EPA

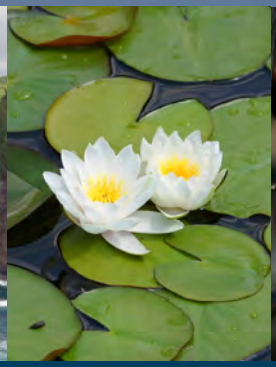
Office of Water

National Water Program

Best Practices and End of Year Performance Report

Fiscal Year 2014






June 2015

This report is based primarily on FY 2014 end-of-year performance data reported by states, tribes, and EPA regional and headquarters offices. The report presents materials and analysis developed in December 2014 and January 2015 by EPA headquarters and regional staff working together on Subobjective Teams. These materials provided data on progress toward environmental and public health goals of key program activities, along with management challenges in meeting or not meeting program commitments. Much of this work is accomplished through grants, and this report serves as the Office of Water's primary summary of progress under the Environmental Results Grants Order.

This report includes four key elements:

- An overview of FY 2014 national performance results and trends for all National Water Program measures.
- Highlights of performance trends for key commitment measures.
- Descriptions of innovative approaches and best practices in program implementation.
- An appendix of FY 2014 national commitments and results for environmental and program-related measures.

Additional information on the performance highlights and challenges for each subobjective area is available on the Internet at http://water.epa.gov/resource_performance/performance/. In addition, the website includes an overview of the National Water Program measure universe and a detailed appendix with historical data on national and regional commitments and results for all performance measures.

Program Contacts

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INTERNET ACCESS: This FY 2014 National Water Program Best Practices and End-of-Year Performance Report and supporting documents are available at http://water.epa.gov/resource_performance/performance/index.cfm.

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National Water Program FY 2014 Performance Results

Executive Summary

Overview

EPA met **82.9%** of its commitments for all National Water Program performance measures in FY 2014. About seventeen percent (**17.1%**) were not met. The FY 2014 results represented a significant increase in the number of measures met from the previous year's results (69%). Other overarching highlights include:

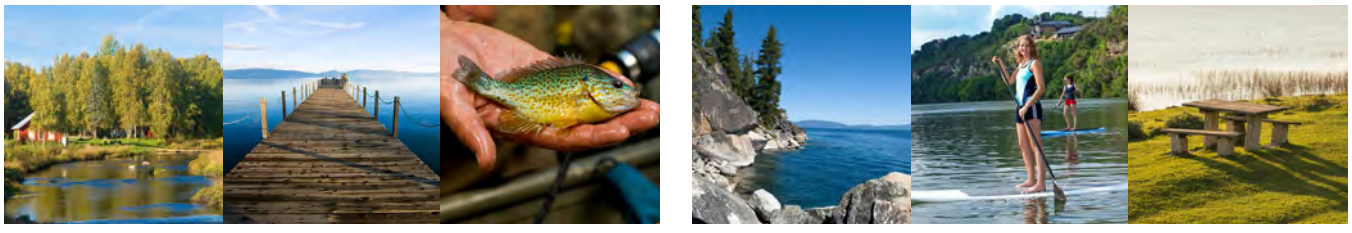
- The national core drinking water and water quality programs were more successful than the geographic-based aquatic programs in meeting their commitments in 2014 (**92% vs. 68%)**. This was the significant improvement for the core programs from the previous year's results, where 71% of the core program measures met their annual commitments compared to 65% of the geographic-based programs.
- Programs under the Wetlands, Great Lakes, Safe Swimming, and Long Island Sound subobjectives were most successful in meeting their commitments.
- On average, **87.5%** of performance commitments set by the EPA regional offices were met in 2014, while **12%** of commitments were missed. This was a noticeable increase over the previous year's results of 79% met.

Protect Public Health

EPA met **92%** of its commitments for all drinking water measures in FY 2014. This is the highest level of attainment in the last seven years. Of these:

- Approximately **93%** of the population was served by community water systems (CWSs) with drinking water that met all applicable health-based drinking water standards (commitment 92%).
- Ninety-two percent (**92%**) of the cumulative amount of Drinking Water State Revolving Funds (DWSRFs) available had loan agreements in place (commitment 89%). EPA has met its commitments for this measure seven years in a row.

For coastal and Great Lakes beaches monitored by state-based beach safety programs, EPA is reporting that **95%** of days of the beach season were open and safe for swimming (FY 2014 commitment 95%). EPA has consistently met this commitment over the past seven years.



Restore and Improve Fresh Waters, Coastal Waters, and Wetlands

EPA met **93%** of its commitments under the Water Quality subobjective in FY 2014 and fell short on **7%**. The percentage of commitments met increased significantly in FY 2014 over the FY 2013 results (67%). Performance highlights include:

- **3,866** of the waters listed as impaired in 2002 met water quality standards for all the identified impairments in FY 2014 (commitment 3,779). Of a universe of 39,503 waterbodies, 9.8% were attaining water quality standards by the end of FY 2014.
- For the seventh consecutive year, EPA and states achieved the national goal of having current National Pollutant Discharge Elimination System (NPDES) permits in place for **90%** of non-tribal facilities (FY 2014 commitment 86%). EPA and authorized states were also successful in meeting the annual national commitment for issuing high-priority permits, with 556 permits issued (commitment 532).
- EPA and states made significant gains in documenting the full or partial restoration of waterbodies that are impaired primarily by nonpoint sources. Nationally, EPA exceeded its commitment (537), with **560** waterbodies that were partially or fully restored.
- The Clean Water SRF utilization rate reached **98%** in 2014. Of the $105.1 billion in funds available for projects through 2013, $100 billion have been committed to 33,325 loans. Project assistance reached $4.6 billion, which funded 1,477 loans in a single year.

EPA faced several management challenges in restoring and improving freshwater quality in FY 2014. These include:

- For the second time in five years, states and territories did not meet the national commitment for submitting new or revised water quality criteria acceptable to EPA that reflect new scientific information (**29** vs. 37 states/territories).
- For the third consecutive year, EPA failed to meet its national commitment of reducing 4.5 million pounds of phosphorus from non-point sources to waterbodies (2.7 million pounds reduced in FY 2014).

The 28 National Estuary Programs (NEPs) and their partners protected or restored almost **94,000 acres** of habitat within the NEP study areas— slightly more than 6,000 acres below the goal of 100,000 acres. In FY 2014, the 28 NEPs played the primary role in directing approximately **$578 million** in additional funds—leveraged from approximately $18 million in EPA Section 320 and earmark funds—toward Comprehensive Conservation and Management Plan (CCMP) implementation. This represents a ratio of **$32 raised for every $1** provided by EPA, which exceeds the historic ratio of $15:$1 measured over the 2003–2012 period

EPA, in partnership with the U.S. Army Corps of Engineers, states, and tribes, was able to report **"no net loss"** of wetlands under the Clean Water Act Section 404 regulatory program. More than **221,000 acres** have been restored and enhanced since 2002. As of FY 2014, **36 states and tribes** have built capacities in wetlands monitoring, regulation, restoration, water quality standards, mitigation compliance, and partnership building.

Improve Drinking Water and Water Quality on American Indian Lands

Safe drinking water and water quality on tribal lands continues to be a concern for the water program. Some key highlights and challenges include:

- **Almost eighty-nine percent (88.6%)** of the population in Indian Country was served by CWSs that receive drinking water meeting all applicable health-based standards, exceeding the national stretch goal of 87% in FY 2014.
- EPA, in coordination with other federal agencies, provided **113,656** American Indian and Alaska Native **homes** with access to safe drinking water and over **75,000 homes** with access to basic sanitation.

Improve the Health of Large Aquatic Ecosystems

EPA implements collaborative programs with other federal agencies, states, and local communities to improve the health of large aquatic ecosystems (LAEs). The following are highlights and challenges for each LAE or place-based program with performance measures in the National Water Program Guidance:

- **U.S.–Mexico Border.** Infrastructure construction project completions through FY 2014 resulted in the removal of **131 million pounds** of biochemical oxygen demand loadings annually from the U.S.–Mexico border area, less than its commitment of 137.3 million pounds. EPA provided access to safe drinking water for **1,468 additional**

homes along the U.S.–Mexico border. This was below the annual goal of 1,700 additional homes but resulted from a project being completed ahead of schedule and providing a public health benefit in FY13. EPA provided adequate wastewater sanitation to an **additional 12,756 homes** over the past year, which was also below the FY 2014 goal of 39,500 additional homes.

- **U.S. Pacific Island Waters.** Last year, **97.7% of the population** in the U.S. Pacific Island Territories was served by community drinking water systems that meet all applicable health-based drinking water standards throughout the year, compared with the commitment of 80%.
- **Great Lakes.** EPA worked with other federal and state agencies to protect, restore, and enhance more than **102,000 acres** of wetlands and wetland-associated uplands across the Great Lakes Basin. This was well above the FY 2014 commitment of 88,000 acres. In FY 2014 EPA, states, and other partners reported remediation of a cumulative **13.3 million cubic yards** of contaminated sediments, including more than 1.8 million cubic yards in 2013.
- **Chesapeake Bay.** The Chesapeake Bay Program reported **59,200 acres** of submerged aquatic vegetation in the bay. This represents approximately **32%** of the program's long-term goal of 185,000 acres, which is the amount necessary to achieve Chesapeake Bay water quality standards. EPA expects enhanced implementation of nitrogen, phosphorus, and sediment pollution control measures as a result of the Total Maximum Daily Load (TMDL) that was established in December 2010.
- **Gulf of Mexico.** The size of the hypoxic, or "dead," zone[1] in the Gulf of Mexico decreased slightly from 5,838 square miles at the end of FY 2013 to **5050 square miles** in FY 2014. A number of hydrological, climate, and monitoring factors impact the hypoxic zone from year to year. For the second time, the Gulf of Mexico Program ended the year slightly below its cumulative target to restore, protect, or enhance 30,800 acres of coastal and marine habitats. Previously funded projects resulted in 13 acres for a cumulative 30,319 acres.
- **Long Island Sound.** The Long Island Sound Program met its commitment (410 acres) by restoring or protecting **410 acres** of coastal habitat, including tidal wetlands, dunes, riparian buffers, and freshwater wetlands. The size of the hypoxic zone in Long Island Sound slightly increased from 80 square miles to **87 square miles,** which was below the five-year rolling average of 137.3 square miles.
- **South Florida.** The health and functionality of the sea grass beds in the Florida Keys National Marine Sanctuary (FKNMS) were maintained above 2006 baseline levels in 2014. Water quality of the near shore and coastal waters of the FKNMS showed some improvement in 2014, with positive results for chlorophyll a, light clarity, and total phosphorus. Elevated dissolved inorganic nitrogen levels due to polluted runoff into waterways, however, continue to be a subject of concern.
- **Puget Sound Basin.** More than **41,000 acres** of tidally and seasonally influenced estuarine wetlands have been restored in the Puget Sound Basin since FY 2006. The program exceeded its 2014 goal of 33,818 acres. The Puget Sound program improved water quality and lifted harvest restrictions for only 46 additional acres (**cumulative total of 3,249**) of shellfish bed growing areas. This was short of the program's cumulative goal of 4,000 acres of unrestrictive commercial and recreational harvesting area in the Sound.
- **Columbia River Basin.** The Columbia River Program has cleaned up a total of **82 acres** of contaminated sediment in the Lower Columbia River as of FY 2014. These cleanups provide a significant contribution to reducing toxics in the Columbia River. EPA measured a **90%** reduction in contaminants of concern in the water and fish at several key sites on the Columbia River.

[1] The dead zone is an area of oxygen-starved water, also known as hypoxia. It is fueled by nitrogen and phosphorus runoff, principally from agricultural activity in the Mississippi River watershed, which stimulates an overgrowth of algae that sinks, decomposes, and consumes most of the life-giving oxygen supply in the water.

Introduction

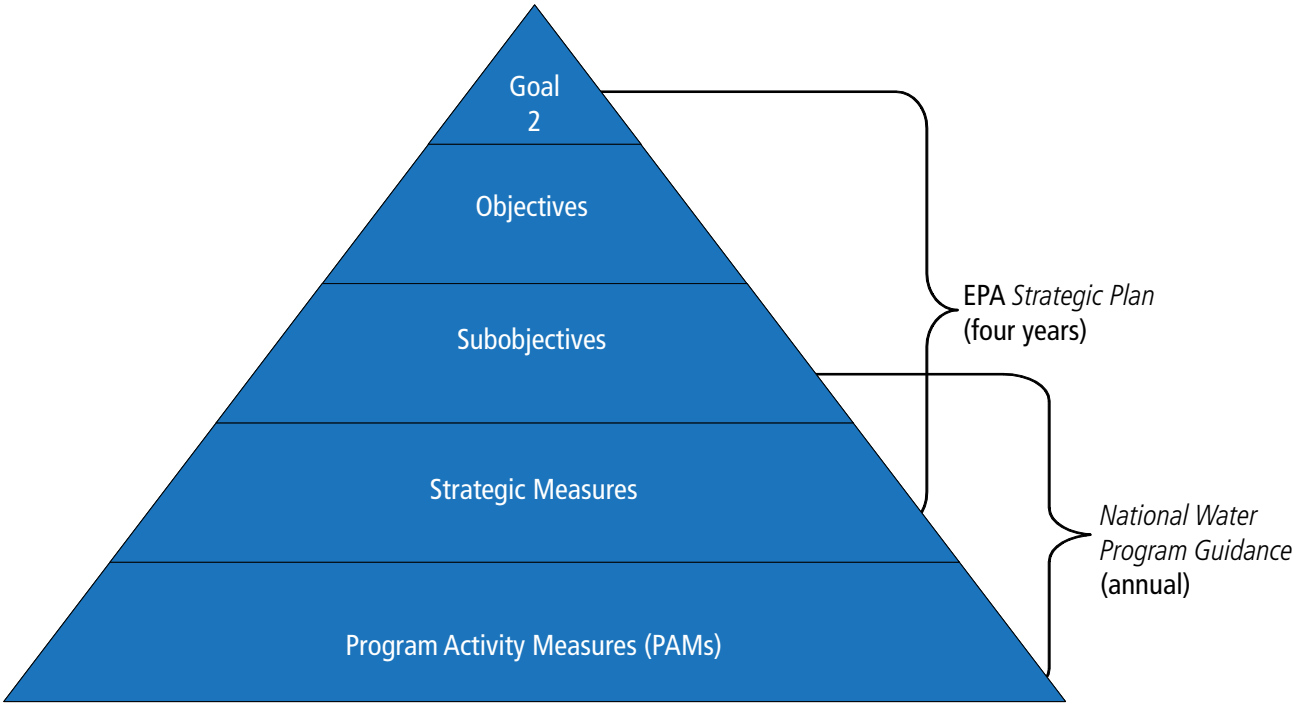
The FY 2014 National Water Program Best Practices and End-of-Year Performance Overview Report describes the progress made in fiscal year 2014 by EPA, states, tribes, and others toward the objectives and subobjectives described in the FY 2014 National Water Program Guidance (NWPG) and the FY 2014–2018 EPA Strategic Plan (Table 1, "National Water Program—Key Subobjectives"). The Strategic Plan and the FY 2014 NWPG are available on the Internet at http://www.epa.gov/water/waterplan.

EPA's FY 2014–2018 Strategic Plan is divided into five goals. The National Water Program is addressed in Goal 2, "Clean and Safe Water." Each goal is divided into objectives and subobjectives, which include a limited number of targeted areas, or "strategic measures," where the Agency believes new or significant changes in strategies or performance measurement are most critical to helping EPA better achieve and measure environmental and human health. Each strategic measure includes a long-range quantitative goal for FY 2018 (see pages 63-66 in the FY 2014-2018 Strategic Plan).

In April 2013, the National Water Program published guidance that described the program strategies to be used to implement Goal 2 of the EPA Strategic Plan in FY 2014, including specific measures to be used to assess program implementation. The FY 2014 NWPG is divided into 15 subobjectives and includes strategic measures and national Program Activity Measures (PAMs) to assess progress toward the goals in the Strategic Plan:

- Strategic measures: Measures of environmental or public health changes (i.e., outcomes) that include long-range and, in most cases, annual commitments in the FY 2014 NWPG.
- National PAMs: Core water PAMs (i.e., output measures) address activities implemented by EPA, states, and tribes that administer national programs. They are the basis for monitoring progress in implementing programs to accomplish the environmental goals in the Agency's Strategic Plan. Most of these measures had national and many had regional commitments for FY 2014.

Performance Measure Architecture



What's New in FY 2014

The *FY 2014 NWPG* included several changes in performance measures from the FY 2013 *Best Practices and End-of-Year Performance Report.* Some of the key changes to performance measures were:

- EPA modified two drinking water measures on tribal and non-tribal community water systems that have undergone a sanitary survey within the past three years (SDW-01a and SDW-01b). The measures were updated to reflect the Ground Water Rule requirements. EPA changed the methodology for calculating results to include territories and updated the baseline year from FY 2008 to FY 2012.
- EPA deleted five measures under the Water Quality, Wetlands, Great Lakes, and Gulf of Mexico subobjectives. The wetlands measure ("net increase wetlands achieved" -WT-SP21.N11) and the Gulf of Mexico measure ("ecosystem health index" – GM-435) were deleted because the Agency did not have annual targets or results for FY 2014. The two Great Lakes measures ("days beaches open and safe for swimming"- GL-08 and "loadings of soluble reactive phosphorus"- GL-15) were deleted due to data uncertainties.

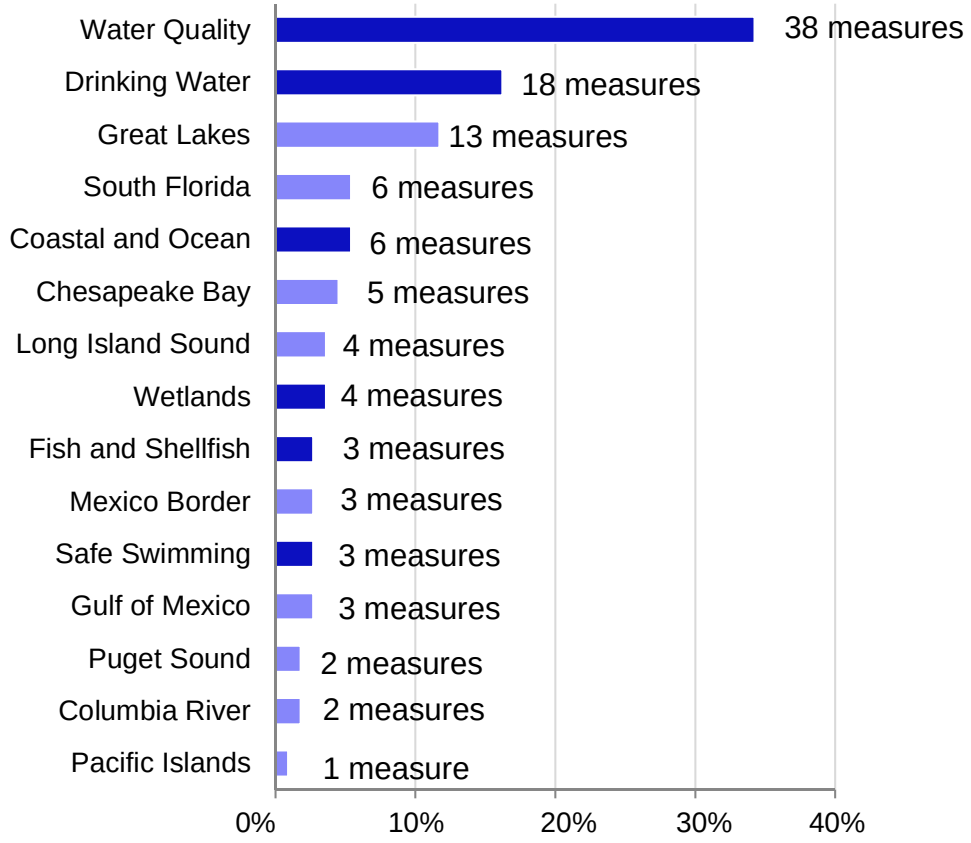
Overall, the Office of Water deleted 5 measures, and modified 3 measures in its FY 2014 NWPG. As a result, the number of total measures decreased from 116 in FY 2013 to 111 in FY 2014. More information about measure changes can be found in Appendix B of this report.

