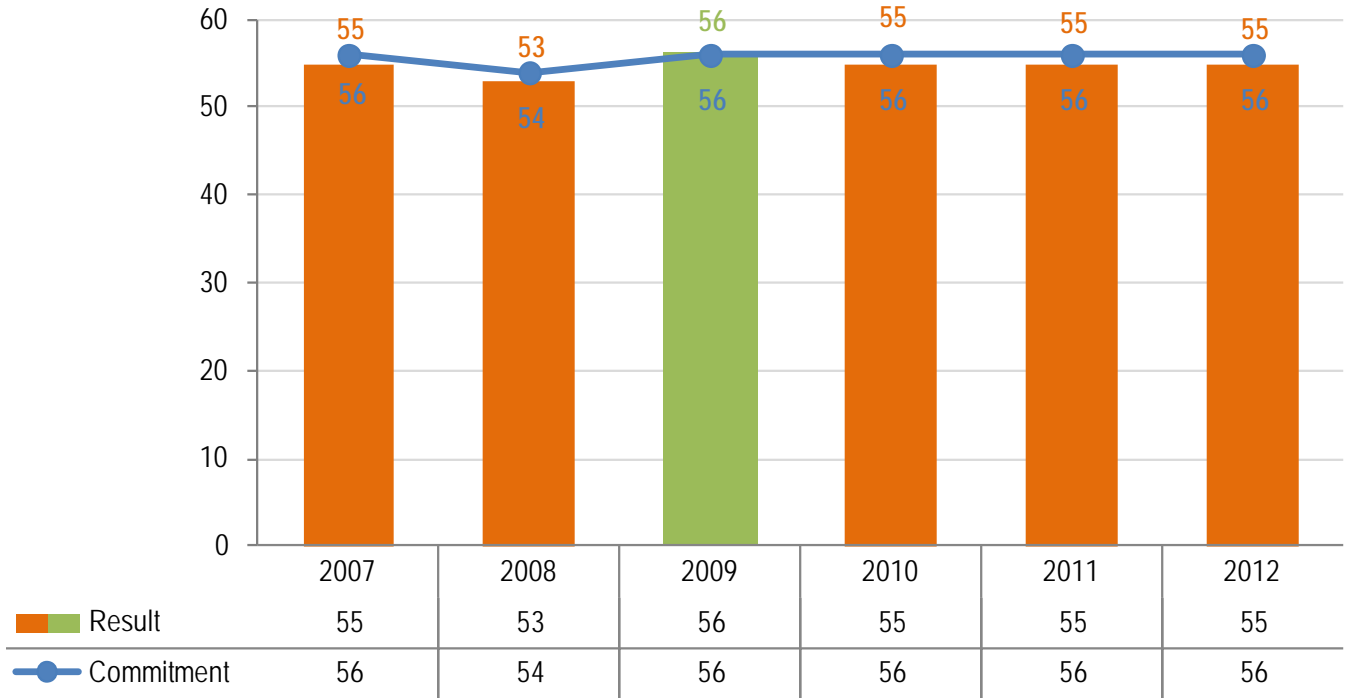
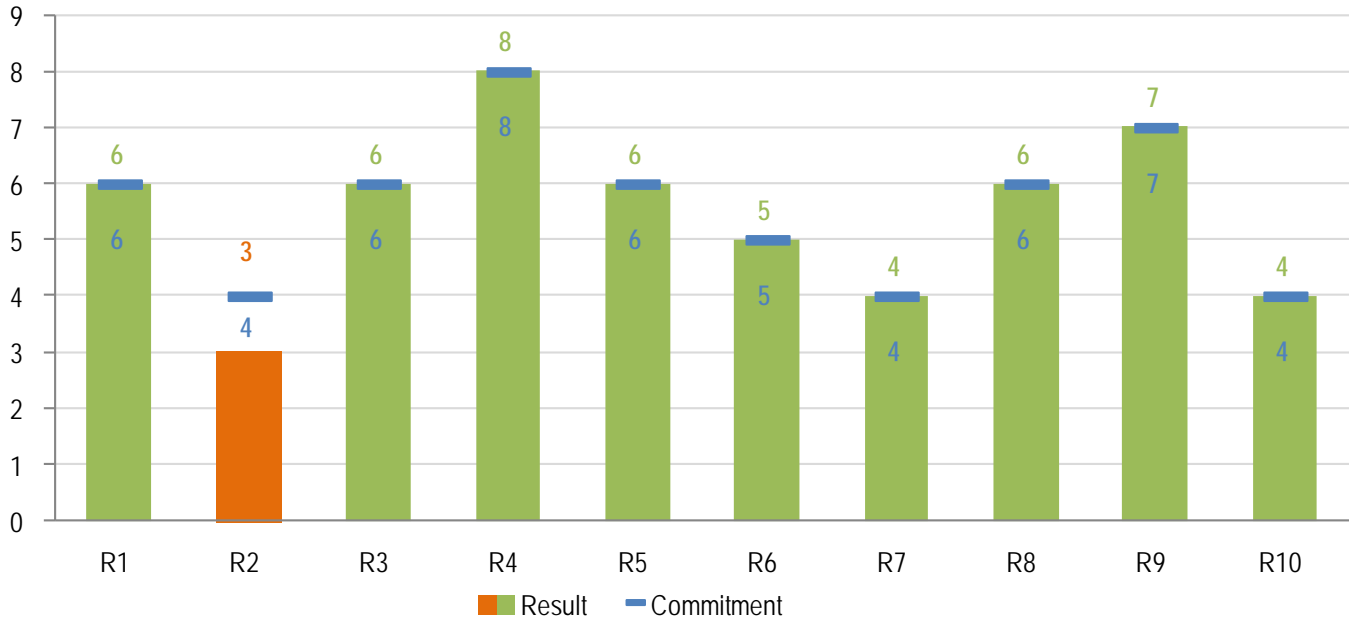