Overview of Performance Results and Recent Trends

Total Measures by Subobjectives

Among the 15 subobjectives outlined in the FY 2014 *NWPG*, Water Quality had the largest share of performance measures at 34%; Drinking Water was next with 16%; and the Great Lakes was third with 12%. The remaining 38% of the measures were spread among the other 12 subobjectives (Figure 1).

Figure 1: Total FY 2014 Measures by Subobjective



Total Commitment Measures

Overall, the National Water Program's performance was more successful in FY 2014 than the previous year. Of 82 performance measures with commitments, over three quarters (82.9%) met their commitments. About seventeen percent (17.1%) were not met (Figure 2).[2] Long-term trend data show that the percentage of commitment measures met has remained fairly consistent over the past six years, averaging about 74% (with a range between 69% and 83%). The average of commitments not met is 22% (range of 17% to 29%), and data unavailability/nonreporting is at 3% (range of 2% to 6%, not counting FY 2014) (Figure 3).

[2] Note that when reviewing trend data for previous years in this report, the results will include data for measures that routinely report late. As a result, this year's trend charts may not reflect the same results as shown in previous end-of-year reports.

Figure 2: FY 2014 Commitment Measures Met and Not Met

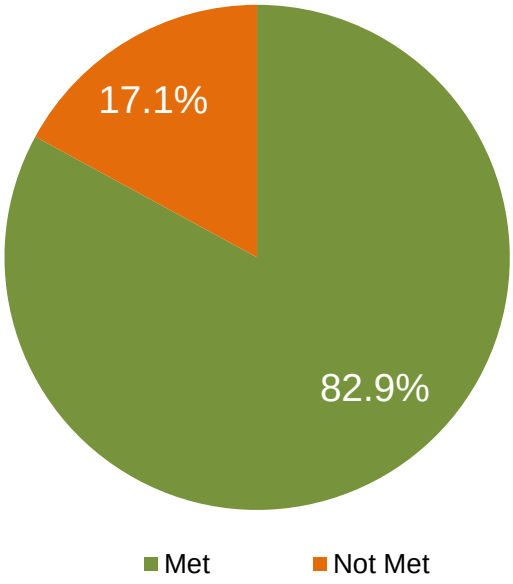
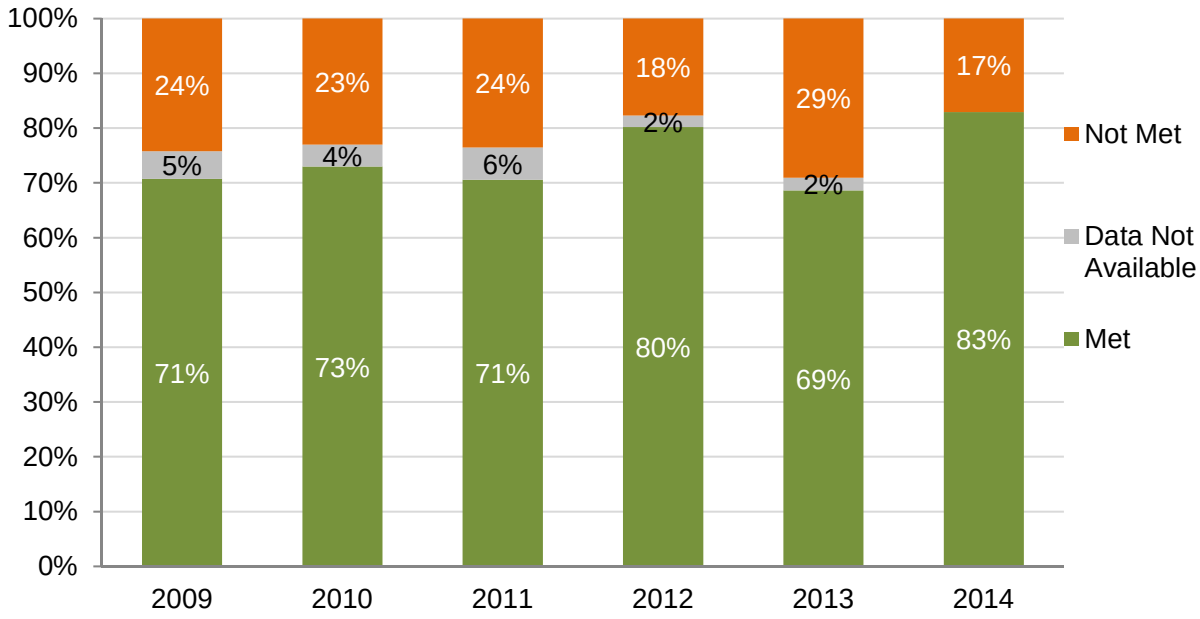


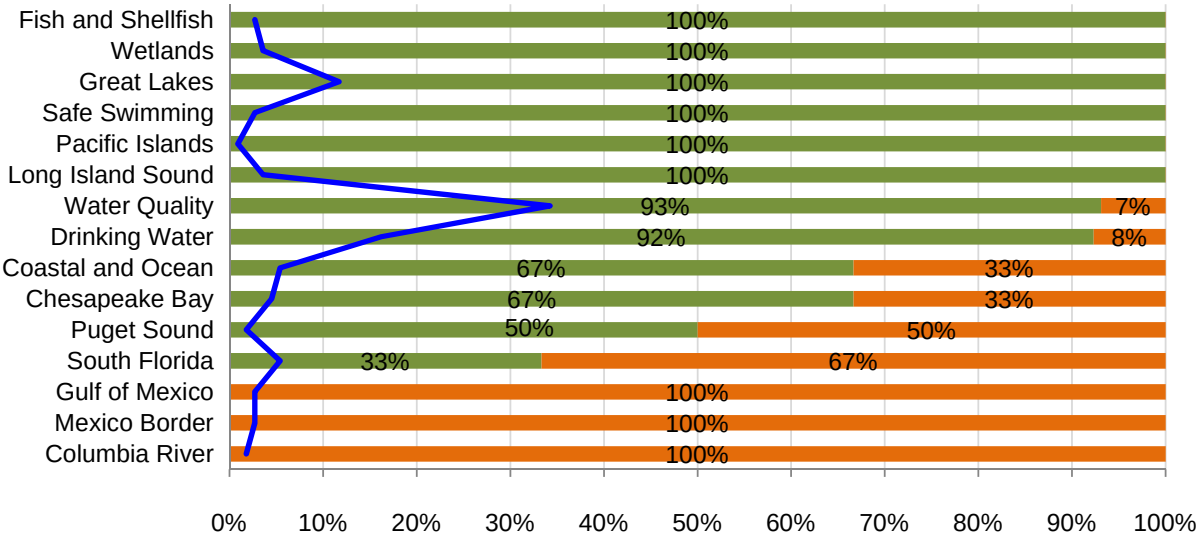
Figure 3: FY 2009–FY 2014 Commitment Measure Performance Trend



Commitment Measures by Subobjectives

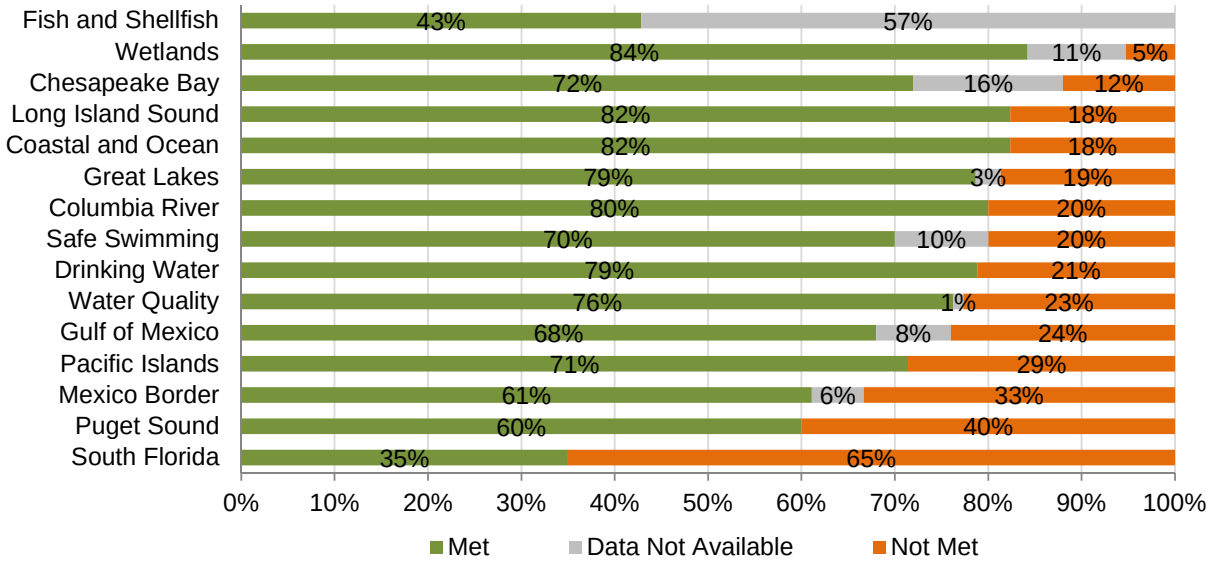
When the FY 2014 results are presented by subobjective, six of 15 subobjectives (Fish and Shellfish, Wetlands, Great Lakes, Safe Swimming, Pacific Islands, and Long Island Sound) were successful in meeting 100% of their commitments. This is up from four subobjectives with a similar status in FY 2013. Seven subobjectives fell below the FY 2014 national average of commitments met (82.9%): Coastal and Ocean (67%), Chesapeake Bay (67%), Puget Sound (50%), South Florida (33%), Gulf of Mexico (0%), Mexico Border (0%), and Columbia River (0%). Note, however, that some subobjectives have more commitment measures than others. The dark blue line in Figure 4 represents the percentage of the total number of commitment measures that each subobjective encompasses. As was noted earlier, the Water Quality subobjective has the most measures, representing about 34% of all commitment measures.

Figure 4: FY 2014 Commitment Measures Met and Not Met by Subobjective



When comparing the FY 2014 results from Figure 4 with the long-term averages of commitments met for each subobjective (Figure 5), eight subobjectives did better in FY 2014 compared with their long-term average. This was up from 6 subobjectives with a similar status in FY 2013. The Coastal and Ocean, Chesapeake Bay, Puget Sound, South Florida, Gulf of Mexico, Mexico Border, and Columbia River subobjectives fell below their long-term averages in FY 2014. The Fish and Shellfish subobjective has consistently had the greatest problems with data availability.

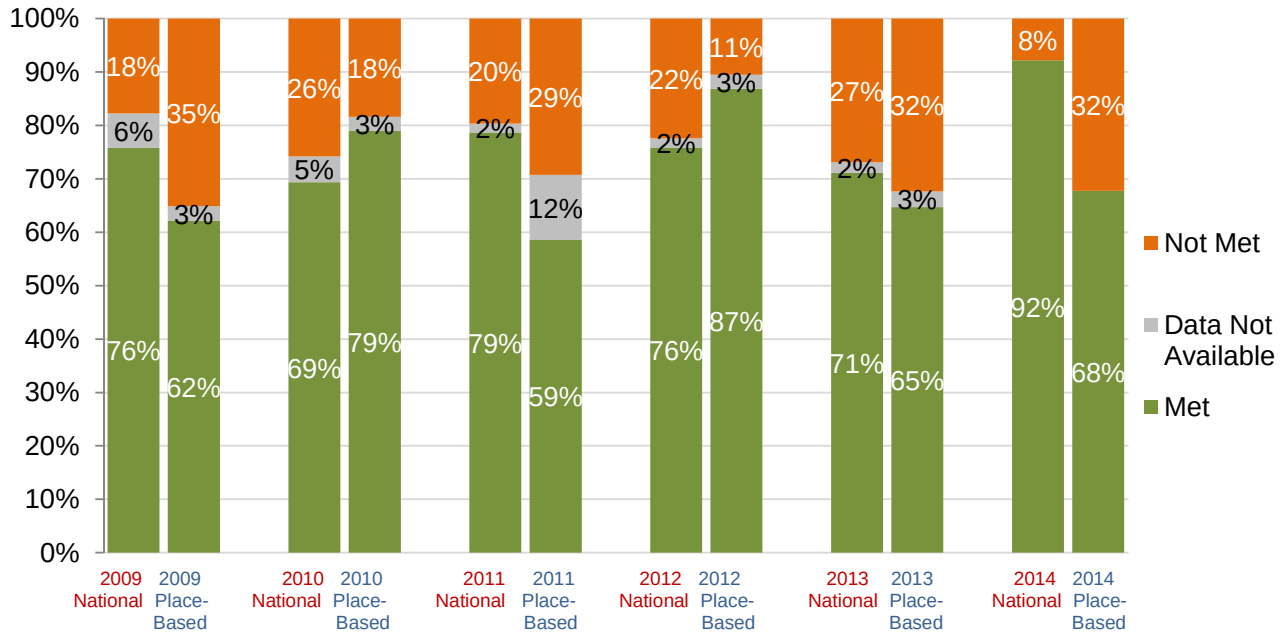
Figure 5: FY 2009–FY 2014 Average Commitments Met and Not Met by Subobjective



Commitments by National Core Water Program vs. Geographic Programs

The National Water Program comprises core drinking water and water quality programs and LAEs or place-based programs. Sixty percent (60%) of all commitment measures pertain to core water programs, and 40% track progress in LAE or place-based programs. In FY 2014, 68% of commitments were met for the LAEs and place-based programs (higher than the 65% met in FY 2013). National core programs increased from 71% of commitments met in FY 2013 to 92% in FY 2014 (Figure 6).

Figure 6: FY 2009–FY 2014 National and Place-Based Programs Trend



National Water Program Long-Term Performance Trends

One way to capture long-term performance trends for individual measures is through a "heat map." The charts in Figure 7 represent a history of the status of annual results of all the core drinking water and water quality program measures over a seven-year period (FY 2008 to FY 2014). The colors on the map represent the status of each measure in a given year (green for commitments met, orange for not met, gray for data unavailable or not reporting, and white for measures not in existence in a given year). Although the status of the results does not take into account the level of ambitiousness or "stretch goals" of the commitments from measure to measure, there are some interesting patterns in the trends. For example, 43% of all core program measures have met their commitments every year for the past six to seven years.

Figure 7: FY 2008–FY 2014 Core Water Program End-of-Year Status History

Subobjective	ACS Code	Abbreviated Measure Description	Commitment Status: = Met; = Not Met; = Data Not Available; = Measure Did Not Exist Or Not Applicable						
			2008	2009	2010	2011	2012	2013	2014
Drinking Water	SDW-211	Percent population served by CWSs	Met	Met	Met	Met	Met	Met	Met
	SDW-SP1.N11	Percent CWSs meeting safe standards	Met	Met	Met	Met	Met	Met	Met
	SDW-SP2	Percent "person months" with CWSs safe standards	Met	Met	Met	Met	Met	Met	Met
	SDW-SP3.N11	Percent population served by CWSs Indian country	Not Met	Not Met	Met	Met	Not Met	Not Met	Met
	SDW-SP4a	Percent CWSs and source water protection	Met	Met	Met	Met	Met	Met	Met
	SDW-SP4b	Percent Population and source water protection	Met	Met	Met	Met	Not Met	Met	Met
	SDW-18.N11	Number Indian & Alaska Native homes provided safe drinking water				Not Met	Not Met	Not Met	Not Met
	SDW-01a	Percent CWSs with sanitary survey	Not Met	Not Met	Not Met	Met	Not Met	Not Met	Met
	SDW-01b	Number Tribal CWSs with sanitary survey	Met	Met	Met	Met	Met	Met	Met
	SDW-04	DWSRF fund utilization rate	Met	Met	Met	Met	Met	Met	Met
	SDW-05	Number DWSRF projects initiated (cumulative)	Met	Met	Met	Met	Met	Met	Met
	SDW-07	Percent Class I, II, or III wells with mechanical integrity					Not Met	Met	Met
	SDW-08	Number High Priority Class V wells closed/permitted (cumulative)					Met	Met	Met
Fish and Shellfish	FS-SP6.N11	Percent Women and mercury blood levels	Data Not Available	Data Not Available	Data Not Available	Data Not Available	Met	Met	Met
Safe Swimming	SS-SP9.N11	Percent beach days safe for swimming	Met	Met	Met	Met	Met	Met	Met
	SS-1	Number enforceable long-term CSO control plan with specific dates and milestones in place	Met	Met	Met	Not Met	Not Met	Not Met	Met
	SS-2	Percent significant public beaches monitored	Met	Not Met	Met	Met	Met	Met	Met
Coastal and Ocean	CO-222.N11	Improve coastal aquatic system health (index)	Met	Met	Met	Met	Met	Met	Met
	CO-SP20.N11	Percent ocean dumping sites acceptable conditions	Met	Met	Not Met	Not Met	Met	Not Met	Met
	CO-432.N11	Number additional NEP acres habitat protected or restored	Met	Met	Not Met	Not Met	Met	Met	Not Met
Wetlands	WT-SP22	No net loss of wetlands	Data Not Available	Met	Met	Met	Met	Met	Met
	WT-01	Number wetland acres restored and enhanced (cumulative)	Met	Met	Met	Met	Met	Met	Met

Figure 7: FY 2008–FY 2014 Core Water Program End-of-Year Status History (cont'd)

Subobjective	ACS Code	Abbreviated Measure Description	Commitment Status: = Met; = Not Met; = Data Not Available; = Measure Did Not Exist Or Not Applicable						
			2008	2009	2010	2011	2012	2013	2014
Water Quality	WQ-SP10.N11	Number formerly impaired waterbodies now meeting standards (cumulative)	Met	Met	Met	Met	Met	Met	Met
	WQ-SP11	Number causes of waterbody impairment removed (cumulative)	Met	Met	Not Met	Met	Met	Met	Met
	WQ-SP12.N11	Number impaired watersheds improved water quality (cumulative)	Met	Met	Met	Met	Met	Met	Met
	WQ-SP13.N11	Number of monitoring stations in tribal waters with improved water quality (cumulative)					Not Met		
	WQ-SP14aN11	Identify number monitoring stations in tribal waters with no degradation in water quality (cumulative)					Met	Met	Met
	WQ-24.N11	Number Indian & Alaska Native homes with access to sanitation				Met	Met	Met	Met
	WQ-01a	Number of numeric nutrient water quality standards approved or promulgated by EPA				Not Met	Met	Met	Met
	WQ-26	Number states/territories implementing nutrient reduction strategies						Met	Met
	WQ-02	Number Tribes with approved water quality standards	Met	Not Met	Not Met	Not Met	Met	Met	Met
	WQ-03a	Number/Percent states/territories with updated water quality criteria	Not Met	Met	Met	Met	Met	Not Met	Not Met
	WQ-03b	Number/Percent Tribes with updated water quality criteria	Met	Met	Met	Met	Met	Not Met	Met
	WQ-04a	Percent states/territorial water quality standards revisions approved	Met	Met	Met	Met	Met	Not Met	Met
	WQ-06a	Number Tribes implementing monitoring strategies	Met	Met	Not Met	Met	Met	Met	Met
	WQ-06b	Number Tribes providing water quality data	Met	Met	Met	Met	Met	Met	Met
	WQ-08a	Number/Percent total TMDLs established/approved EPA	Met	Met	Met	Met	Met	Met	Met
	WQ-08b	Number/Percent TMDLs developed by states/approved by EPA	Met	Met	Not Met	Met	Met	Met	Met
	WQ-09a	Number pounds nitrogen reduced from non-point sources (millions)	Met	Met	Met	Met	Met	Met	Met
	WQ-09b	Number pounds phosphorus reduced from non-pount sources (millions)	Not Met	Not Met	Not Met	Met	Not Met	Not Met	Not Met
	WQ-09c	Number tons sediment reduction reduced from non-point sources (thousands)	Met	Met	Met	Met	Met	Met	Met
	WQ-10	Number NPS-impaired waterbodies restored (cumulative)	Met	Met	Met	Met	Met	Met	Met
	WQ-12a	Number/Percent Nontribal NPDES permits current	Met	Met	Met	Met	Met	Met	Met
	WQ-12b	Number/Percent Tribal permits current	Not Met	Not Met	Met	Met	Met	Not Met	Met
	WQ-14a	Number/Percent POTWs SIUs control mechanisms in place	Met	Met	Not Met	Met	Met	Met	Met
	WQ-15a	Percent major dischargers in SNC	Not Met	Not Met	Not Met	Not Met	Met	Met	Met
	WQ-16	Number/Percent POTWs comply wastewater discharge standards	Met	Met	Met	Met	Met	Met	Met
	WQ-17	CWSRF Fund utilization rate	Met	Met	Met	Met	Met	Met	Met
	WQ-19a	Number high priority state NPDES permits	Met	Met	Met	Met	Met	Not Met	Met
	WQ-19b	Number high priority state & EPA NPDES permits	Met	Met	Met	Met	Met	Not Met	Met
	WQ-23	Percent Alaska homes access to drinking water & sanitation				Met	Not Met	Not Met	Met
	WQ-25a	Number urban water projects initiated addressing water quality issues in the community					Met	Not Met	Met

Figure 8 shows that 17% of all place-based program measures have met commitments every year for six to seven years.

Figure 8: FY 2008–FY 2014 LAE and Place-Based Programs End of Year Status History

Subobjective	ACS Code	Abbreviated Measure Description	Commitment Status: = Met; = Not Met; = Data Not Available; = Measure Did Not Exist Or Not Applicable						
			2008	2009	2010	2011	2012	2013	2014
Great Lakes	GL-433.N11	Improve health–Great Lakes ecosystem (index)	Met	Met	Not Met	Not Met	Met	Met	Met
	GL-SP29	Reduce PCBs in Great Lakes fish (cumulative)	Met	Met	Met	Met	Met	Met	Met
	GL-SP31	Number Areas of Concern (AOCs) with all management actions implemented (cumulative)	Not Met	Not Met	Not Met	Met	Not Met	Not Met	Met
	GL-SP32.N11	Number cubic yards (millions) of contaminated sediment remediated (cumulative)	Met	Met	Met	Met	Met	Met	Met
	GL-05	Number Beneficial Use Impairments (BUIs) removed		Not Met	Not Met	Met	Met	Met	Met
	GL-06	Rate of invasive species newly detected in the Great Lakes (avg. since 2010)				Met	Met	Met	Met
	GL-07	Response plans established, response exercises, and/or response actions (cumulative)				Met	Met	Met	Met
	GL-09	Number acres managed for populations of invasive species controlled to a target level. (cumulative)				Met	Met	Met	Met
	GL-10	Percent of populations of native aquatic non-threatened and endangered species self-sustaining in the wild. (cumulative)				Not Met	Met	Met	Met
	GL-11	Number of acres of wetlands and wetland-associated uplands protected, restored and enhanced. (cumulative)				Met	Met	Met	Met
	GL-12	Number of acres of coastal, upland, and island habitats protected, restored and enhanced. (cumulative)				Not Met	Met	Met	Met
	GL-13	Number of species delisted due to recovery				Met	Met	Not Met	Met
	GL-16	Percent increase in acres in Great Lakes watershed with USDA conservation practices implemented				Met	Met	Met	Met
Chesapeake Bay	CB-SP35	Percent Bay nitrogen reduction practices implemented					Met	Met	Not Met
	CB-SP36	Percent Bay phosphorus reduction practices implemented	Not Met	Met	Met	Data Not Available	Met	Met	Met
	CB-SP37	Percent Bay sediment reduction practices implemented	Met	Not Met	Met	Data Not Available	Met	Met	Met

Figure 8: FY 2008–FY 2014 LAE and Place-Based Programs End of Year Status History (cont'd)

Subobjective	ACS Code	Abbreviated Measure Description	Commitment Status: = Met; = Data Not Available; = Not Met; = Measure Did Not Exist Or Not Applicable						
			2008	2009	2010	2011	2012	2013	2014
Gulf of Mexico	GM-SP38	Number of impaired Gulf water segments and habitat restored (cumulative)							
	GM-SP39	Number of Gulf Acres restored or enhanced (cumulative)							
Long Island Sound	LI-SP41	Percent reduction Long Island Sound nitrogen							
	LI-SP43	Number acres Long Island Sound coastal habitat restored							
	LI-SP44	Number miles river and streams for fish passage reopened							
Puget Sound	PS-SP49.N11	Number acres of Puget Sound shellfish areas improved (cumulative)							
	PS-SP51	Number acres of Puget Sound estuarine wetlands restored (cumulative)							
Mexico Border	MB-SP23	Number million pounds BOD loadings removed Mexico Border (cumulative)							
	MB-SP24.N11	Number additional Mexico Border homes access to safe drinking water							
	MB-SP25.N11	Number additional Mexico Border homes access to adequate sanitation							
Pacific Islands	PI-SP26	Percent Pacific Islands population served by CWS							
South Florida	SFL-SP47a	Percent South Florida monitoring stations maintain coastal water quality for chlorophyll a & light clarity							
	SFL-SP47b	Percent South Florida monitoring stations maintain coastal water quality for nitrogen and phosphorous							
	SFL-SP48	Maintain Everglades water quality measured by total phosphorus							
Columbia River	CR-SP53	Percent reducuction Columbia River contaminants in water & fish							
	CR-SP54	Number acres Columbia River contaminated sediments cleaned up (cumulative)							

Changes in Measure Performance Status from FY 2013 to FY 2014

The performance status of 23 of the 82 commitment measures changed between FY 2013 and FY 2014. Seventeen measures switched from not meeting to meeting their annual commitments, whereas 5 previously met measures did not meet their commitments in the past year. This is a significant reversal in performance from the previous year, where 3 measures switched from "not met" to "met" status and 15 changed from "met" to "not met." Core water programs had 11 measures that changed their status from not met to met and 1 from met to not met between 2013 and 2014. LAEs or place-based programs had 6 measures with a change in status from not met to met and 5 from met to not met (Table 1).

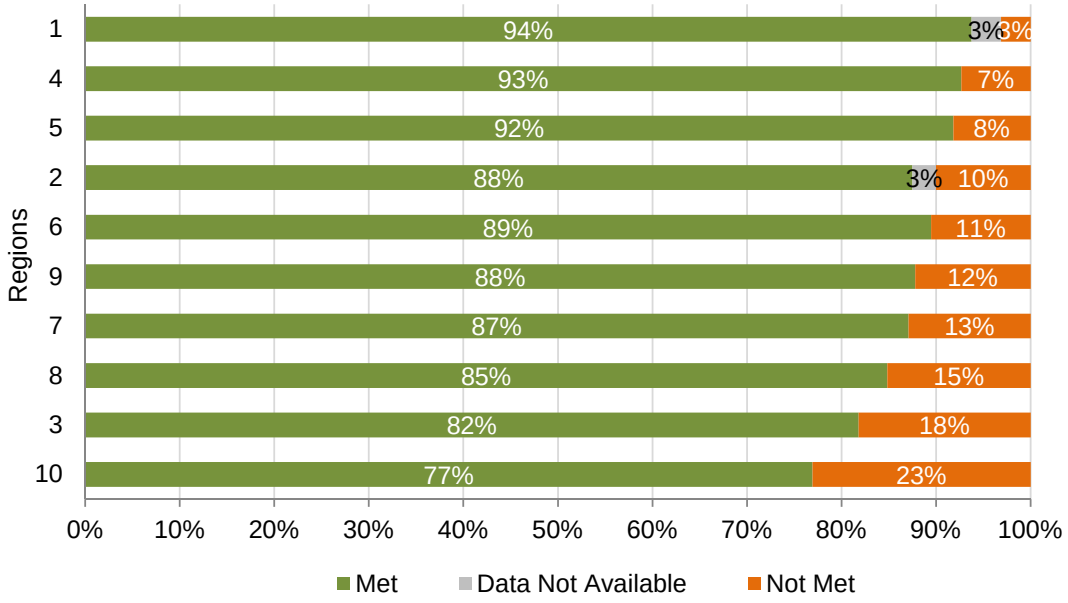
Table 1: Measures with Changes in Performance Status from FY 2013 to FY 2014

Subobjective	ACS Code	Abbreviated Measure Description	Performance Status	
			2013	2014
2.1.1 Water Safe to Drink	SDW-SP3.N11	Percent population served by CWSs Indian country	Not Met	Met
2.1.1 Water Safe to Drink	SDW-01a	Percent CWSs with sanitary survey	Not Met	Met
2.1.3 Water Safe for Swimming	SS-1	Number enforceable long-term CSO control plan with specific dates and milestones in place	Not Met	Met
2.2.1 Water Quality	WQ-03b	Number/Percent Tribes with updated water quality criteria	Not Met	Met
2.2.1 Water Quality	WQ-04a	Percent states/territorial water quality standards revisions approved	Not Met	Met
2.2.1 Water Quality	WQ-12b	Number/Percent Tribal permits current	Not Met	Met
2.2.1 Water Quality	WQ-19a	Number high priority state NPDES permits	Not Met	Met
2.2.1 Water Quality	WQ-19b	Number high priority state & EPA NPDES permits	Not Met	Met
2.2.1 Water Quality	WQ-23	Percent Alaska homes access to drinking water & sanitation	Not Met	Met
2.2.1 Water Quality	WQ-25a	Number urban water projects initiated addressing water quality issues in the community	Not Met	Met
2.2.2 Coastal and Ocean Waters	CO-SP20.N11	Percent ocean dumping sites acceptable conditions	Not Met	Met
2.2.2 Coastal and Ocean Waters	CO-432.N11	Number additional NEP acres habitat protected or restored	Met	Not Met
2.2.4 Great Lakes	GL-SP31	Number Areas of Concern (AOCs) with all management actions implemented (cumulative)	Not Met	Met
2.2.4 Great Lakes	GL-13	Number of species delisted due to recovery	Not met	Met
2.2.5 Chesapeake Bay	CB-SP35	Percent Bay nitrogen reduction practices implemented	Met	Not Met
2.2.6 Gulf of Mexico	GM-SP38	Number of impaired Gulf water segments and habitat restored (cumulative)	Data Not Available	Not Met
2.2.7 Long Island Sound	LI-SP43	Number acres Long Island Sound coastal habitat restored	Not Met	Met
2.2.7 Long Island Sound	LI-SP44	Number miles river and streams for fish passage reopened	Not Met	Met
2.2.8 Puget Sound	PS-SP51	Number acres of Puget Sound estuarine wetlands restored (cumulative)	Not Met	Met
2.2.9 Mexico Border	MB-SP23	Number million pounds BOD loadings removed Mexico Border (cumulative)	Met	Not Met
2.2.9 Mexico Border	MB-SP24.N11	Number additional Mexico Border homes access to safe drinking water	Met	Not Met
2.2.9 Mexico Border	MB-SP25.N11	Number additional Mexico Border homes access to adequate sanitation	Met	Not Met
2.2.10 Pacific Islands	PI-SP26	Percent Pacific Islands population served by CWS	Not Met	Met

Commitment Measures by EPA Regions

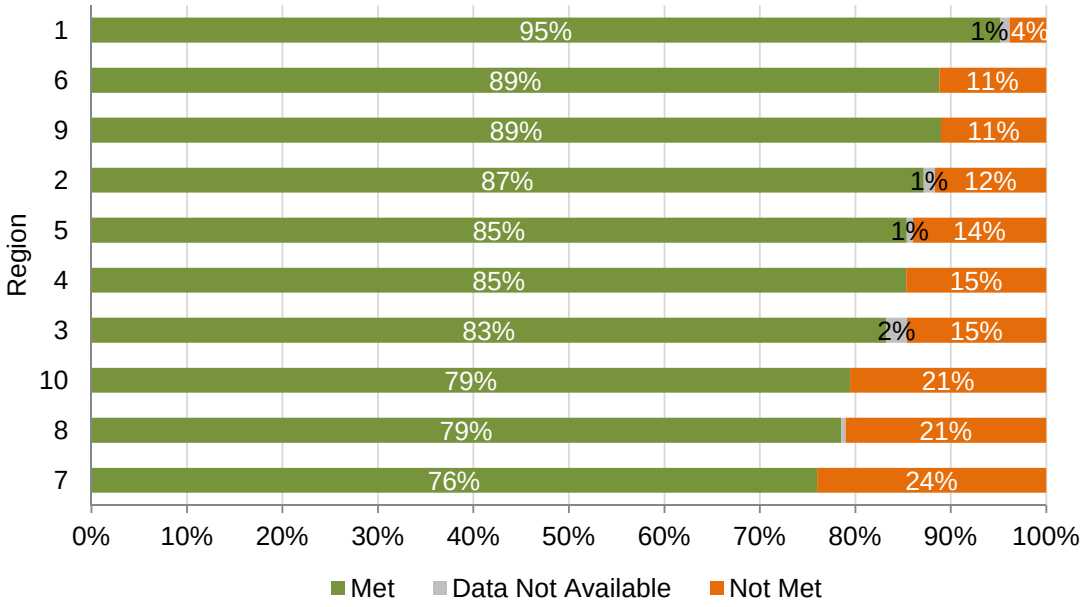
The 10 EPA regional offices, the states, and tribes are primarily responsible for implementing the programs under the Clean Water and Safe Drinking Water Acts. On average, 87.5% of performance commitments set by the EPA regional offices for activities in their geographic areas were met in 2014, while an average of 12% of commitments were missed. This was an 8.5% increase from the FY 2013 average of 79% of commitments met. Nine out of 10 regions saw an increase in commitments met in 2014. The biggest increases were in Region 2 (+22%) and Region 5 (+14%). Only Region 3 (-6%) saw a decrease in their performance in 2014 compared to 2013. Regions 1 (94%) and 4 (93%) had the highest percentage of measures met in FY 2014, and Regions 3 (82%) and 10 (77%) had the lowest (Figure 9).

Figure 9: FY 2014 Commitments Met and Not Met by Region



Over the past six years, Regions 1, 6, 9 and 2 have had the highest percentages of commitments met. Regions 7, 8, and 10 have had the highest percentages of commitments not met (Figure 10).

Figure 10: FY 2009–FY 2014 Average Commitments Met and Not Met by Region



A trend analysis of individual regional performance over the past six years reveals that EPA Regions 7 and 4 have exhibited the most improvement in meeting their annual commitments between FY 2009 and FY 2014. Region 7 increased its performance by 18% (69% to 87% commitments met), and Region 4 raised its performance by 10% (83% to 93%). EPA Region10 showed the most decline in commitments met between FY 2009 and FY 2014, declining by 8% (85% to 77%). Region 2 exhibited the greatest variability in percent commitments met over the past six years, with a range of 33%. The region with the least variability in performance over the past six years was Region 9, with a range of only 8%. (Figure 11). **Note that these regional trend analyses do not factor in the level of ambitiousness of individual regional commitments or stretch goals, which may or may not contribute to performance status.**

Another way to look at the EPA regions' FY 2014 performance is to focus on the status of end-of-year results of individual measures. This works best when the focus is on the core drinking water and water quality measures, as almost all regions set annual commitments and report on these measures. Figure 12 displays the end-of-year performance status for core program measures in each region for FY 2014. As the chart shows, 12.5% (4/32) of all core program measures met commitments by all regions in FY 2014 (SDW-211, SDW-SP1.N11, SDW-SP2, and SDW-SP4a). Some measures are problematic, with three or more regions not meeting annual commitments (WQ-SP10.N11, WQ-SP12.N11, WQ-03a, and WQ-04a). For several measures, such as the national numeric nutrient measure WQ-01a, a few regions do not set commitments or report annual results. Also, because Region 3 has a limited tribal population, it does not report on national tribal measures (SDW-SP-3.N11, SDW-01b, WQ-SP-14aN11, WQ-02, WQ-03b, WQ-06a, WQ-06b, and WQ-12b). More information about these measures can be found in the subobjective chapters and Appendix D on the Office of Water performance website.

Figure 11: FY 2009–FY 2014 Regional Performance Trends

Figure 12: FY 2014 Regional Commitment Performance Status

Subobjective	ACS Code	Abbreviated Measure Description	FY 2014 Commitment Status = Met; = Data Not Available; = Not Met; = Measure Did Not Exist Or Not Applicable									
			R1	R2	R3	R4	R5	R6	R7	R8	R9	R10
Drinking Water	SDW-211	Percent population served by CWSs										
	SDW-SP1.N11	Percent CWSs meeting safe standards										
	SDW-SP2	Percent "person months" with CWSs safe standards										
	SDW-SP3.N11	Percent population served by CWSs Indian country										
	SDW-SP4a	Percent CWSs and source water protection										
	SDW-SP4b	Percent Population and source water protection										
	SDW-01a	Percent CWSs with sanitary survey										
	SDW-01b	Number Tribal CWSs with sanitary survey										
	SDW-04	DWSRF fund utilization rate										
	SDW-05	Number DWSRF projects initiated (cumulative)										
	SDW-07	Percent Class I, II, or III wells with mechanical integrity										
	SDW-08	Number High Priority Class V wells closed/permitted										
Water Quality	WQ-SP10.N11	Number formerly impaired waterbodies now meeting										
	WQ-SP11	Number causes of waterbody impairment removed										
	WQ-SP12.N11	Number impaired watersheds improved water quality										
	WQ-SP14aN11	Identify number monitoring stations in tribal waters with no										
	WQ-01a	Number of numeric nutrient water quality standards										
	WQ-02	Number Tribes with approved water quality standards										
	WQ-03a	Number/Percent states/territories with updated										
	WQ-03b	Number/Percent Tribes with updated water quality criteria										
	WQ-04a	Percent states/territorial water quality standards revisions										
	WQ-06a	Number Tribes implementing monitoring strategies										
	WQ-06b	Number Tribes providing water quality data										
	WQ-08a	Number/Percent total TMDLs established/approved EPA										
	WQ-08b	Number/Percent TMDLs developed by states/approved										
	WQ-10	Number NPS-impaired waterbodies restored										
	WQ-12a	Number/Percent Nontribal NPDES permits current										
	WQ-12b	Number/Percent Tribal permits current										
	WQ-14a	Number/Percent POTWs SIUs control mechanisms in place										
	WQ-17	CWSRF Fund utilization rate										
	WQ-19a	Number high priority state NPDES permits										
	WQ-19b	Number high priority state & EPA NPDES permits										

Measuring the Ambitiousness of Regional Commitments

For many years, EPA has published the percentage of commitments met and not met nationally and by region in its annual *National Water Program Best Practices and End-of-Year Performance Overview Report*. Although this information can be useful in determining to what extent regions are setting and meeting realistic goals, it is limited in that it does not account for the level of ambitiousness or number of stretch goals a specific region attempts to undertake in a given year. In an effort to provide some context to the measure results, the Office of Water has developed a method that attempts to assess the ambitiousness of regional commitments, regardless of whether those commitments were met or not met.

EPA used three methods to evaluate the relative ambitiousness of regional commitments for a set of 28 performance measures.[3] The method or methods used depended on whether the commitment is expressed as a percentage or as a numeric value.

For each commitment expressed as a percentage, EPA computed both:

- The difference between FY 2014 regional commitments and FY 2014 national commitments, and
- The difference between FY 2014 regional commitments and FY 2013 regional end-of-year results.

For each commitment expressed in numeric units, EPA computed:

- FY 2014 regional commitments as a percentage of FY 2014 regional **universes**.