Figure 32: States/Territories That Have Adopted Monitoring Strategies (WQ-05) by Region for FY 2012



Forty-six states and territories provided electronic information for integrated reporting of water quality assessment data in FY 2012 (WQ-7). This was two states short of the annual commitment. There is a long-standing issue with the assessment reporting processes employed by two states in Region 3. In a change from the most recent reporting cycles, all Region 3 states submitted their draft 2012 Integrated Reports by mid-May. Several of these had significant issues for the region to work through, and the combined effort to address these concerns and complete reviews and approvals of all six submissions did not allow for extra time to resolve the database reporting issues for the two Region 3 states.

Total Maximum Daily Loads (TMDLs): Developing TMDLs for an impaired waterbody is a critical step in meeting water restoration goals. TMDLs establish a pollutant budget, which may be implemented via permit requirements or watershed plans through local, state, and federal programs. In FY 2012, states developed and EPA approved or established 2,922 TMDLs (WQ-8a) (Figure 33), of which 227 were established by EPA. All regions met their annual commitments for this measure in FY 2012. (Figure 34).

EPA tracks the pace of TMDL development, which refers to the annual number of TMDLs approved or established consistent with national policy. The national policy recommends that TMDLs be established and approved within eight to 13 years of the water having been listed as impaired under CWA Section 303(d). The national 2012 end-of-year pace was 91%, which significantly exceeded the commitment of 60% (WQ-8a).

Figure 33: TMDLs Established or Approved on a Schedule Consistent with National Policy by Fiscal Year (WQ-08a)