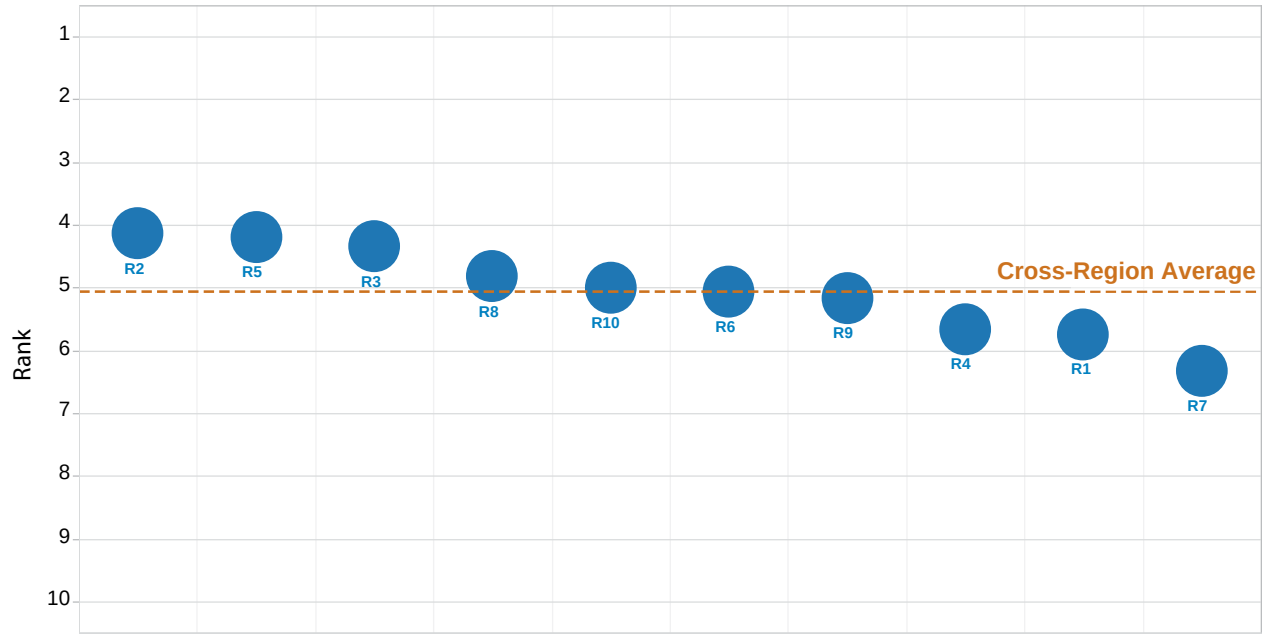
For each measure, within each of the analyses above, each region was assigned a rank based on its result relative to other regions (1= most ambitious, 10= least ambitious). For instance, for a particular numeric measure, the region committing to the greatest share of its universe would be ranked #1 for that measure. These measure-level rankings were combined to generate an average weighted rank per region. (The underlying methodology is described in more detail in Appendix C.)

The average weighted ranks for each region are shown in Figure 13, with regions sorted from high to low rank. Regions 2, 5, and 3 appear to have developed the most ambitious commitments or stretch goals based on this analysis.

[3] The Office of Water focused only on those measures with eight or more regions setting commitments and reporting results, so that the meaning of different ranks would remain fairly constant across measures. This choice excluded measures for LAEs and place-based programs, which are often reported by only one or two regions.

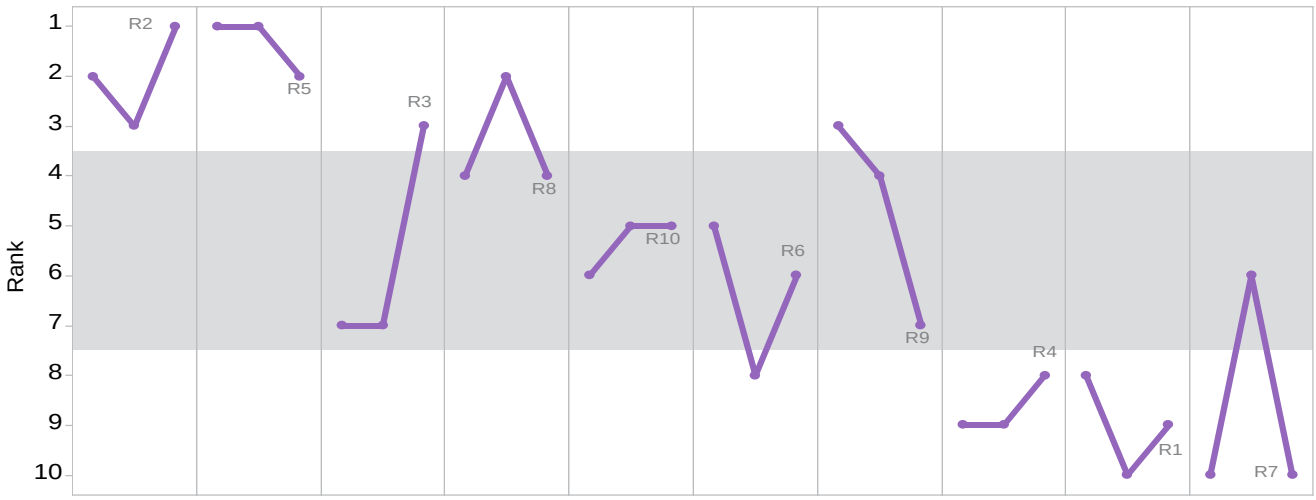
Figure 13: Regional Commitment Ambitiousness: Average Weighted Rank (FY 2014)

Regions Sorted From Highest to Lowest Rank



To compare the regions' level of ambitiousness in setting commitments between FY 2012 and FY 2014, the Office of Water developed a trend chart comparing the average weighted ranking for each region for the past three years (see Figure 14). In 2014, four regions dropped in rank (Regions 5, 8, 9, 7), five regions increased their rank (Regions 2, 3, 6, 4, 1) and one region stayed in the same rank (Regions 10).

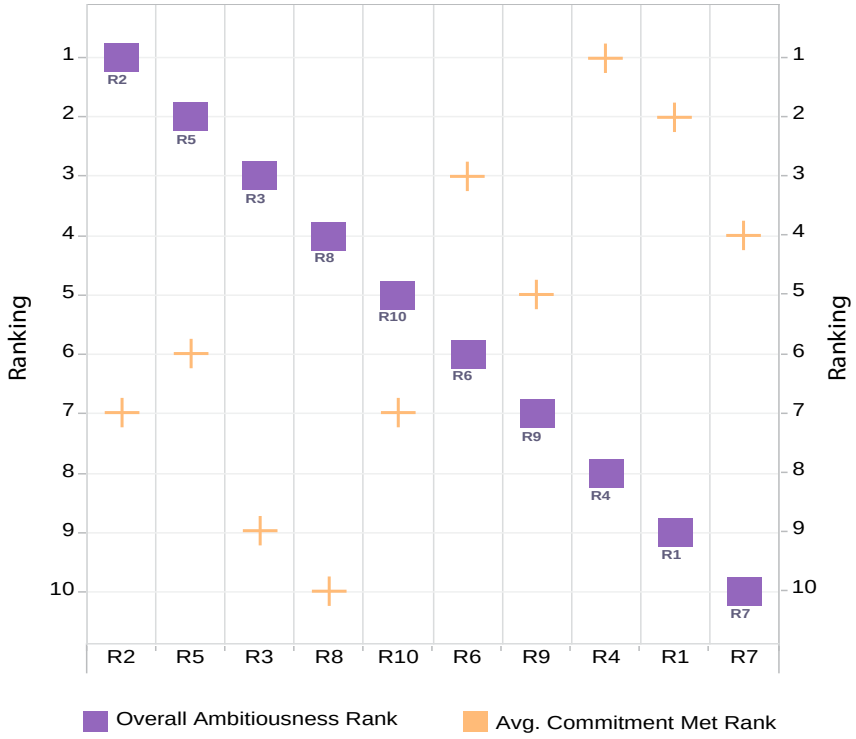
Figure 14: Change in Regional Ambitiousness Rank FY 2012 to FY 2014



EPA also explored the relationship between each region's level of ambitiousness for commitments and the degree to which commitments are met. To do so, EPA gave each region two overall rankings: one based upon its overall ambitiousness, using the average weighted rank discussed above, and one based upon its rate of commitments met for the same set of measures. EPA then compared the rankings for ambitiousness and commitments met across all 10 regions for FY 2014 (Figure 15).[4] As the figure illustrates, two of the three regions with the highest ranking for ambitiousness, Regions 2, 5, and 3 tended to rank lower than average in the percentage of annual commitments met in FY 2014. The regions ranked in the middle on ambitiousness generally ranked about the same in commitments met. The regions ranked ninth and tenth in ambitiousness (Regions 1 and 7) are ranked second and fourth in commitments met.

Figure 15: FY 2014 Regional Ranks of Ambitiousness vs. Commitment Met

Regions Sorted by Ambitiousness Rank



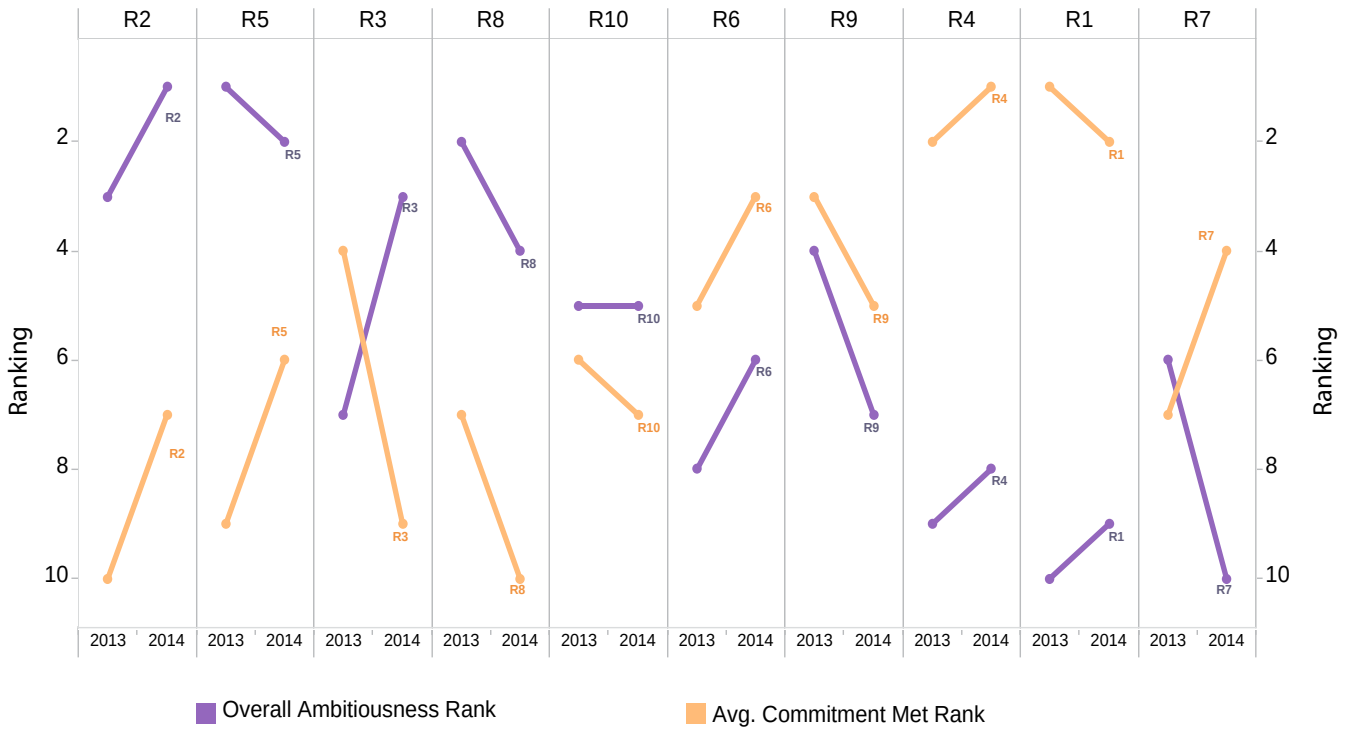
Another way to examine the impact of ambitiousness on the ability to meet commitments is to compare changes in regional rank between FY 2013 and FY 2014 (Figure 16).[5] In terms of ranking on commitments met, five regions declined (Regions 3, 8, 10, 9, and 1) and five regions increased (Regions 2, 5, 6, 4, and 7). For commitment ambitiousness, four regions dropped in rank (5, 8, 9, 7), five regions increased in rank, (2, 3, 6, 4, 1) and one region stayed in the same rank (10). Of the five regions that increased in commitment ambitiousness (Regions 2, 3, 6, 4, 1), three regions increased and two decreased in commitment met rankings. Alternately, of the four regions that showed declines in relative ambitiousness between 2013 and 2014, two regions' rankings on commitments met went up (5, 7) and two decreased (8, 9).

[4] Because this ambitiousness analysis focused only on a subset of the Office of Water's measures, the rankings for commitments met may be different than those presented earlier in this document (Figure 9). This approach helps ensure appropriate comparability, in this analysis, between the ambitiousness ranks and commitments-met ranks.

[5] The FY 2013 rankings for ambitiousness and commitments met were calculated in the same manner as described earlier for the FY 2014 rankings.

Figure 16: Change in Regional Rank in Ambitiousness and Commitments Met

Regions Sorted by FY 2014 Ambitiousness Rank

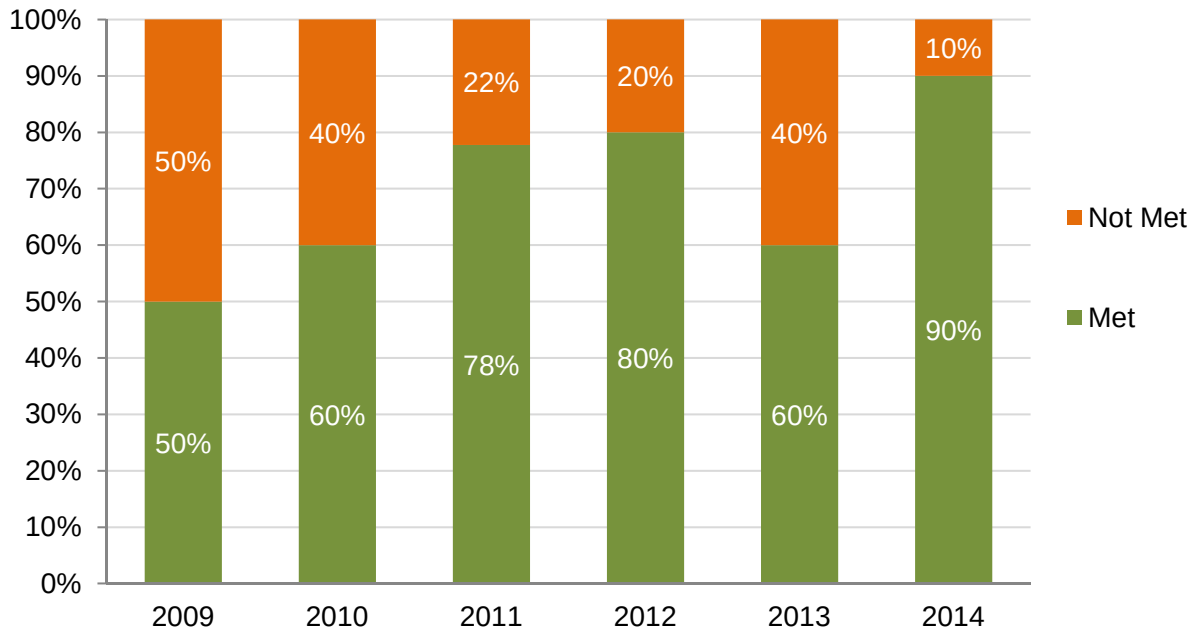


The analysis suggests a relationship between the level of ambitiousness in setting commitments and the percentages of commitments met at end of year. Note, however, that there are several key caveats in interpreting the results of this analysis. It is based on a relatively small set of measures (23 to 28) and focuses on only two to three years of data. Other methodological approaches probably could be used and might produce different results. And, finally, a multitude of factors influence regions in terms of setting commitments for individual measures (e.g., resource availability, size of measure universe, region-specific priorities, region-state oversight relationships). All of these factors are important in the ultimate outcome of negotiations among headquarters, regions, and states in setting annual commitments. The purpose of EPA's analysis in assessing ambitiousness is not to punish or embarrass any region whose rankings might be lower than other regions'. The goal is simply to provide additional benchmarking information for headquarters and regions to use during commitment negotiations.

Tribal Commitment Measures

Ten of the National Water Program measures focus specifically on drinking water and water quality on American Indian lands. There was a significant increase in the number of commitments met for Tribes in 2014 over the results in 2013 (Figure 17). The only commitment missed in FY 2014 was the number of American Indian and Alaska Native homes provided access to safe drinking water in coordination with other federal agencies. For more information on tribal performance results, see the "American Indian Drinking Water and Water Quality FY 2014 Performance" chapter on EPA's Water Program Performance Page (http://water.epa.gov/resource_performance/performance/index.cfm).

Figure 17: FY 2009–FY 2014 Tribal Commitments Met and Not Met



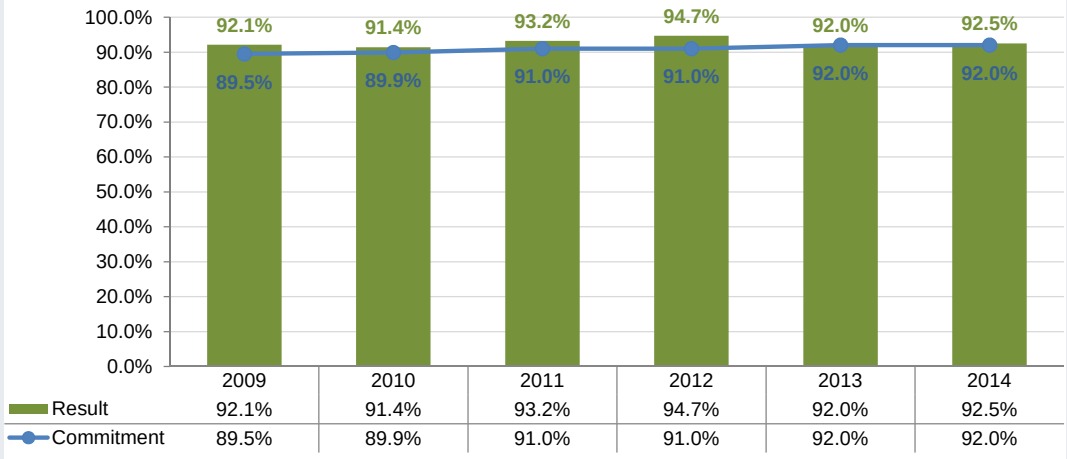
FY 2014 Performance Highlights

The National Water Program tracks the results of 111 commitment and non-commitment (indicators) performance measures for a diverse set of individual programs. Programs can be national or regional in scale and produce a multitude of outputs and outcomes. The following section provides historical trend data of many of the key performance measures in the national program. For more in-depth information about any of the measures or charts in this section, please refer to the specific sub-objective chapter contained in the comprehensive Best Practices and End-of-Year Performance Report on EPA's website (http://water.epa.gov/resource_performance/performance/index.cfm).

Water Safe to Drink

Ninety-two and a half percent (**92.5%**) of the population was served by CWSs with drinking water that met all applicable health-based drinking water standards. This was above the annual commitment of 92%.