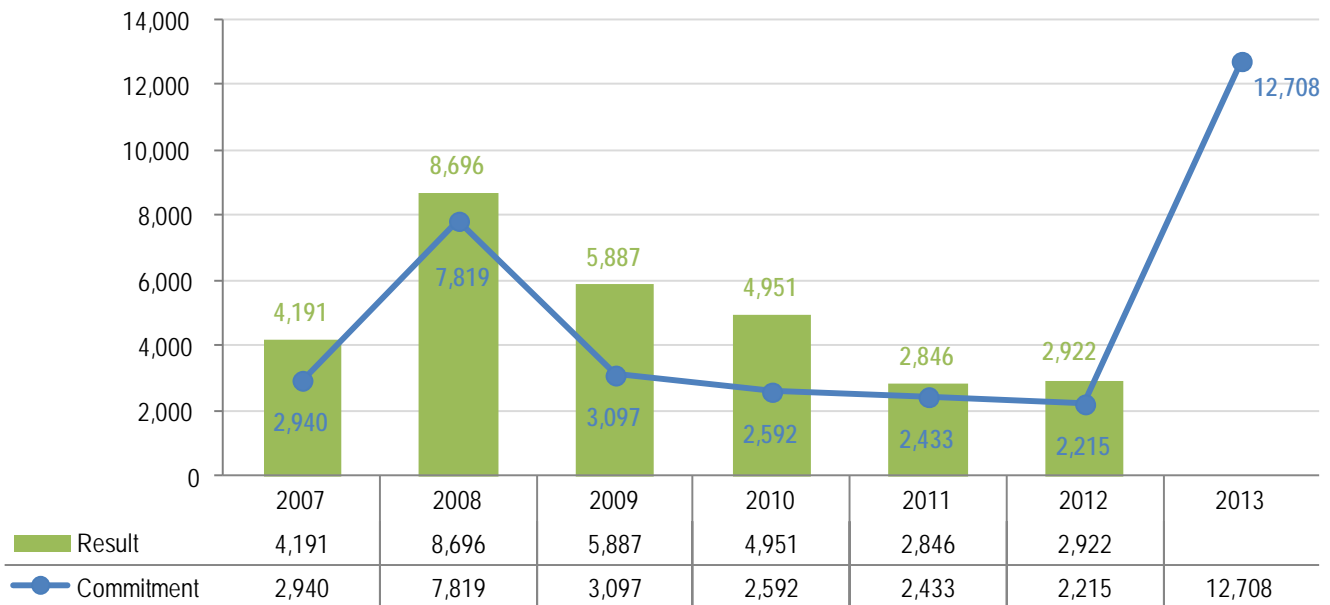
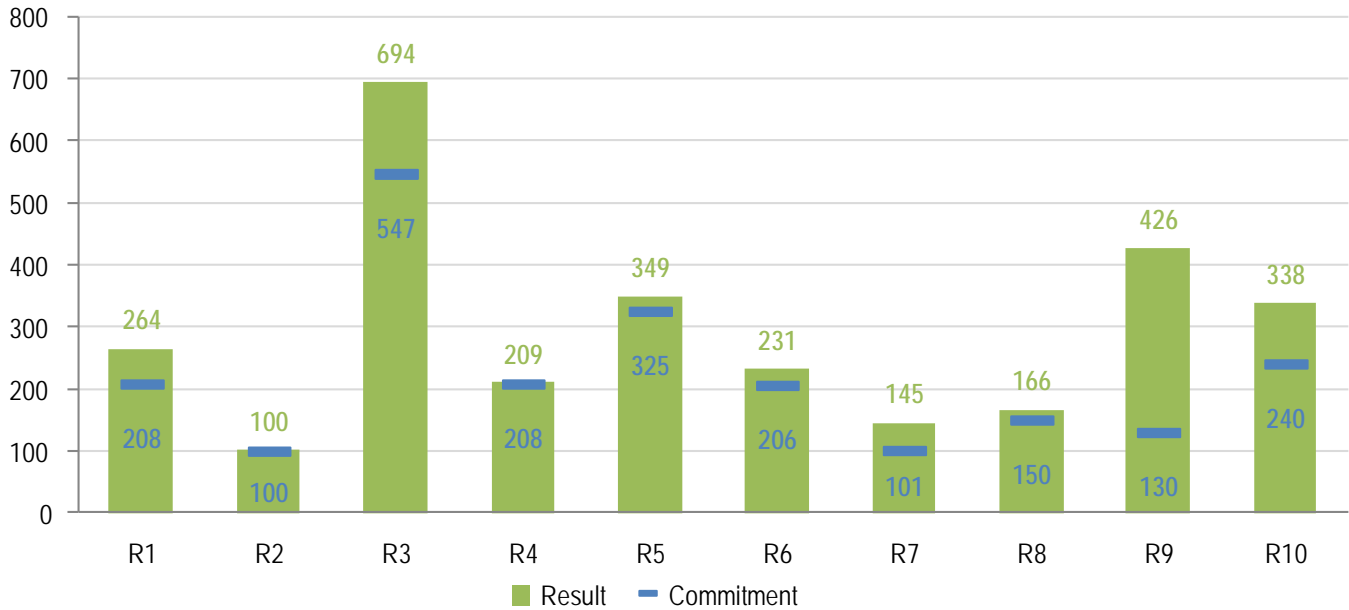


Figure 34: TMDLs Established or Approved on a Schedule Consistent with National Policy (WQ-08a) by Region for FY 2012



The higher than expected results were due to a number of factors. Specifically, Connecticut developed 186 bacteria TMDLs and Maine completed a statewide impervious cover TMDL, which accounted for 30 TMDLs. West Virginia conducts their TMDL process at the watershed scale, and in FY 2012, completed two watershed TMDL packages, which accounted for more than 600 TMDLs. Kansas also applies a watershed approach to TMDL development, and in FY 2012, completed and submitted to EPA a watershed TMDL, which had not been anticipated. Lastly, several Los Angeles consent decree TMDLs were completed, which resulted in substantially more TMDLs than anticipated.

National Pollutant Discharge Elimination System (NPDES) Permit Program: The NPDES program requires all point sources discharging into U.S. waterbodies to be covered by state or EPA NPDES permits. For the sixth year in a row, EPA and states achieved the national goal of having current NPDES permits in place. In 2012, 90.4% of nontribal facilities (109,866 facilities) had current permits, exceeding the national commitment of 88% (100,147 facilities) (WQ-12a) (Figure 35). Despite widespread decline in state resources causing five of the 10 Regions to miss FY 2012 commitments, some states and regional offices were able to maintain a strong performance and issue more permits than expected, leading to an overall national result that met the national commitment. (Figure 36)

Figure 35: Non-Tribal NPDES Permits Considered Current by Fiscal Year (WQ-12a)