Figure 18: Percent Population with Drinking Water Meeting Standards by (SDW-211) Fiscal Year

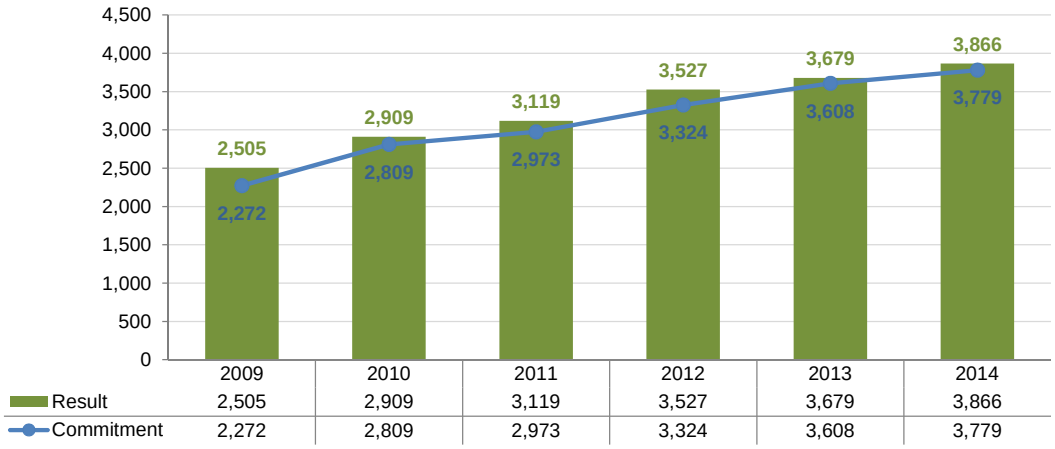


	2009	2010	2011	2012	2013	2014
Result	92.1%	91.4%	93.2%	94.7%	92.0%	92.5%
Commitment	89.5%	89.9%	91.0%	91.0%	92.0%	92.0%

Improve Water Quality on a Watershed Basis

Close to **3,900** of the waters listed as impaired in 2002 met water quality standards for all the identified impairments (commitment 3,779).

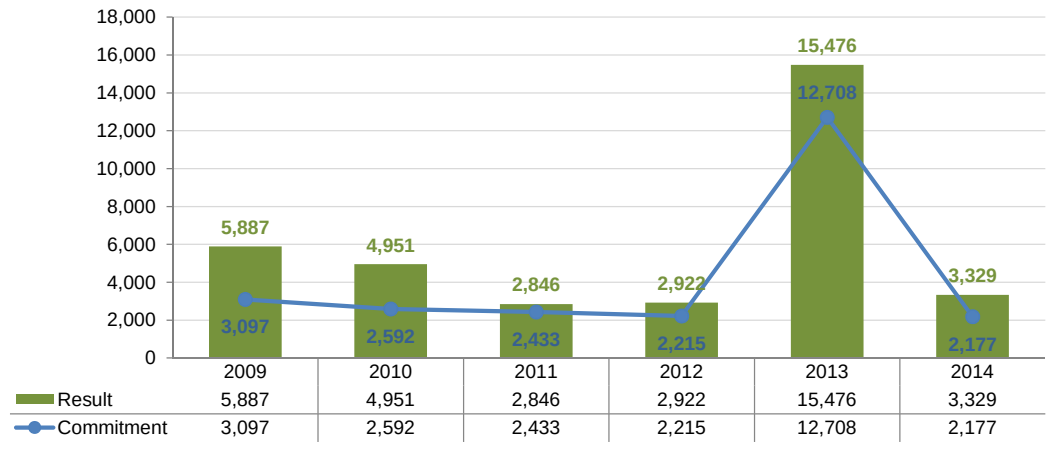
Figure 19: Formerly Impaired Waterbodies Meeting Water Quality Standards (WQ-SP10.N11) by Fiscal Year



	2009	2010	2011	2012	2013	2014
Result	2,505	2,909	3,119	3,527	3,679	3,866
Commitment	2,272	2,809	2,973	3,324	3,608	3,779

EPA established and approved **3,329 TMDLs** (Figure 20). More than 71,000 TMDLs have been completed since 1996.[6]

Figure 20: TMDLs Established or Approved on a Schedule Consistent with National Policy (WQ-08a) by Fiscal Year



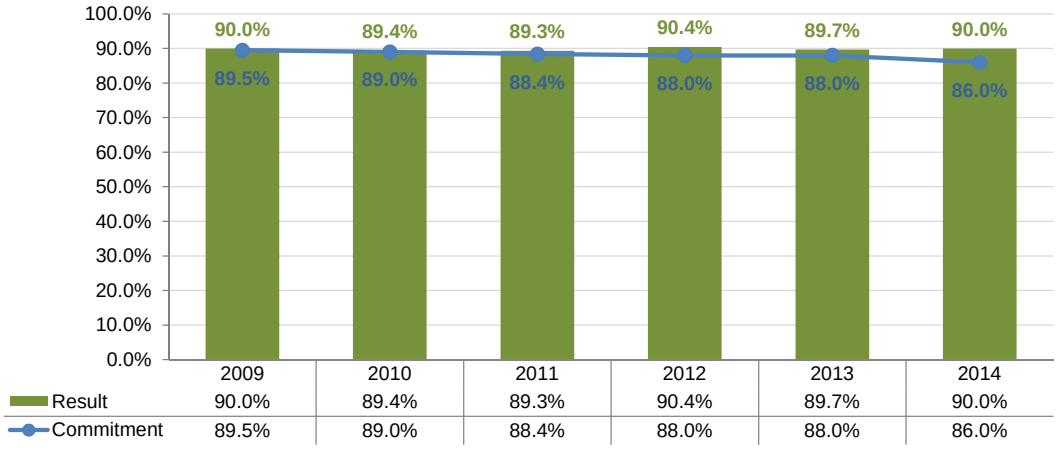
	2009	2010	2011	2012	2013	2014
Result	5,887	4,951	2,846	2,922	15,476	3,329
Commitment	3,097	2,592	2,433	2,215	12,708	2,177

[6] A TMDL is a technical plan for reducing pollutants in order to attain water quality standards. The terms "approved" and "established" refer to the completion and approval of the TMDL itself.

Improve Water Quality on a Watershed Basis

For the seventh consecutive year, EPA and states achieved the national goal of having current NPDES permits in place for **86%** of non-tribal facilities (Figure 21).

Figure 21: Non-Tribal NPDES Permits Considered Current (WQ-12a) by Fiscal Year

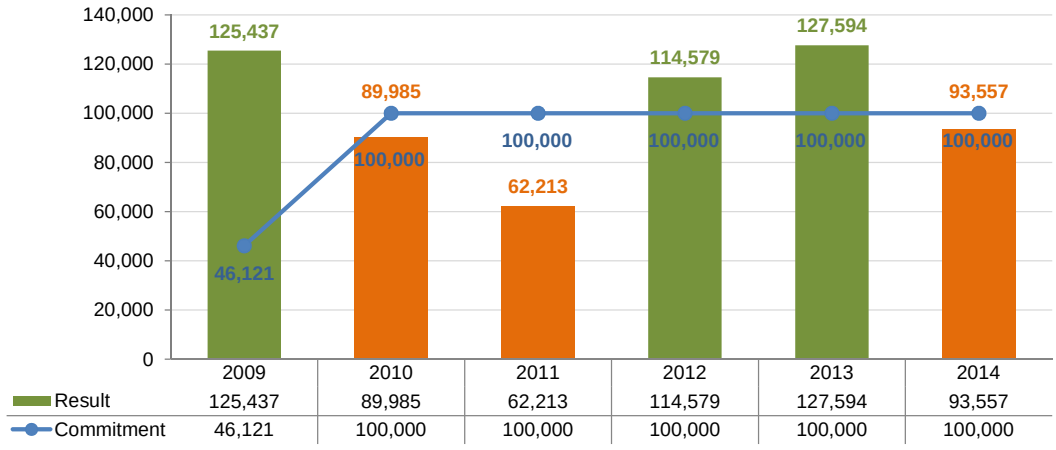


	2009	2010	2011	2012	2013	2014
Result	90.0%	89.4%	89.3%	90.4%	89.7%	90.0%
Commitment	89.5%	89.0%	88.4%	88.0%	88.0%	86.0%

Improve Coastal and Ocean Waters

The 28 NEPs and their partners protected or restored just over **93,500 acres** of habitat within the NEP study areas—falling short of EPA's goal of 100,000 acres. Since 2002, the NEPs and their partners have protected or restored more than 1.4 million habitat acres within the NEP study areas.

Figure 22: NEP Acres Protected or Restored (CO-432.N11) by Fiscal Year

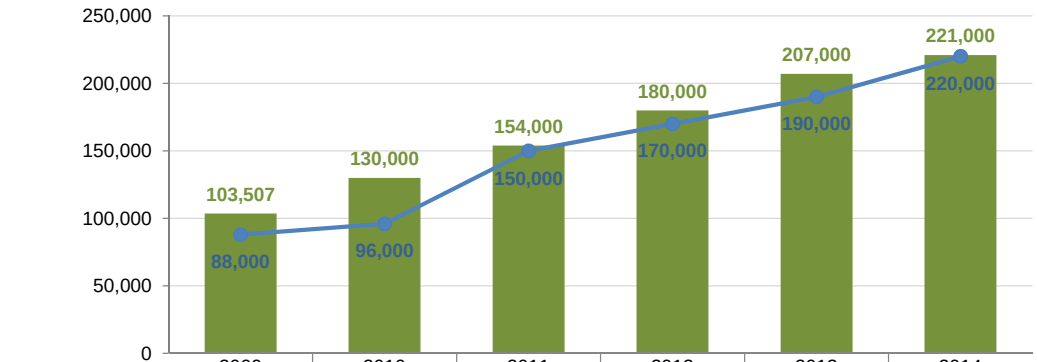


	2009	2010	2011	2012	2013	2014
Result	125,437	89,985	62,213	114,579	127,594	93,557
Commitment	46,121	100,000	100,000	100,000	100,000	100,000

Increase Wetlands

EPA continues to exceed expectations in wetlands restoration with **221,000 acres** restored and enhanced since 2002 (WT-01).

Figure 23: Wetland Acres Restored and Enhanced (WT-01) by Fiscal Year

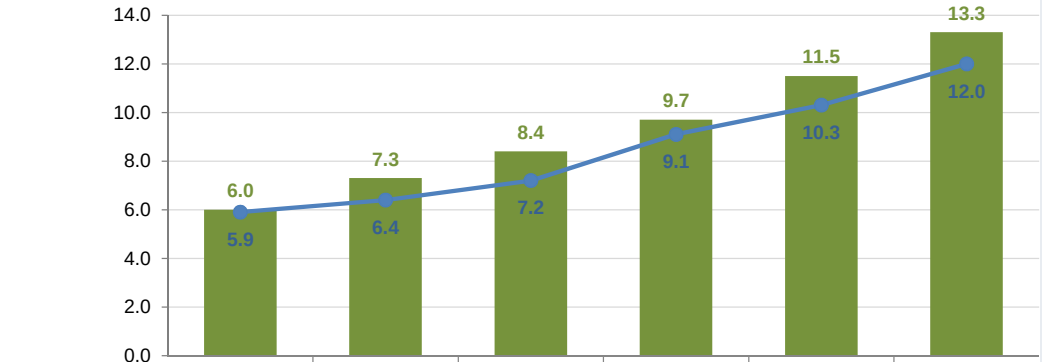


	2009	2010	2011	2012	2013	2014
Result	103,507	130,000	154,000	180,000	207,000	221,000
Commitment	88,000	96,000	150,000	170,000	190,000	220,000

Improve the Health of the Great Lakes

In FY2014, EPA, states, and other partners reported remediation of **13.3 million cubic yards** (cumulative) of contaminated sediments in the Great Lakes through 2013, including more than 1.8 million cubic yards for the most recent year reported (Figure 24).

Figure 24: Cubic Yards of Remediated Sediment (GL-SP32.N11) by Fiscal Year

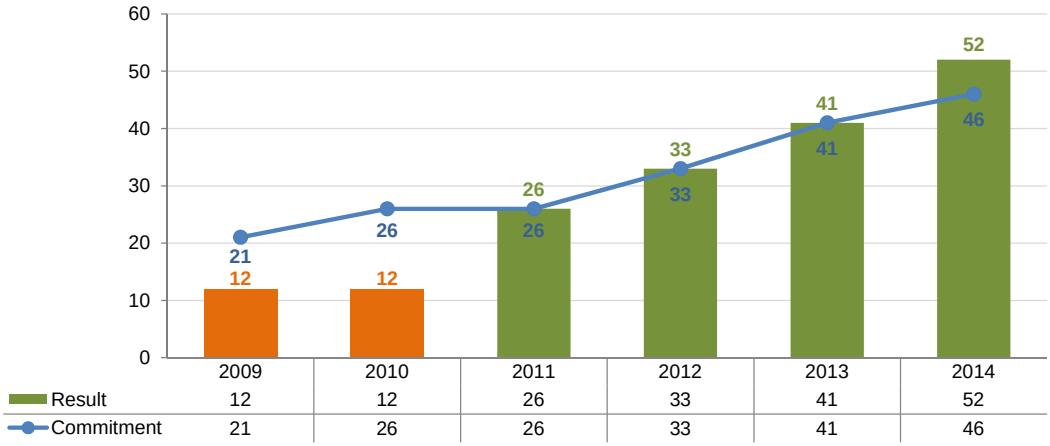


	2009	2010	2011	2012	2013	2014
Result	6.0	7.3	8.4	9.7	11.5	13.3
Commitment	5.9	6.4	7.2	9.1	10.3	12.0

Improve the Health of the Great Lakes *(continued)*

The Great Lakes Program exceeded its commitment to reduce five additional Beneficial Use Impairments (BUIs) at Great Lakes Areas of Concern (AOCs) (Figure 25). From GLRI's inception through FY 2014, 44 Beneficial Use Impairments (BUIs) have been removed at 14 AOCs in Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania, and Wisconsin – quadrupling the total number of BUIs removed in the preceding 22 years. Thirteen were removed in FY2014: restrictions on dredging at Waukegan Harbor AOC; degraded fish and wildlife populations at White Lake and Ashtabula River AOCs; loss of fish and wildlife habitat at White Lake, Ashtabula River, and Saginaw Bay AOCs; aesthetics at St. Louis River, St. Marys River, and White Lake AOCs; restrictions on fish and wildlife consumption at Deer Lake and Ashtabula River AOCs; restrictions on drinking water at White Lake AOC; and bird or animal deformities at St. Marys River AOC.

Figure 25: Beneficial Use Impairments Restored (GL-05) by Fiscal Year[7]



	2009	2010	2011	2012	2013	2014
Result	12	12	26	33	41	52
Commitment	21	26	26	33	41	46

[7] An intensive review of this metric conducted during the preparation of GLRI Action Plan II in FY 2014 determined that the number of beneficial use impairments removed prior to the implementation of the GLRI was overstated by two. The 2014 review determined that the delisting of the Oswego AOC in 2006 resulted from the removal of four BUIs, not six. Consequently, the number of "actual" BUIs reported in the table for FYs 2009 through 2013 included the six BUIs believed to have been removed at the Oswego AOC. For FY 2014, the number of actual BUIs reported as removed has been corrected to reflect the true number of BUIs removed at the Oswego AOC. However, the number of actual BUIs reported in FY2010 is accurate since the intensive review also revealed that two BUIs had been removed in FY2010 but had not been reported until FY 2011.

Improve the Health of the Chesapeake Bay

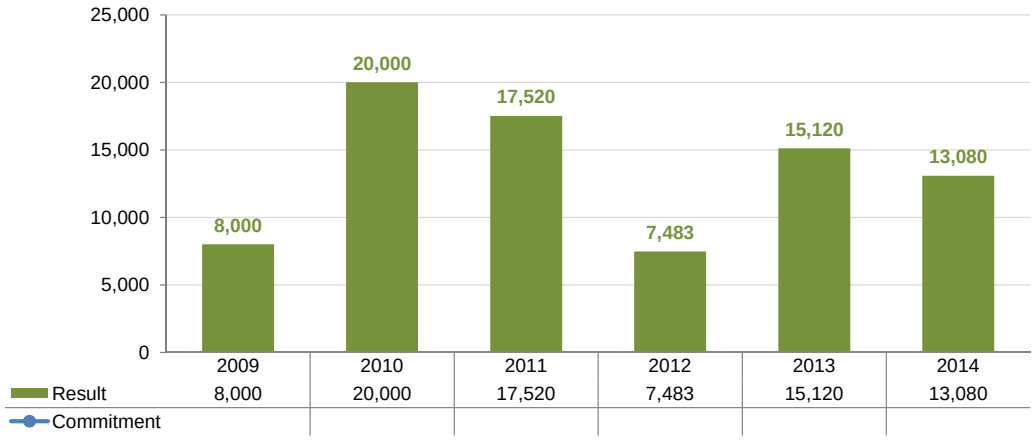
Based on annual monitoring from the prior year, the Chesapeake Bay Program reported over 59,940 acres of underwater grasses in the bay. This represents approximately 32.4% of the program's long-term goal of 185,000 acres (Figure 26).

Figure 26: Chesapeake Bay Submerged Aquatic Vegetation Restored (CB-SP33.N11) by Fiscal Year

Restore and Protect the Gulf of Mexico

The size of the hypoxic, or "dead," zone in the Gulf of Mexico decreased from 15,120 square kilometers in 2013 to 13,080 square kilometers in 2014 (Figure 27). A number of hydrological, climate, and monitoring factors lead to variability in the size of the hypoxic zone from year to year.

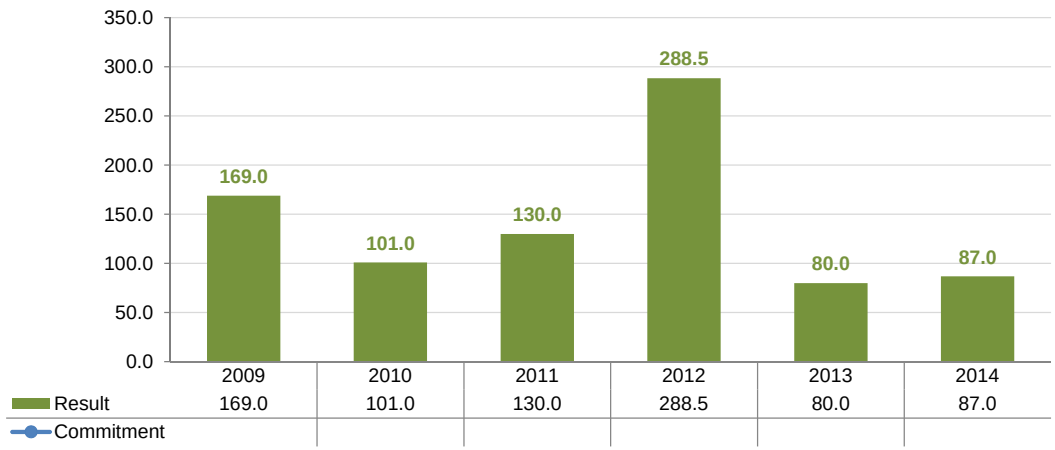
Figure 27: Gulf of Mexico Hypoxic Zone 5-Year Average Size (Square Kilometers) (GM-SP40.N11) by Fiscal Year



Restore and Protect the Long Island Sound

The maximum area of hypoxia in Long Island Sound measured 87 square miles (Figure 28). Ambient environmental conditions in the summer of 2014 led to one of the lowest maximum area of hypoxia in the Sound since 1992.

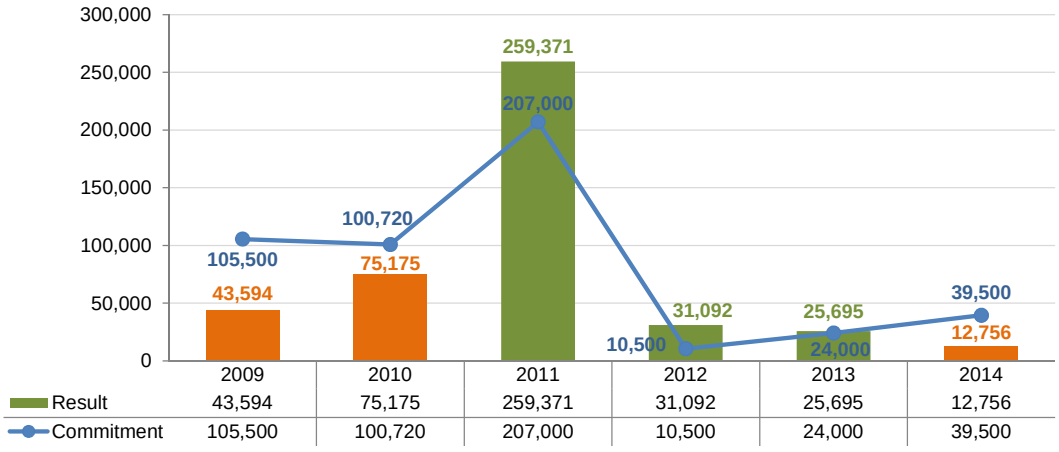
Figure 28: Reduction in Size (Square Miles) of Long Island Sound Hypoxic Zone (LI-SP42.N11) by Calendar Year



Sustain and Restore the U.S.–Mexico Border Environmental Health

EPA provided adequate wastewater sanitation to an additional 12,756 homes over the past year, less than half of its annual commitment (39,500 additional homes) (Figure 29).