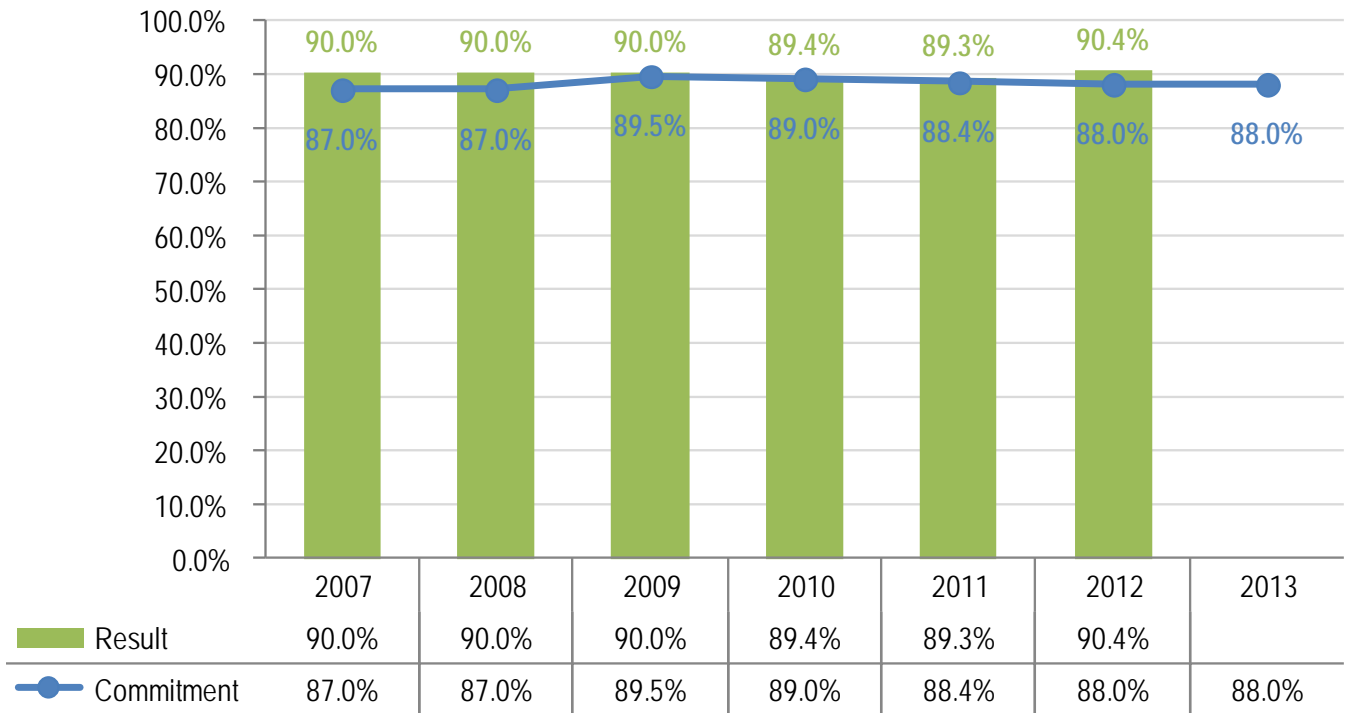
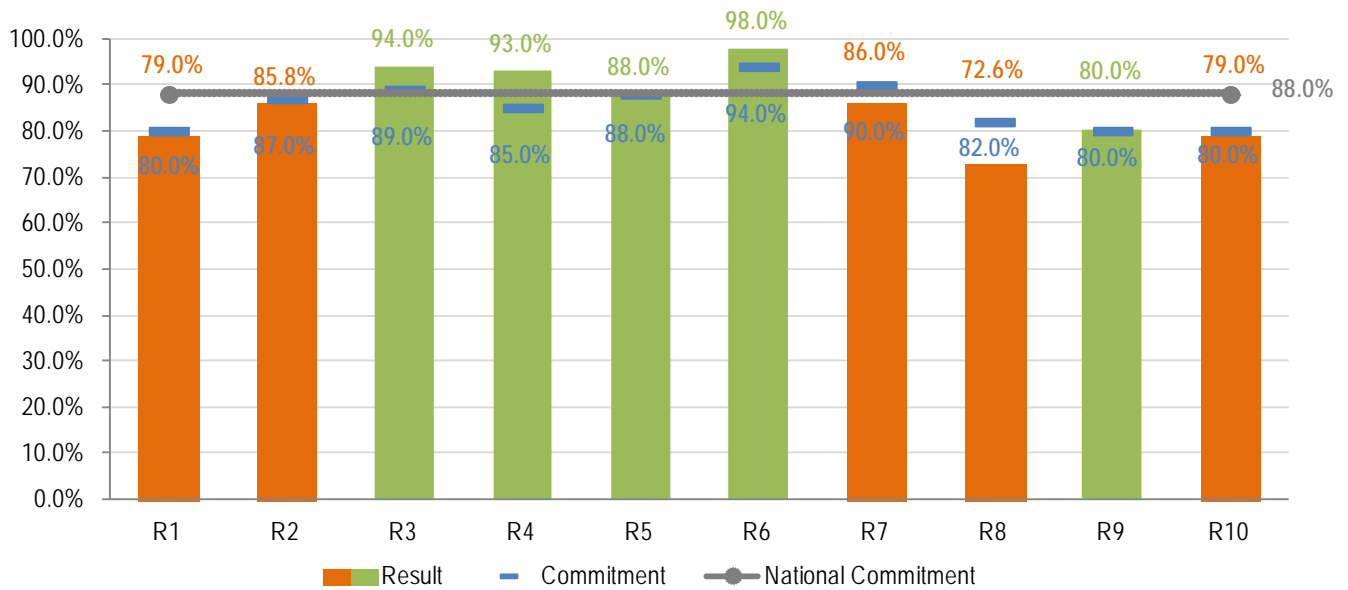
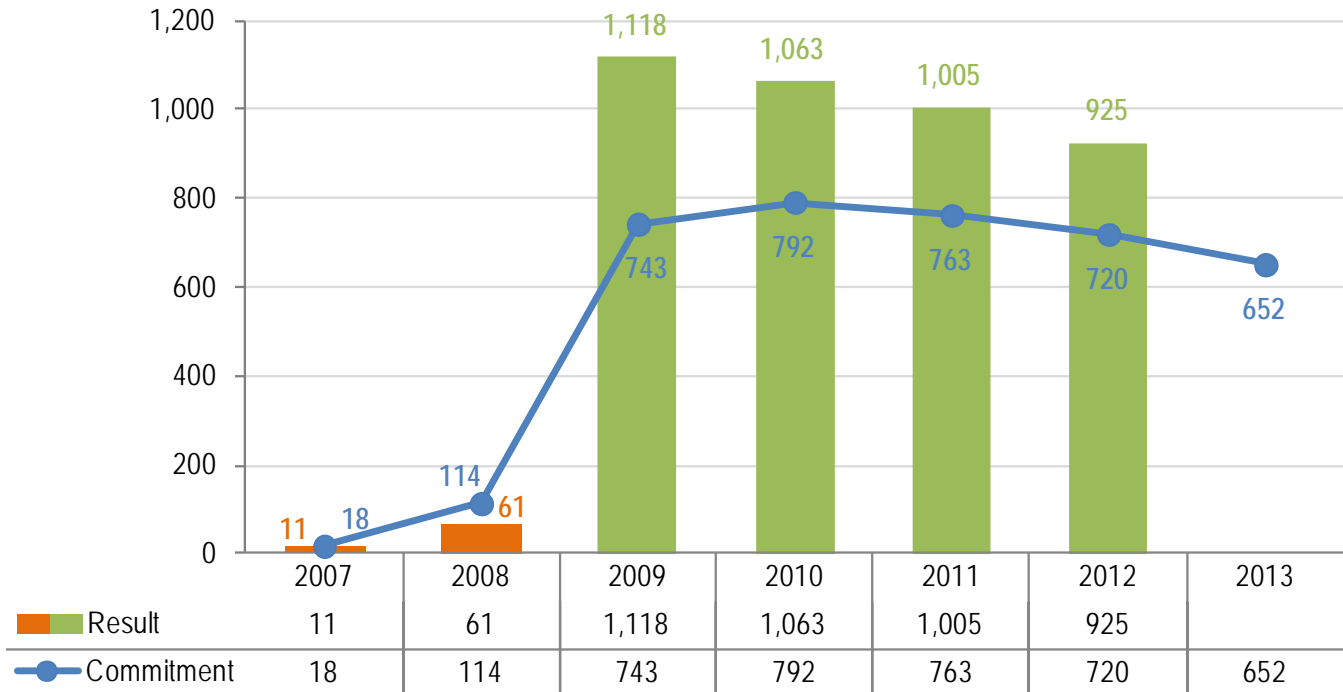