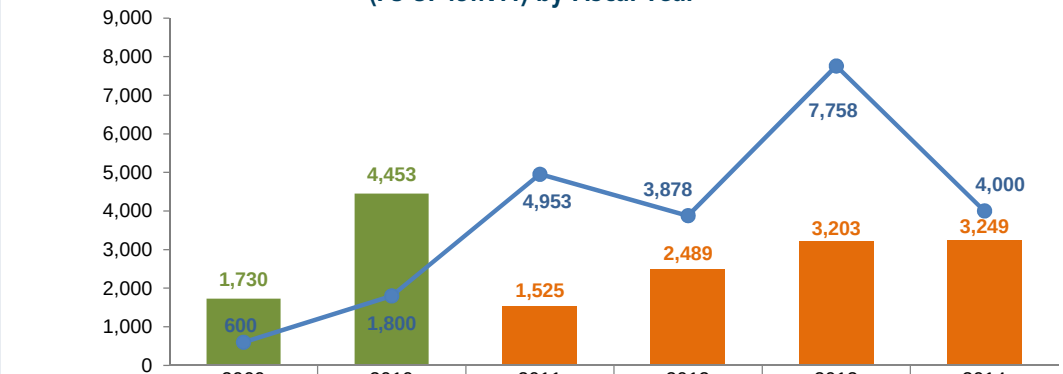
Figure 29: Homes Provided Adequate Wastewater Sanitation in the U.S.–Mexico Border Area (MB-SP24.N11) by Fiscal Year



Restore and Protect the Puget Sound Basin

The Puget Sound program improved water quality and lifted harvest restrictions for 46 additional acres of shellfish bed growing areas. Unfortunately, this was not enough to reach the program's cumulative goal of 4,000 acres of unrestrictive commercial and recreational harvesting area in the Sound (Figure 30).

Figure 30: Increased Acres of Puget Sound Shellfish Areas (PS-SP49.N11) by Fiscal Year

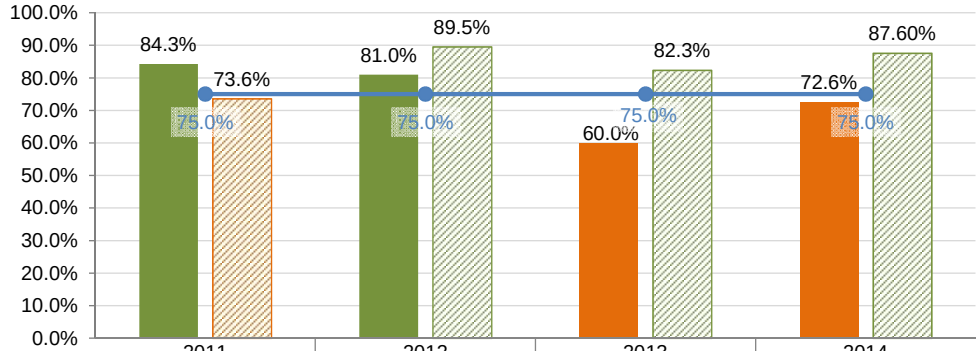


	2009	2010	2011	2012	2013	2014
Result	1,730	4,453	1,525	2,489	3,203	3,249
Commitment	600	1,800	4,953	3,878	7,758	4,000

Restore and Protect the South Florida Ecosystem

Due to the implementation of upgraded wastewater management, water quality in the Florida Keys Marine Sanctuary showed mixed progress in FY 2014, as measured by the percent of monitoring stations with dissolved nitrogen and total phosphorus at or below unhealthy levels. Dissolved nitrogen levels were at healthy levels at less than 75% of monitoring stations (72.6%) in near shore and coastal waters of the Marine Sanctuary (Figure 31).

Figure 31: Florida Keys National Marine Sanctuary Dissolved Inorganic Nitrogen (DIN) and Total Phosphorus (TP) Levels (SFL-SP47b) by Fiscal Year

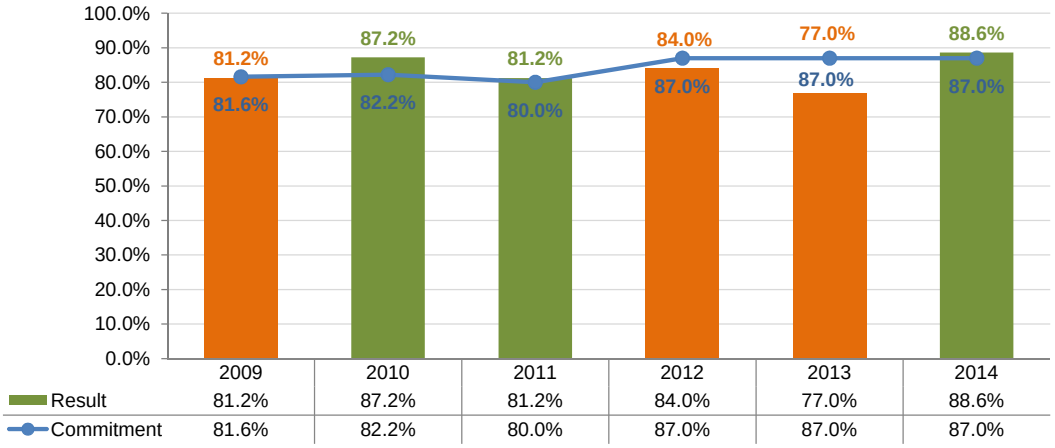


	2011	2012	2013	2014
DIN Result	84.3%	81.0%	60.0%	72.6%
TP Result	73.6%	89.5%	82.3%	87.60%
Commitment	75.0%	75.0%	75.0%	75.0%

Ensure Safe Drinking Water and Protect Water Quality on Tribal Lands

EPA set and met (88.6%) an ambitious commitment of 87% of the population in Indian Country served by CWSs that receive drinking water meeting all applicable health-based standards (Figure 32).

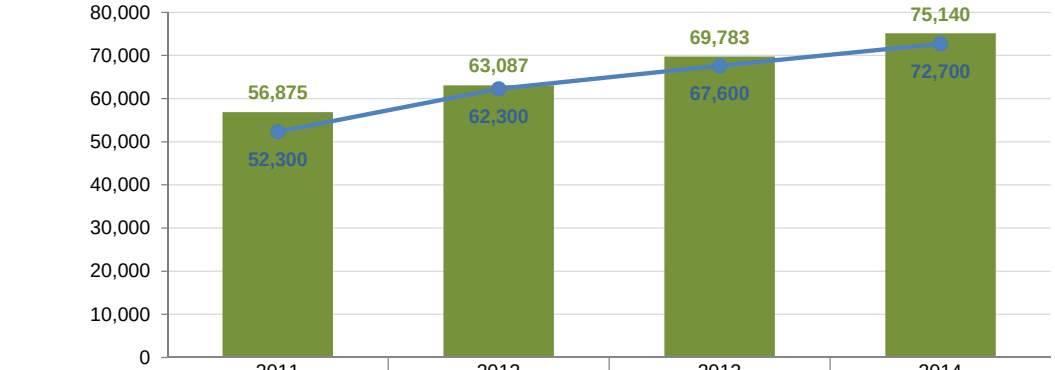
Figure 32: Population Served by CWSs In Indian Country (SDW-SP3.N11) by Fiscal Year



	2009	2010	2011	2012	2013	2014
Result	81.2%	87.2%	81.2%	84.0%	77.0%	88.6%
Commitment	81.6%	82.2%	80.0%	87.0%	87.0%	87.0%

The Agency and its partners provided access to basic sanitation to 75,140 American Indian or Alaskan Native homes in FY 2014 (Figure 33).

Figure 33: Number of American Indian and Alaska Native Homes with Access to Basic Sanitation (WQ-24.N11) by Fiscal Year



	2011	2012	2013	2014
Result	56,875	63,087	69,783	75,140
Commitment	52,300	62,300	67,600	72,700

National Water Program FY 2014 Best Practices

Introduction

Achieving continuous improvement in programmatic activities and environmental outcomes requires a process of planning, implementation, measurement, and analysis. This section highlights a number of best practices that have resulted in successful drinking water, surface water quality, wetlands, coastal and oceans, and large aquatic ecosystem programs. A best practice is defined as a process or methodology that consistently produces superior or innovative results. To propagate their impact widely and encourage their adoption, it is important to identify and analyze these approaches.

The twelve best practices highlighted in this report were selected from proposals submitted by the water divisions in EPA's regional offices. The proposals were evaluated based on the following criteria:

- **Success Within the Program:** How has the activity resulted in improvements? Are the activity results clear? Does the activity have a direct or catalytic impact on program success?
- **Innovation:** How does the activity differ from existing approaches?
- **Replicability:** Can the activity be adopted by other regions/offices/states? Does it have the potential for expansion?
- **Direct Relation to the Administrator's Priorities**

The selected best practices do not represent a comprehensive list of the innovative activities that are being implemented. Rather, the selection is intended to provide examples of different types of activities taking place in different regions addressing different subobjectives. In selecting these best practices, special emphasis was placed on identifying activities or approaches that have resulted in measurable successful outcomes. These best practices are in addition to a number of activities identified in the FY 2014 End of Year Report.

The vision for this report is to promote the widespread use of these successful activities and scale up the benefits of their implementation by sharing information on them among the program and regional offices.

Further activities will be identified and analyzed on a biannual basis. Furthermore, activities that have been selected will continue to be monitored to study their long-term effectiveness. This is part of a continuous learning process that is expected to yield even more innovation and successful outcomes.

A New Framework for Evaluating Seismic Potential Associated with Underground Injection Control (UIC) Class II Permits

Brief Description:

Scientists have long recognized that human activities, such as construction of dams and water reservoirs, mining and oil and gas production, can trigger seismic events, including those that are felt by humans. Under certain conditions, disposal of fluids through injection wells has the potential to cause human-induced seismicity. However, induced seismicity associated with fluid injection is uncommon, as additional conditions necessary to cause seismicity often are not present. Seismic activity induced by Class II wells is likely to occur only where all of the following conditions are present: (1) there is a fault in a near-failure state of stress; (2) the fluid injected has a path of communication to the fault; and (3) the pressure exerted by the fluid is high enough and lasts long enough to cause movement along the fault line. Seismic events due to underground injection are rare (in less than one percent of disposal wells), but the number of events has increased in recent years.

Region 3 developed the Seismicity Framework to provide permit reviewers with key criteria that must be considered during the review of permit applications for Class II-D brine disposal wells that could have a bearing on whether seismicity occurs during injection. Some of the factors to consider include: geologic features, especially faults, which exist near the proposed injection well location; evidence of historical seismic activity; and permit conditions, such as injection pressure and injection volume. Addressing the problem of seismic incidence in a systematic way will help maintain the public's confidence in underground injection as a sound method for brine disposal from conventional and unconventional well operations.

Region 3 technical staff and attorneys from the Office of Regional Counsel worked in close cooperation to develop this Framework. The criteria in the framework, used to analyze the potential for seismicity, was developed from the review of peer-reviewed research such as that published by the National Academy of Sciences. The Region has shared this framework with other EPA regions and primacy states.

Subobjective:

Water Safe to Drink

Type:

Assessment

Highlights:

- **What:** EPA Region 3 staff who review Underground Injection Control (UIC) permit applications are using a new framework to evaluate the potential for induced seismicity from brine disposal injection wells.
- **Who:** EPA Region 3 Ground Water and Enforcement Branch staff of the Water Protection Division and Office of Regional Counsel staff developed the framework. It is being implemented by the Ground Water and Enforcement Branch technical staff and has been shared with other primacy states and EPA Regions that directly implement the UIC program.
- **Why:** A series of seismic events caused by disposal well practices have occurred in a number of locations throughout the United States, including eastern Ohio. EPA Region 3 is involved in the development and issuance of a growing number of Class II-D brine disposal well permits due to unprecedented growth in unconventional gas well drilling. The public has expressed concerns about the likelihood of these injection wells triggering seismic events. EPA's Environmental Appeals Board (EAB) also expressed their desire that the Region document how the potential for seismicity was considered and evaluated during the course of UIC permit review and issuance to avoid future appeals.

Current Status:

The Seismicity Framework is currently being utilized by Region 3 UIC program staff when reviewing permit applications for Class II disposal wells in Pennsylvania and Virginia. EPA Region 3 directly implements both state's UIC programs. The Region provided the framework for use to West Virginia, who

has UIC program primacy, and other EPA regions that also directly implement the UIC program.

Outcomes:

Due to its use of the Framework, the public is able to better understand how EPA Region 3 accounts for potential seismicity during the review of a Class II permit application. The Framework is a "living" document that can be updated as new research in the area of seismicity becomes available. Other states and regions will also be able to modify this framework according to the specific geologic parameters and historical seismic events that are pertinent to their area of the country.

Lessons Learned/Recommendations:

Induced seismicity from Class II disposal operations has been documented in a number of locations throughout the United States. Research is currently being done to help understand why these events have occurred and prevent them from happening in the future. It is important to have a document like the Seismicity Framework available so that technical staff reviewing permit applications can have relevant criteria available that will assist in the development of a permit designed to prevent induced seismicity. The Framework will assist in building and maintaining public confidence and understanding in underground injection as an option for brine disposal in the US. For a more detailed approach on the prevention of induced seismicity from injection, EPA Region 3 recommends that permit reviewers should review the document, "Minimizing and Managing Potential Impacts of Induced Seismicity from Class II Disposal Wells: Practical Approaches." EPA's Underground Injection Control Program National Technical Workgroup developed this document and it can be found on the following website: http://www.epa.gov/r5water/uic/techdocs.htm

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Supporting Citizen Science Water Quality Monitoring in the New York-New Jersey Harbor

Brief Description:

This project connected EPA scientists with citizen scientists from the New York-New Jersey Harbor area who were trained to collect and analyze water quality data. Region 2 worked with the four citizen science groups and the regional WQX/STORET team to develop a single data template for use in collecting the data. Before sampling began, EPA held a training session on use of the data template. Citizen scientists monitored local streams and rivers from June through August 2014, gathering water quality data on-site using a multi-parameter probe (dissolved oxygen, conductivity, temperature, and pH) and collecting samples that they analyzed for Enterococcus using the IDEXX Enterolert test kit. Partners collaborated with staff from state environmental agencies to determine how collected data could be useful to ongoing state environmental programs. After the sampling period concluded, EPA held another training session with the citizen groups on how to successfully upload the data into the WQX/STORET system.

Region 2 helped to develop a "tool kit" for citizen science water quality monitoring activities and provided it to the citizen groups for their monitoring projects in the Harbor. The tool kit includes 1) a Quality Assurance Project Plan template for planning monitoring projects; 2) field and laboratory data sheets to record observations/results and method information; 3) Standard Operating Procedures for common water quality measurements; 4) YouTube videos on sample collection procedures; and 5) an equipment loan program to provide critical monitoring equipment for the collection of environmental data. EPA and HEP developed a common project database and mapping application for all four groups. They provided training and assistance in archiving the final data in EPA's WQX/Storet database to facilitate data sharing with state and federal agencies.

The project involved a collaboration of nearly 30 members from four citizen science groups and a coalition of employees from the states of New York, New Jersey, academia, the Harbor Estuary Program Office, and NEIWPCC. Region 2 provided funding through the use of discretionary Clean Water Act Section 106 funds. The Region also developed an umbrella quality assurance project plan (QAPP) and helped citizen scientists develop addenda to the QAPP specific to

Subobjective:

Oceans and Coastal Protection

Type:

Monitoring, Partnership

Highlights:

- **What:** This practice consists of a collaboration among the EPA, state regulatory agencies, and environmental groups to gather water quality data in tributaries to the New York—New Jersey Harbor Estuary, with a focus on pathogen indicators. The data is made publicly available on an interactive website and through the EPA WQX/STORET system to enable communities, regulatory agencies and the general public to gain knowledge about the health of their local waterways.
- **Who:** EPA Region 2, the New York- New Jersey Harbor & Estuary Program (HEP), the New England Interstate Water Pollution Control Commission (NEIWPCC), the New York State Department of Environmental Conservation (NYSDEC), the New Jersey Department of Environmental Protection (NJDEP) and four citizen scientist groups.
- **Why:** Government agencies often have limited use for the citizen's monitoring data because of concerns about its quality. In this project, EPA Region 2 supported the formation of citizen science groups and provided them with technical guidance and assistance in order to improve the quality of their monitoring efforts to increase knowledge about pathogen contamination in the Harbor. This pilot can serve as a blueprint for future citizen science efforts in the region.

their sites and project objectives. Region 2 provided lab space, staff support and equipment and trained citizens in field sampling, instrument use, lab techniques and data management procedures. HEP, a National Estuary Program housed at the Hudson River Foundation, coordinated all project activities and provided technical and logistical support to the citizen groups. NYSDEC and NJDEP helped to scope the project and provided feedback about the utility of data collected and how future citizen science monitoring can be most helpful to state water quality monitoring programs.

Current Status:

Region 2 and the HEP program invited state environmental staff and citizen scientists from the four community groups to a presentation and forum at EPA's offices in November 2014. Forum participants discussed next steps for monitoring in the Harbor and how future data collection efforts might be useful to state and federal governments. Region 2, HEP, NYSDEC and NJDEP continue to seek opportunities to support citizen science activities in the Region.

Outcomes:

The four citizen groups collected valuable data on pathogens that will serve the communities in which they monitored. Each of the groups has presented their results to their communities and relevant agencies and the data is being used to characterize and address the key water quality issues in their communities. This project also successfully deployed and tested the citizen science tool kit, which will be refined and will be made available for use by future citizen science groups. A similar approach can be employed in other areas and regions.

Lessons Learned:

This citizen science effort was a rewarding one for all involved, especially the citizen scientists themselves. Although all four citizen groups were interested in collecting data for their own purposes, it was also important for them to know that their data would be used by other partners. The importance of data quality assurance, use of a single structured data template and the need for training and/or assistance in the use of WQX/STORET are important lessons learned from this project that can be shared with other organizations and future monitoring projects. For future efforts, partnerships with other organizations that bring complementary resources to the table will be especially helpful. Depending on the complexity of the citizen science initiative, a project may require some initial funding and/or in-kind support by partners. Finally, it is imperative that future groups coordinate with state and local agencies during the planning process to ensure the most beneficial uses of the data and the streamlining of data collection and data management.

Contact Information:

More information about this project is available on the HEP website at http://www.harborestuary.org/citizenscience-2014project.htm.

3 Teaming Up To Optimize Wastewater Treatment for Nutrient Reduction

Brief Description:

Region 3's Optimization Team (EPA, State, NGO) reaches out to communities and WWTPs to offer assistance and schedule onsite visits. The onsite visit consists of a brief tour of the facility by the superintendent, a discussion of permit parameters, recent violations, future plans, and staff/WWTP needs. A follow-up report or email identifying findings is sent to the superintendent requesting their response to gauge their interest in working together on specific projects.

Examples of a follow-up project may be onsite training on process control, tracking and trending processes (mixed liquor settleability, nutrient levels in each process, food to mass ratio, sludge wasting, etc.), or offering guidance material and calculation sheets, which assist operators with data collection and interpretation. After the operators understand process control they can begin to experiment with optimizing a process one step at a time. The Region has process control testing equipment, from which data can be used by the operators to make process changes. The Region also has two Pennsylvania-certified WWTP operators on staff.

One recent project involved optimizing the sludge processing of a 0.5 million gallon per day (mgd) WWTP to reduce the amount of Nitrate N decanted back to the main stream treatment, thereby reducing the potential for TN or NO3 violations. The sludge is aerobically digested 24/7 for a few weeks until the tank is full, then the air is shut off and the sludge is allowed to settle. The liquid above the settled sludge is decanted back to the main Biological Nutrient Removal stream. The sludge is then pumped to a holding tank to be hauled to another WWTP for further treatment.

- Before Optimization: Aerobic digestion. NO3 in decant approximately 80mg/L. High energy use from blowers operating 24/7.
- After Optimization: Aerobic/Anoxic digestion. NO3 in decant approximately 0.2mg/L. Energy use cut in half (approximately 50,000kWh savings). Alkalinity sent back to the main stream treatment which may offset the chemicals needed for nitrification.

Subobjective:

Water Safe to Drink

Type:

Technical Assistance, Partnership

Highlights:

- **What:** Wastewater treatment plant (WWTP) representatives can benefit by teaming up with EPA, State, and Non-governmental Organization (NGO) technical assistance providers to identify opportunities for optimizing treatment processes, and to further educate themselves on process control and utility management. Optimization includes two steps; first, improve the efficiency of each treatment process to maximize chemical and energy savings, and second, look for areas for increased nutrient removal.
- **Who:** EPA Region 3, Water Protection Division, Office of Infrastructure and Assistance, state, NGOs, and partners. EPA is currently focusing on areas of interest in Southeastern Pennsylvania and the Chesapeake Bay Watershed.
- **Why:** By helping them optimize treatment processes, EPA can assist communities to reduce the contaminants (Total Suspended Solids, Total Nitrogen, Total Phosphorus) discharged through less capital-intensive means. Also, the project results in educating WWTP staff and management on means to reduce energy and chemical use, and save operating and capital expenses.

Current Status:

Region 3 continues to implement this practice using WPD staff and is planning to expand the assistance via

contractor support to meet the demand. We are very active in wastewater operator training, regional and state training, and wastewater operator association events to get the message out.

Outcomes:

The outcomes for this practice tend to be customized to the community; the WWTP staff receive a free service to assist them in improving their skill as operators and managers, as well as reducing the contaminants discharged, energy used, chemicals used, and operational dollars spent. Region 3 earns the trust of state and NGO counterparts and municipal engineers.

Lessons Learned/Recommendations:

Region 3 will continue to assist states in facilitating optimization through technical assistance to WWTPs. While regional staff are unable to be available throughout the region due to the number of WWTPs, our participation has been an important way to demonstrate teamwork with our states and trade organizations in providing technical support, lessons learned and outreach to communities in need.

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Performance-Based Training (PBT) for Drinking Water Resiliency and Sustainability

Brief Description:

This training is innovative in that it utilizes the Performance-Based Training (PBT) approach established by the drinking water Area-Wide Optimization Program (AWOP) to address programmatic drinking water resiliency rather than just technical water optimization issues. This training bridges the "knowing" and "doing" gap by implementing a hands-on approach to learning about water system resiliency and consists of 9 one-day sessions with a minimum of four utilities committed to the training program. During each session, the participants learned the principles and tools of resiliency and were encouraged to apply the principles at their utility using a homework implementation plan. After each PBT session, the participants applied the classroom concepts and reported on progress at the subsequent training session with the other participants. They were provided access to facilitators from the state primacy agency to assist with but not solve homework issues. Progress throughout the resiliency PBT was tracked as compared to the resiliency baseline established prior to the first training session. Training modules included: Resource Management, Training and Exercises, Communications, Continuity of Operations Planning, Climate Resiliency, Recovery & Mitigation & Cybersecurity.

Current Status:

This pilot project completed its ninth and final training session in early February 2015, at which participants compared their current status to the resiliency baseline set prior to the first session in September 2012. Committed participants include DC Water, the City of Manassas in Virginia, and the Calvert and Charles Counties in Maryland, each of which operate numerous water utilities in their counties.

Outcomes:

Resiliency planning is essential to ensuring that water systems can provide safe water to drink and may not always be included in strategic planning activities due to water systems' commitment of resources to day-to-day drinking water compliance. Throughout the PBT training process utilities reported completion of homework assignments, so it is expected that the resiliency status reported at the last session will have improved due to this training program. The training was developed so that it could be implemented by others. Region 3 intends to provide the training documentation via the Association of State Drinking Water Agencies (ASDWA) website. Since all of the training tools have been developed, implementation by other regions or states is easily replicable, including those that do not participate in AWOP.

Subobjective:

Water Safe to Drink

Type:

Training

Highlights:

- **What:** Interactive Performance-Based Training (PBT) for water treatment plant operators to improve drinking water resiliency
- **Who:** Developed by Region 3 Drinking Water Branch and implemented for water utilities in the Washington, D.C. metropolitan area.
- **Why:** Increase drinking utilities ability to plan for and respond to service interruptions caused by all types of hazards via resiliency tool training and required implementation planning.

Lessons Learned/Recommendations:

The water systems appreciated this opportunity to address their resiliency needs and had stated that implementing this PBT has allowed water systems to enhance their relationships with the primacy agency. As always with PBT, the interactive nature of simultaneous participation by numerous water systems ensures that homework is completed and provides a network of collaboration.

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EPA Region 4's Rain Catcher Award for Green Infrastructure Projects

Brief Description:

The EPA Region 4, Water Protection Division, launched the Rain Catcher Award in June 2014 to collect information on implemented practices, and to recognize those projects that exemplify green infrastructure excellence. It is anticipated that, over time, this award program will provide information regarding region-specific best practices that will be used for knowledge transfer and building a green infrastructure community of practice.

Projects submitted for consideration need to include basic background information on the project, a brief narrative that explains how specific environmental criteria are being met, and photographs of the site. All projects submitted for consideration have to meet all of the following criteria: (1) installed in the ground within the last 10 years; (2) located in EPA Region 4, that is, located in North or South Carolina, Georgia, Mississippi, Tennessee, Florida, Alabama or Kentucky; and (3) provides a unique, nontraditional solution for the management or mitigation of stormwater. There are seven key elements under which the nominees for the award are judged:

1. **The Quality of the Nomination –** Nominations are evaluated based on the design of a project in the watershed context and whether the approach was innovative in some way.
2. **Results –** Staff also review any water quality and/or water quantity results that were documented as a result of the project, and the extent to which the project demonstrates a social result or change in behavior (i.e., changes in land use or political support for Green Infrastructure ordinances).
3. **Environmental Significance –** projects are evaluated on how they solve important environmental problems reflecting state and federal environmental priorities.
4. **Broad Support –** Nominations are evaluated on how the nominee leveraged collaborative partnerships and working relationships among various stakeholders.
5. **Peer Outreach and Information Transfer –** The review panel scores are based on how well the nominee demonstrated a clear strategy for transferring the knowledge or expertise gained to other groups with similar environmental challenges.
6. **Financial Integrity/Budget –** Budget information is considered in terms of cost efficiency relative to the problem addressed.
7. **Regulatory Integrity –** Lastly, nominations are evaluated on whether projects were consistent with other authorities in effect, such as the NPDES MS4 permit,

Subobjective:

Water Quality

Type:

Green Infrastructure

Highlights:

- **What:** Annual awards for excellence in implementation of a stormwater green infrastructure project.
- **Who:** EPA Region 4 Water Protection Division and Watersheds and Communities Branch
- **Why:** EPA Region 4 developed the Rain Catcher Award to recognize stormwater projects that exemplify green infrastructure (GI) excellence. It is the Region's hope that, over time, the awards program will help build a database of region-specific best practices that will be used for knowledge transfer and building a green infrastructure community of practice.

Superfund Redevelopment and Reuse Agreements, Brownfield grants, and so forth.

In the first year of issuing the awards nearly 20 applicants submitted proposals. The awards and the resulting database has been extremely useful in identifying green infrastructure and Low Impact Development (LID) projects in the Southeast United States.

Current Status:

In August, 2014, the first recipients of the Rain Catcher Awards received their awards and certificates. This took place at EPA Region 4's inaugural MS4 Wet Weather Conference, in partnership with the International Erosion Control Association (IECA). The Rain Catcher Awards are anticipated to be a yearly event, and the 2015 winners will be awarded at the EPA Region 4/IECA Wet Weather MS4 Conference, Atlanta, Georgia, in June 2015.

Outcomes:

The region's review panel selected a winner for three different categories: the municipal level, commercial level, and neighborhood/community level. The 2014 recipients were the following:

Municipal Level Winner: Louisville and Jefferson County Metropolitan Sewer District for the Combined Sewer Overflow Green infrastructure Project

Commercial Level Winner: Volkswagen Group of America for the Chattanooga, Tennessee Assembly Plant

Neighborhood/Community Level Winner: Horry County for the Crabtree Swamp Floodplain Restoration Project

These winners demonstrated a degree of excellence, and have shared and showcased their best examples as a transfer of technical innovation in GI design and maintenance. This is also important for EPA's success in assisting permittees and the non-regulated community to achieve the protection and restoration goals of the Clean Water Act.

Lessons Learned/Recommendations:

For 2015, the Region plans to advertise early to allow more time for communities to apply. EPA has learned that early planning and greater promotion ensures greater participation by applicants. EPA Region 4 has received extensive inquiries in anticipation for the 2015 Rain Catcher Awards. EPA has also learned that communities located in Region 4 are eager to share technical information.

Several inquiries have been made from other EPA Regions expressing interest in the Rain Catcher Awards. Based on its experience, Region 4 recommends that other Regions may want to expand the categories of potential winners for award recognition, and advertise early and often to generate interest among potential municipal, commercial, and community recipients for the awards.

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Virginia's Nutrient Credit Trading Program

Brief Description:

The innovative Chesapeake Bay TMDL, issued in December 2010, provides the accountability framework for nutrient and sediment reductions in the watershed and tributaries that flow to the Bay. This TMDL provided the impetus for nutrient and sediment reductions from all sectors, including construction-related activities. It also established the expectation that all new nutrient and sediment loads and new nutrient- and sediment-generating activities that do not have an allocation under the Bay's TMDL must be offset by other reductions in nutrients and sediment.

The Commonwealth of Virginia Nutrient Trading program allows for innovative stormwater management and, in this case, the focus was on reducing new phosphorous (P) loads generated from new construction activities once the construction is completed; what is sometimes referred to as post-construction runoff. These new P loads from the newly-developed sites are offset by the purchase of equivalent P reduction credits from state-certified credit banks located in the same major river basin.

How does the trading program work? Landowners and farmers implement projects on private lands that result in a reduction of nutrients below their share of the allocation under the Bay's TMDL. Data on the reduction of nutrients entering the Chesapeake Bay are then submitted to the Virginia Department of Environmental Quality (VA DEQ) for approval. The nutrient reductions generate nutrient credits which the landowner can then sell and transfer to permit applicants to meet state and local water quality permit requirements. Private investors have created nutrient credit "banks" which advance other goals such as habit protection, stream buffers and land preservation, as well as fostering more cost-effective development

The partnership in support of this trading program was evident during a public announcement event held in December 2014 which featured EPA Administrator McCarthy, Secretary Vilsack of USDA, the Governor of Virginia, and the head of VA DOT. EPA and USDA work together to support such programs as demonstrated in their Inter-Agency Trading Partnership Agreement in November 2013. The Agreement establishes a collaborative framework to support water-quality-based trading and other market-based approaches for ecosystem service.

While the trading program operates within the authority of Virginia's state regulations, EPA has provided the policy framework and support for this offset approach to happen. EPA regularly assesses Bay States' Watershed Implementation Plans and annual progress, in which trading and offset programs are a component for some Bay States.

Subobjective:

Chesapeake Bay

Type:

Nutrient Reduction

Highlights:

- **What:** Innovative, cost-effective approach of water quality trading saves the state millions
- **Who:** Virginia Department of Environmental Quality (DEQ) in cooperation with EPA, United States Department of Agriculture (USDA) and Virginia Department of Transportation (VA DOT)
- **Why:** To address the complex and large-scale effort of reducing nutrients to the Chesapeake Bay and its tributaries, the Commonwealth of Virginia has implemented a multi-faceted approach to its regulatory stormwater and Total Maximum Daily Load (TMDL) programs centered on nutrient trading.

Outcomes:

The nutrient trading program allowed VDOT to meet its nutrient-reduction goals by purchasing $900,000 in nutrient

credits that Virginia Department of Transportation (VDOT) had procured for over 50 projects state-wide at an estimated cost savings of $1 million. Without trading, VDOT would have had to invest $2 million in nutrient controls. VDOT expects to purchase an additional $1 million in credits in 2015. This proposal allows for the maintenance of the TMDL load cap for phosphorus.

Lessons Learned/Recommendations:

This program:

- Showcases how conservation financing and emerging environmental markets help generate new income opportunities for America's working land owners while also reducing compliance costs and improving the environment;
- Underscores agriculture's important contributions to conservation and the role new markets can play in maintaining complementary production and conservation objectives;
- Emphasizes the importance of generating credits from working farms; and
- Expresses commitment to continued collaboration with federal partners to expand water quality credit trading opportunities throughout the Chesapeake Bay and the nation.

A series of Trading Technical Memoranda that EPA has developed, in consultation with a number of states within the Chesapeake Bay watershed, can be shared with other Regions and states to promote sound trading programs.

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Tribal Drinking Water Plan Review, Training, Technical Assistance, and Outreach Program

Brief Description:

The practice consists of three key elements: review of plans, training and technical assistance, and outreach to Tribal leadership.

1. **Plan Reviews:** For plan reviews, Region 6 requested that all Tribal water construction and modification project plans go through the Regional Office for a courtesy review, regardless of how the project is funded. Region 6 reviews and provides comments to the Tribe, and to the Indian Health Service (IHS) if it is an IHS-managed project, prior to construction. For EPA funded projects, Region 6 has an interagency agreement with IHS that the project be submitted for EPA review. Region 6 conducts plan reviews voluntarily and proactively, in the absence of regulatory authority. This authority exists for state primacy agencies, but not for EPA Regional Tribal Direct Implementation programs. For projects not funded by EPA, the partnership is informal and relies on a "gentleman's handshake" that IHS and Tribes will provide EPA an opportunity to comment before construction begins. The IHS, Tribes, consultants and EPA's contractors all play a role in this effort by providing information about the projects at the facility level. Region 6 began the Plan Review Program after determining that it was far cheaper in time and resources for all parties (EPA, Tribes, IHS) to prevent improper construction from occurring, than to react to it after a sanitary survey, where funding is required to fix the issue, and enforcement may have to get involved due to violations from improper construction.

2. **Training and Technical Assistance:** Region 6 and its contractors provide enhanced training and targeted technical assistance to Tribes. Region 6 works with its contractors to tailor trainings so that they are most useful for Tribes. The Region's sanitary survey trainings help Tribes prepare for a survey and then respond to the findings after it is complete. Also, the Region leveraged its trainings with other Regions and entities (Inter-Tribal Council of Arizona [ITCA] and Texas A&M Engineering Extension Services [TEEX]) to provide more educational opportunities for Tribes who cannot attend all of EPA's offerings.

3. **Outreach to Tribal Leadership:** Region 6 takes a proactive effort in involving Tribal leadership early on when water system issues start to appear. This includes targeted phone calls and site visits, and also increased presence at the quarterly Region 6 Tribal Operations Committee (RTOC) meetings where the Region provides water system updates to leadership and hosts a conference exhibit to educate Tribal leaders on coliform sampling and chlorine residuals. The Region's Water Division collaborates regularly with its Tribal Affairs Office and

Subobjective:

Water Safe to Drink

Type:

Assessment, Training, Technical Assistance

Highlights:

- **What:** The EPA Region 6 Tribal Drinking Water Program implemented a robust Plan Review Program for new and modified water construction projects and stepped up training, technical assistance and visibility with Tribal leadership.
- **Who:** The EPA Region 6 Tribal Drinking Water Program in the Source Water Protection Branch, Water Division.
- **Why:** The EPA Region 6's Water Division developed its Tribal Drinking Water Plan Review, Training, and Outreach Program as a result of finding deficiencies due to improper construction to water treatment facilities on Tribal lands during field visits, and to reduce Tribal non-compliance due to poor design or construction. Training and technical assistance are offered with increased number of trainings and leveraging of training opportunities with other Regions, which has enhanced Region 6's training program.

its Enforcement Division to make sure that the agency maintains consistency helping the Tribes address water system issues. Making Tribal leadership aware of water system issues brings support to the operators who directly improved compliance.

Current Status:

Region 6 plans on continuing to conduct plan reviews on Tribal water projects, to develop and provide training and technical assistance to Tribes, and to involve Tribal leadership early on when water system issues arise.

Outcomes:

Region 6 believes that one of the outcomes of its effort has been an improvement in Tribal compliance. The Region has found that the percent of tribal population served by community water systems that are in compliance with health-based standards has improved to 89% compliance in Fiscal Year 2014 compared to 78% in Fiscal Year 2013.

Lessons learned/Recommendations:

All of elements of this practice are supported by all the components of the Region's Source Water Protection Branch and the Water Division. Cultivating a collaborative spirit is important between the Technical Program, the Enforcement Program and the Tribal Affairs Office to promote and harness collaboration with Tribes at the leadership level as well as the operator level. These practices can be replicated and implemented by any Region. The only challenges would be finding the resources (plan review engineers) and time to conduct the plan reviews and working with experienced contractors to develop and deliver training and technical assistance that positively impact the Tribes.

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Pennsylvania Local Government Tackles Water Pollution Sources Using a Public Utility Approach

Brief Description:

Broad Top Township is a rural community in Bedford County, PA, with a population of approximately 2,000 residents. The majority of the Township lies in the Long's Run Watershed. Going back to the early 1990s, Long's Run had been severely impaired by abandoned mine drainage (AMD) and bacteria from malfunctioning private septic systems. Beginning in the mid-1990s, Broad Top Township officials created a program to improve the management of local septic systems. For a service fee of $15 per month, the Broad Top Township created its own utility to operate and maintain homeowners' systems. By the mid-2000s, Broad Top had developed a watershed-based plan and began installing passive treatment systems such as limestone lined ponds and constructed wetlands to treat AMD. To install and maintain these systems in the most cost effective manner, the Township hired 5 highly trained staff. Where other municipal governments often bid out public projects to contractors working for a profit, the Township saves grant money by having its own staff do the work.

The Township's work depends on state and federal grants, which it aggressively pursues. According to Township Secretary David Thomas, of the locality's roughly $2.5 million annual budget, about $1 million is comprised of grants.

Since 2005, the Township has received over $3 million of Section 319 Nonpoint Source Clean Water Act funds to design and construct the passive treatment systems. Of that funding, approximately $500,000 went toward restoration of Long's Run. Funding from these grants was used to buy the materials, rent special equipment and pay township workers to complete the job. Township employees monitor the systems and streams to check on how the systems are functioning and to see if streams are improving. With access to equipment and operators, the Township can perform any maintenance work needed to keep the system operational. Since the Township built the infrastructure, it knows exactly how everything functions. Up to now, the Township has used the grant funds it has received primarily to fund new systems.

Subobjective:

Water Quality

Type:

Local Water Quality Restoration

Highlights:

- **What:** A local Township in Pennsylvania (PA) created its own utility to install and operate treatment systems for homeowners' septic systems and address the impacts of acid mine drainage on a local watershed.
- **Who:** Township officials in Broad Top, PA, with EPA Region 3 and PA Department of Environmental Protection support and guidance.
- **Why:** The Township decided that it wanted to cost effectively restore and protect its streams. Its local watershed was severely impaired by abandoned mine drainage (AMD) and bacteria from private septic systems. The most effective approach was to provide local leadership for both planning and implementing the necessary controls. Developing and implementing the watershed approach using a public utility model as a guide provided the most cost effective process.

Once all the systems are installed, the Township will no longer need additional grant funds but will rely on its local utility to protect its local water quality.

This Best Practice is unique in that a township, not a volunteer watershed group, has led the efforts for watershed restoration. The benefits of a township leading the cause is infrastructure permanence with professional employees. EPA hopes to see this idea expand to other localities.