Figure 36: Non-Tribal NPDES Permits Considered Current (WQ-12a) by Region for FY 2012



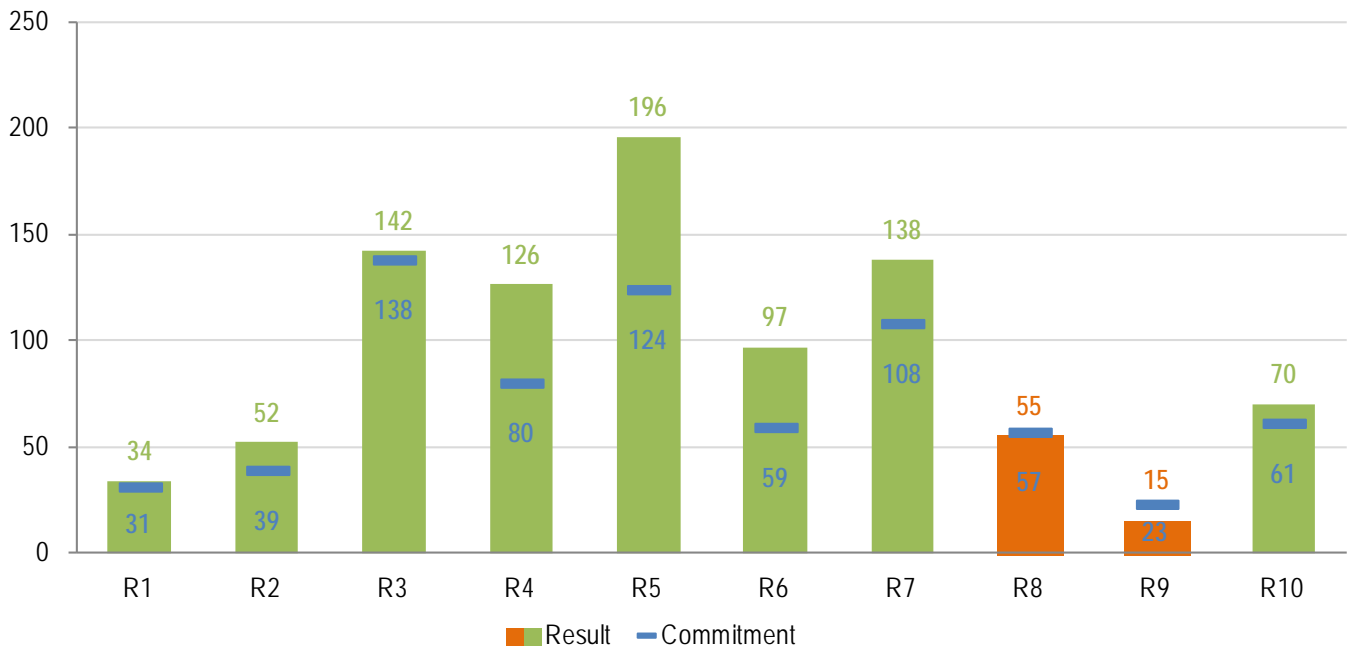
EPA has been working with states to structure the permit program to better support comprehensive protection of water quality. A key strategy is to focus efforts on high-priority permits that need to be issued or reissued to help implement TMDLs, watershed plans, effluent guidelines, or other environmental and programmatic actions. In 2012, both EPA and authorized states issued 925 priority permits (128% of the universe), exceeding the national commitment of 720 permits (100%) (WQ-19b) (Figure 37). Eight of the 10 regions met or exceeded their commitments in 2012 (Figure 38). EPA and authorized states have exceeded their targets for issuing high-priority permits for the past four years.¹⁵ States have continued their efforts in coordination with EPA regions to maintain strong performance in issuing high-priority permits.

Figure 37: High-Priority EPA and State NPDES Permits by Fiscal Year (WQ-19b)



¹⁵ To simplify the process and be more transparent, EPA developed a new policy for FY 2010 for developing the priority permits universe. In addition, EPA shifted the time period for locking down the priority permits universe to align with the Government Performance and Results Act (GPRA) commitment schedule. When states establish their lists each year, they designate priority permits and commit to a certain number of these to be issued within the fiscal year. If a state is able to issue additional priority permits ahead of schedule, it receives credit toward the current fiscal year target, which may result in more permits being issued than originally targeted. This measure has been revised for FY 2013 so that results over 100% will no longer be possible.

Figure 38: High-Priority EPA and State NPDES Permits (WQ-19b) by Region for FY 2012



Clean Water Financing: The Clean Water State Revolving Funds (CWSRFs) provide low-interest loans to local governments to help finance wastewater treatment facilities and other water quality projects. The CWSRF utilization rate hit 98% in 2012. Six of the 10 regions met their commitments in FY 2012. Two regions—9 and 10—significantly exceeded their annual goals due to the fact that a number of states were able to provide more assistance to communities than was original estimated, given current economic conditions and the amount of funding that was expected to become available. Of the \$97.4 billion in funds available for projects through 2012, \$95.4 billion has been committed to nearly 32,000 loans. In 2012, project assistance reached \$5.8 billion, which funded 1,947 loans in a single year. Nationally, since 2001, fund utilization has remained relatively stable and strong at greater than 90% (WQ-17)

Figure 39: Fund Utilization Rate for the CWSRF by Fiscal Year (WQ-17)

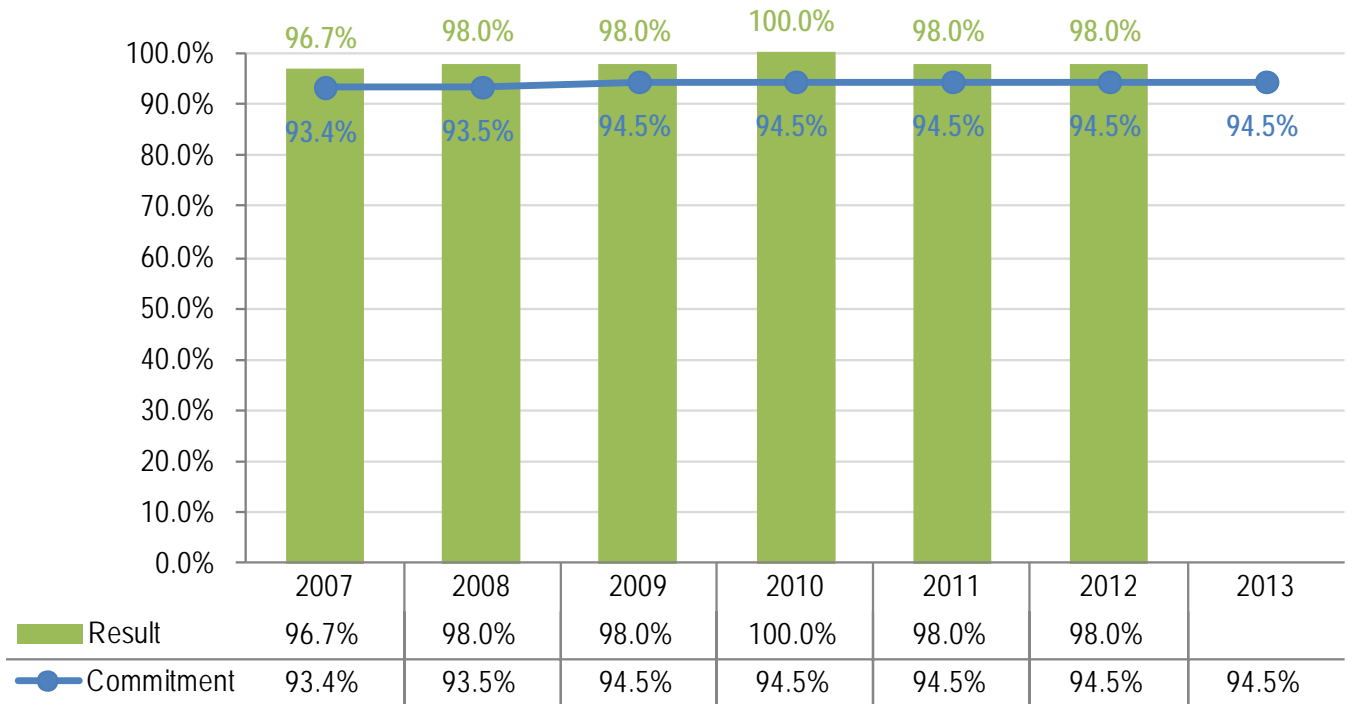
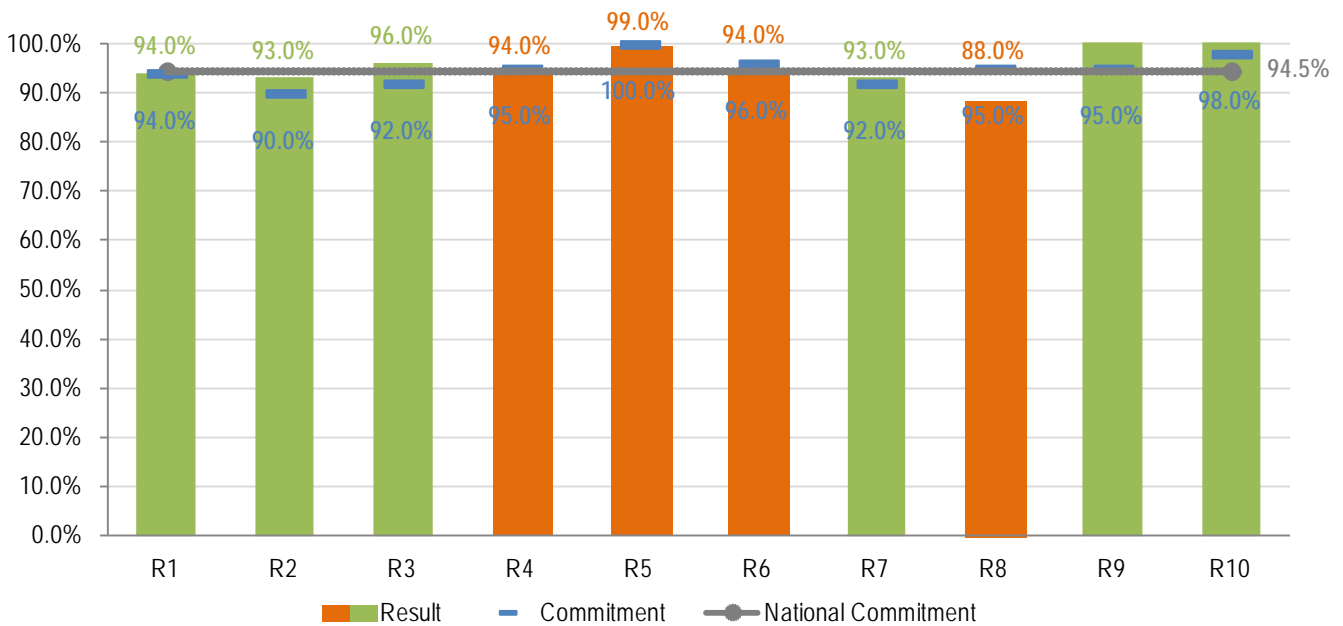


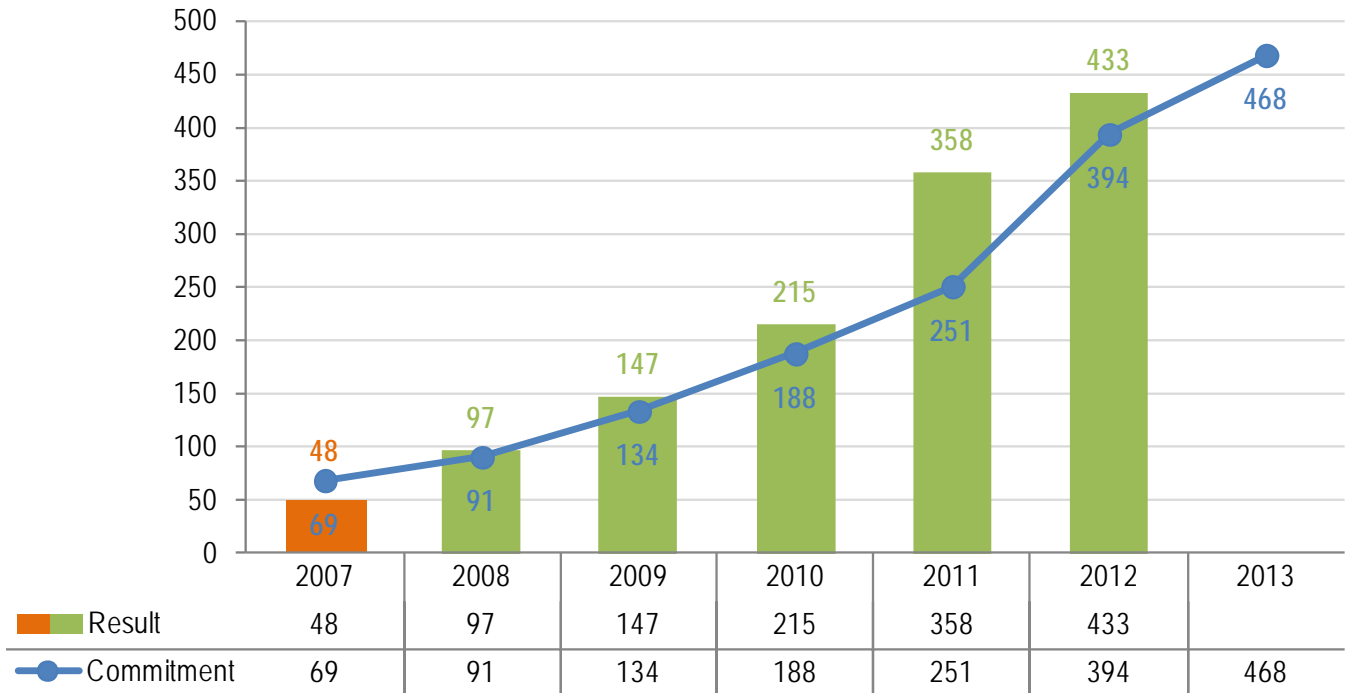
Figure 40: Fund Utilization Rate for the CWSRF (WQ-17) by Region for FY 2012 (Numbers reflect both base program and ARRA funded projects)



Control Nonpoint Source (NPS) Pollution: Polluted runoff from sources such as agricultural lands, forestry sites, and urban areas is the largest single remaining cause of water pollution. EPA and states are working with local governments, watershed groups, property owners, tribes, and others to implement programs and management practices to control polluted runoff throughout the country. EPA and states made significant progress in FY 2012 in documenting the full or partial restoration of waterbodies that are impaired primarily by nonpoint source runoff. Nationally, EPA exceeded its FY 2012 commitment (394), with 433 waterbodies partially or fully restored. This was a 21% increase over the 2011 result of 358 improved waterbodies nationwide (WQ-10) (Figure 41).¹⁶ All regions met their annual commitments (Figure 42). Some of the results are due to Region 6 exceeding its commitment because of 11 delisted Oklahoma waterbodies. Region 7 had several success stories, counting for 18 delisted waterbodies. In addition, one state in Region 7 updated the segmentation of their waters so that some stories that would have previously counted for one segment or waterbody now count for multiple segments.

One of the challenges of the measure is it can be difficult to anticipate in exactly what year projects will come to fruition because each one consists of a different scale or scope, pollutant(s) type, and monitoring cycle. In addition, factors helping or hindering water quality progress, such as other projects currently underway or watershed development, often add more pollutants, thus making detecting change difficult.

Figure 41: NPS-Impaired Waterbodies Restored by Fiscal Year (WQ-10)



¹⁶ EPA continues to highlight NPS success stories on its website at <http://www.epa.gov/owow/nps/Success319/>.

Figure 42: NPS-Impaired Waterbodies Restored (WQ-10) by Region for FY 2012