Current Status:

Township officials continue to plan and install passive treatment systems on abandoned mine lands throughout

the locality. It has created a trust fund for the operation, maintenance and repair of the existing systems. In 2015 the Township plans to complete a 10-mile nature trail on a former railroad bed. Many watershed groups and other localities contact Broad Top to understand how it does things so they can try to follow its successful ways.

Outcomes:

Streams are improving within the vicinity of Broad Top Township. As a result of the Township's efforts, the Long's Run tributary now meets designated water quality standards and was delisted in Pennsylvania's 2014 integrated Section 303(d) list of impaired waters.

Lessons Learned:

EPA Region 3 Nonpoint Source Program staff worked closely with PADEP staff to assist Broad Top Township develop a Watershed Based Plan. EPA should continue to work strategically with local leadership, who can often provide the most cost-effective and sustainable path to restoring, protecting and maintaining the nation's waters. Having the local governments involved in watershed restoration efforts, such as AMD clean-up and septic system maintenance, can often be the most cost effective approach to achieving improved water quality. Many localities have the equipment and operators to do much of the work that has to be completed to keep pollution control systems working. They have permanent professional employees to administer the grants, sample, and monitor, and they have the vested interest in restoring local waterways, both now and in the long term.

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Enhancing the Availability of Clean Water and Drinking Water State Revolving Funds to States

Brief Description:

Several grant award and management processes were revised to facilitate this best practice, including:

- The SRF project officers in the Water Protection Division work with the regional states to submit their application packages as soon as possible after SRF grant award amounts become available. Even 30 days earlier can make a difference. Also, SRF project officers request states to provide an estimated date for when the grant application packages will be submitted. This allows for better planning and coordination between the project officers and the grant specialists.
- An SRF grant application package includes a grant application form with several attachments, the Intended Use Plan, and the Project Priority List. Regional SRF project officers review these documents independently, in draft, and usually within 2 weeks of receipt. *Previously, project officers waited for a final complete package before initiating their review.*
- SRF project officers use a detailed checklist for what is required in the grant application, Intended Use Plan and Project Priority List. The checklist immediately identifies if something is missing, as well as focuses the project officer's review. Also, if one project officer needs to complete a review initiated by another project officer, the checklist facilitates this transition without adding delays that normally occur from unexpected absences or conflicting priorities. Another added benefit to the regional checklist is that it includes most of the items that the Grants Office looks for so that many potential comments are addressed before the grants specialist completes his review.
- All SRF Annual Reviews (called Advanced Monitoring for other programs) are completed before June 30 of each year so that project officers can focus on grant application packages before the end of the federal fiscal year.

Subobjective:

Water Safe to Drink and Water Quality

Type:

Financial Management

Highlights:

- **What:** Region 3 revised several grant management processes in order to ensure that Clean Water State Revolving Fund (CWSRF) and Drinking Water State Revolving Fund (DWSRF) allotments were awarded to the states in the first year that the funds were available. The Region has successfully awarded funds in the first year for the past five years.
- **Who:** Regional SRF Project Officers analyzed existing practices and revised several processes to accelerate review of grant application packages.
- **Why:** By awarding funds in the first year that funds are available, the Region has:
  - ensured state programs continue uninterrupted,
  - significantly reduce the threats of rescission and loss of funds for the states,
  - significantly reduced the levels of Unliquidated Obligations, and
  - state partnerships are improved.

After the first SRF Funding Recommendation (FR) is completed each year, a template is continually updated and available for the other project officers to use for their respective grants, facilitating a quicker completion of this complex document for future grants.

The Grants Office requests that every program complete a "Year-End Grants Strategy" worksheet. This worksheet assists the Grants Office in budgeting their time and resources.

The worksheet lists all grant actions the program office expects to forward between July 1 and September 30 of each year, including new awards, increase amendments, time extensions, and closeouts.

The Region 3 Grants Office has committed to reviewing and providing comments on application packages within 30 days of receipt. The SRF coordinators maintain frequent contact with the SRF grant specialist during the busiest time for grant awards to ensure that grant application packages are being reviewed in the same order in both offices.

Outcomes:

The Region 3 CWSRF project officers successfully awarded all funds in the first year of availability for the past five years (2010-2014). The DWSRF Project Officers successfully awarded all funds in the first year of availability for the past four (2011-2014).

Lessons Learned/Recommendations:

All Regions could adopt some or all of this new process to facilitate a quicker review of grant application packages. By awarding grants more quickly, as well as working with states to improve their respective rates of drawing grant funds, the Region has significantly reduced their unliquidated obligations.

Ensuring grants are awarded in the first year of availability has improved state partnerships. States respond to the Region's review comments very quickly because they have experienced the benefits of receiving the grant awards sooner.

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Reducing Public Health Risks from Bromide Through Integrated Use of Clean Water Act and Safe Drinking Water Act Authorities

Brief Description:

EPA Region 3 sent a formal notification in August 2013 to state National Pollutant Discharge Elimination System (NPDES) program managers regarding the need for 1) accurate characterization of bromide as a pollutant and implementation of discharge monitoring, 2) beyond-compliance settlements holding grandfathered wastewater treatment facilities to the same requirements as new facilities, 3) temporal and geographic trends analysis to compare drinking water system noncompliance and ambient water quality, and 4) disinfection byproduct formation research to identify intake bromide levels of concern.

The research represents an innovative step toward providing states with the science to support discharge limits protective of downstream drinking water intakes even where ambient water quality criteria have not been developed.

Region 3 is partnering with eight public water systems, all of whom have sampled for a two-year period so that researchers can model and quantify the formation of brominated disinfection byproducts associated with given intake bromide levels. This research is conducted under the Regional Applied Research Program and is supported by both the National Risk Management Research Laboratory and the Region 3 Environmental Science Center.

Current Status:

Utilities participating in the research have completed sampling; data verification and validation are currently underway. Model development is scheduled for spring 2015 and final reporting is due by December 2015.

A number of public and private wastewater treatment facilities, power plants, steel plants, and mines are now monitoring and reporting bromide discharges pursuant to new monitoring requirements established by the Pennsylvania Departments of Environmental Protection (PADEP) and West Virginia Department of Environmental Protection in response to Region 3's August 2013 notification.

Subobjective:

Water Safe to Drink

Type:

Monitoring, Partnership

Highlights:

- **What:** An integrated strategy combining use of permitting and enforcement authorities, total trihalomethane (TTHM) Maximum Contaminant Level (MCL) exceedance analysis, and research to address point-source discharges of bromide impacting drinking water quality downstream.
- **Who:** Led by EPA Region 3 in collaboration with states and the EPA's Office of Research and Development.
- **Why:** Some people who drink water containing total trihalomethanes in excess of the MCL over many years could experience liver, kidney, or central nervous system problems and increased risk of cancer. The purpose of the practice is to reduce public health risks from the adverse impacts of TTHM, improve drinking water system compliance with disinfection byproducts limits, and enhance understanding of both discharges from point sources of Total Dissolved Solids (TDS) and bromide (a TDS constituent) and effects of bromide on TTHM formation.

Outcomes:

Trends analysis, research into thresholds at which pollutants cause problems for drinking water treatment systems, enhanced monitoring through NPDES permits, and negotiated pollutant control are tools that can be applied in other areas where there is a need to protect public health from the adverse impacts of a contaminant where ambient water quality criteria are not in place. If the research is successful in correlating source water bromide and brominated disinfection byproduct formation, permit writers can use

this science to support incorporation of bromide limits into discharge permits. Increased discharge monitoring should eventually allow inventory of all significant NPDES-permitted bromide loadings in the region. Reductions in summertime brominated disinfection byproducts in finished water for Allegheny River drinking water systems are anticipated as a result of the civil settlements that will reduce upstream bromide discharges. Full implementation of settlement requirements are projected to reduce bromide discharges by over 1,000 lbs/day, bringing monthly average ambient bromide levels in the Allegheny to below 100 µg/l, even in dry months. Pursuant to the administrative settlement, TDS discharges at the three facilities will be reduced to 500 mg/l after renewal of NPDES permits for the three facilities, for which the operator submitted permit applications in 2013. Region 3 has reviewed draft permits and PADEP is currently revising permits in response to comments.

Lessons Learned/Recommendations:

Coordination between drinking water and discharge programs is key in strategy development.

The potential for Public Water System operators to incur significant drinking water treatment costs to address a problematic pollutant can motivate them to support source reduction efforts (in this case sound science to identify a threshold value that may be used to support discharge permit limits)

Rapid expansion within an industrial sector can correlate to significant increases in associated contaminants of concern, requiring quick response if contaminants are to be addressed

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Massachusetts Designates No Discharge Zone in Coastal Water through Novel Stakeholder Agreement

Brief Description:

Section 312 of the Clean Water Act authorizes states to establish No Discharge Zones in which all treated and untreated sewage discharges from recreational and commercial vessels are prohibited, thereby providing a greater level of water quality protection. The Act requires EPA to approve them based on its determination that there are sufficient sewage pump-out facilities to serve the area's boating population. To date, approximately 3,947 square miles (or 59 percent) of New England's 6,680 square miles of state coastal waters have been designated as NDZ.

The primary obstacle to the NDZ designation for the remaining area of Massachusetts coastal waters was that none of the 15-16 ferries that regularly transit between Cape Cod and the Martha's Vineyard Islands had sewage holding tanks and there was no sewage pump-out infrastructure at any of the ferry terminals. Most of the vessels used salt water for sewage treatment and needed to be retrofitted for fresh water and holding tanks. Shore-side collection systems needed to be built at the ferry terminals and connected to the local sewage systems. Each town in which the terminals were located needed to ensure that their wastewater treatment system had adequate capacity to accept the volume and flow of wastewater from the ferries.

To address these problems, EPA and MCZM came up with an innovative, voluntary agreement under which all coastal waters around the lower Cape and the islands would be designated as NDZ in 2012, except for two "exclusionary" corridors, which were to be designated and closed by 2015. This would allow about 99% of the total area to be designated as NDZ, providing the clean water benefits associated with reduced bacteria and pathogen discharges, while allowing additional time for the ferry operators and research institutions to complete the expensive retrofits and infrastructure. It was a unique approach that was necessary because of the high concentration of ferries operating between the Cape and Islands, the relatively high cost of retrofitting all the ferries (compared with small recreational vessels) and installing new shoreside infrastructure (most marinas and boatyards already have pump-out facilities), and the fact that ferry service could not be interrupted because they're the lifeline to thousands of island residents and businesses.

Subobjective:

Oceans and Coastal Protection

Type:

Partnership Agreement

Highlights:

- **What:** In 2012, EPA and the Commonwealth of Massachusetts came up with an innovative, voluntary agreement under which all coastal waters around lower Cape Cod and the Martha's Vineyard islands would be designated as No Discharge Zone (NDZ) for 3 years, except for two "exclusionary" corridors, which were to be designated and closed by 2015. This allowed about 99% of the total area to be designated as NDZ, providing the clean water benefits associated with reduced bacteria and pathogen discharges, while allowing additional time for local ferry operators and research institutions to complete the necessary retrofits and infrastructure.
- **Who:** EPA Region 1, Massachusetts Office of Coastal Zone Management (MCZM), Massachusetts Department of Environmental Protection, local ferry operators, environmental groups, and municipal harbormasters. The National Oceanic and Atmospheric Administration and Woods Hole Oceanographic Institution also were involved due to their fleet of research vessels.
- **Why:** Federal and state agencies were interested in extending NDZ protection to the remaining areas of undesignated coastal waters in Massachusetts.

Current Status:

In May 2014, EPA Region 1 designated as a No Discharge

Zone (NDZ) for vessel sewage the last remaining areas of undesignated coastal waters in Massachusetts. This action seamlessly integrated the 20 individual NDZs that had previously been designated in Massachusetts since 1991 into a single statewide NDZ.

Outcomes:

The May 2014 NDZ designation covered the two "exclusionary" corridors between Cape Cod and Martha's Vineyard and the Cape and Nantucket for ferries to transit state waters designated as NDZ while they were being retrofitted with holding tanks, and necessary shore-side infrastructure was being installed. The designation of the two corridors was a success story in itself, because it allowed Massachusetts to move closer to its goal of making all its coastal waters a NDZ, while also giving the ferry operators time to retrofit their vessels and install shore-side collection systems, and showed a good faith effort by all parties to work together to meet mutually beneficial goals.

Recommendations and Lessons Learned:

EPA and the Commonwealth worked closely with the commercial ferry operators and municipal officials to address key financial issues and complete the NDZ designation one year ahead of the five-year schedule that was negotiated in 2010. The ferry operators were very motivated to come into compliance primarily because the rest of Massachusetts' coastal waters were already designated, there was a lot of local public support for the NDZ designation, and they would have received a great deal of negative publicity if they had resisted.

While designating NDZs for areas with primarily recreational boating is fairly straightforward, because there is a federally authorized Clean Vessel Act grant program to fund the installation and maintenance of pump-out facilities, designating areas with large numbers of commercial vessels that operate in state waters is more difficult because of the high cost of compliance for commercial operators. EPA and Massachusetts tackled and solved this complex issue with a creative, innovative approach that expedited the designation process while enabling the ferry operators to make a positive contribution to address the public's environmental concerns.

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EPA's Cross-Regional Sharing of Expertise on Grants Management

Brief Description:

The key elements for this Best Practice are sharing information and experience with other regions' staff through conference calls, e-mails and videoconferencing. The practice is innovative in that Region 3 is reaching out nationally to help its peers with specific issues. For some time, EPA's Region 3 has practiced team work and cross- divisional cooperation within its own region, and is now taking this concept to the national level. The Region has worked with Regions 4, 7 and 9 in the last year. Staff from the SAAP team spoke on several occasions with project officers (PO) in Region 4 on several grant-related issues regarding specific projects and grants. In February 2014, the Region 3 team held a training session, via teleconference, with Regions 4, 7, 9 and the field office in Hawaii on procurement requirements. Several Region 3 staff have reviewed issues regarding land purchases and disposition and addressed specific concerns as well as using the National SAAP Coordinators' bimonthly call to further address the issues.

Current Status:

The basic framework of the practice is simple. As issues come up, Region 3 is available to speak with other POs and management from other regions. As each training session is wrapped up, Region 3 staff collaborate with the region involved to plan for future training. On the National SAAP coordinators calls, Region 3 makes themselves available for assistance to anyone that asks.

Outcomes:

By implementing this Best Practice, information is getting directly to the people that need it most, and in a timely manner. Reading policies and regulations is one thing, but discussing issues with project officers who have dealt with the issues firsthand gives a much more realistic perspective. This practice has definitely resulted in continual improvements. For example, Region 9 requested the help of Region 3 with Disadvantaged Business Enterprise (DBE) requirements on several grant project procurements. EPA contractors in the field had reviewed the procurement process of several California grantees and had indicated that further documentation was needed to determine the contract eligibility. The younger project officers in that region had many questions about the DBE requirement process and turned to Region 3 for advice. All the Region 3 SAAP project officers have over 25 years of experience with procurement issues. Based on initial conference calls, which answered the immediate issues, the idea of a teleconferencing training session on DBE requirements was developed. This initial training session went so well that a second one was held and more are planned for the near future. Region 3 is working on developing a system to expand this practice of mentor and mentee to all the regional

Subobjective:

All

Type:

Grants Management

Highlights:

- **What:** EPA's Region 3 is working with other regional offices through one-on-one assistance and training to share expertise on grants-related issues and processes.
- **Who:** Region 3's Office of Infrastructure and Assistance Special Appropriation Act Project (SAAP) team, with the help of Emily Nicasio at EPA headquarters, developed and implemented this Best Practice.
- **Why:** During National SAAP coordinators conference calls, questions were raised about different project management issues. A discussion ensued that it would be helpful if the regions could work together to educate each other; Region 3 volunteered to begin the process of helping other regions work together to resolve programmatic and other issues. Regions 4, 7 and 9 requested help and Region 3 worked directly with each of the three regions to address their issues.

offices. Each regional office has staff resources that have strengths in different areas of project management. Matching up the issue to the staff personnel should be easily attainable both through the bimonthly Coordinators calls and group e-mail requests. Region 3 will develop a reference resource of project officers that will identify their areas of expertise to be used by others.

Lessons Learned/Recommendations:

Region 3 discovered in its conversations and training sessions that there are areas of project management that are confusing or that staff have no experience with in one region, but is well understood and practiced in another region. The exchange of information has shown the Region that assisting other project officers, whether across the hall or across the country, can increase productivity and also be very rewarding. This is a perfect example of "sharing the wealth." The Region will continue to work with the other regional SAAP coordinators to further develop this practice.

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Appendix A: National Water Program FY 2014 End-of-Year Performance Measure Commitments, Results, and Status

Strategic Measures in FY 2011–FY 2015 Strategic Plan

FY14 ACS Code	FY 2014 National Water Program Guidance Measures	FY 2014 National Commitment	FY 2014 EOY Result	FY 2014 EOY Status
Subobjective 2.1.1: Water Safe to Drink				
SDW-211	Percent of the population served by community water systems that receive drinking water that meets all applicable health-based drinking water standards through approaches including effective treatment and source water protection.	92%	92.5%	Met
SDW-SP1.N11	Percent of community water systems that meet all applicable health-based standards through approaches that include effective treatment and source water protection.	90%	91%	Met
SDW-SP2	Percent of "person months" (i.e. all persons served by community water systems times 12 months) during which community water systems provide drinking water that meets all applicable health-based drinking water standards.	95%	96.7%	Met
SDW-SP3.N11	Percent of the population in Indian country served by community water systems that receive drinking water that meets all applicable health-based drinking water standards.	87%	89%	Met
SDW-SP4a	Percent of community water systems where risk to public health is minimized through source water protection.	45%	48.0%	Met
SDW-SP4b	Percent of the population served by community water systems where risk to public health is minimized through source water protection.	57%	57.7%	Met
SDW-18.N11	Number of American Indian and Alaska Native homes provided access to safe drinking water in coordination with other federal agencies.	119,000	113,656	Not Met
SDW-01a	Percent of community water systems (CWSs) that have undergone a sanitary survey within the past three years (five years for outstanding performers or those ground water systems approved by the primacy agency to provide 4-log treatment of viruses).	83%	87%	Met
SDW-01b	Number of tribal community water systems (CWSs) that have undergone a sanitary survey within the past three years (five years for outstanding performers or those ground water systems approved to provide 4-log treatment of viruses).	590	633	Met
SDW-04	Fund utilization rate [cumulative dollar amount of loan agreements divided by cumulative funds available for projects] for the Drinking Water State Revolving Fund (DWSRF).	89.00%	92.00%	Met
SDW-05	Number of Drinking Water State Revolving Fund (DWSRF) projects that have initiated operations. (cumulative)	7,844	8,001	Met

FY14 ACS Code	FY 2014 National Water Program Guidance Measures	FY 2014 National Commitment	FY 2014 EOY Result	FY 2014 EOY Status
SDW-07	Percent of Classes I, II and Class III salt solution mining wells that have lost mechanical integrity and are returned to compliance within 180 days thereby reducing the potential to endanger underground sources of drinking water.	85%	89.0%	Met
SDW-08	Number of Class V motor vehicle waste disposal wells (MVWDW) and large capacity cesspools (LCC) that are closed or permitted (cumulative).	25,225	26,560	Met
SDW-11	Percent of DWSRF projects awarded to small PWS serving <500, 501-3,300, and 3,301-10,000 consumers.	Indicator	70%	Indicator
SDW-15	Number and percent of small CWS and NTNCWS (<500, 501-3,300, 3,301-10,000) with repeat health based Nitrate/Nitrite, Stage 1 D/DBP, SWTR and TCR violations.	Indicator	1,159	Indicator
SDW-17	Number and percent of schools and childcare centers that meet all health-based drinking water standards.	Indicator	6,783	Indicator
SDW-19a	Volume of CO_2 sequestered through injection as defined by the UIC Final Rule.	Indicator	50,753	Indicator
SDW-19b	Number of permit decisions during the reporting period that result in CO_2 sequestered through injection as defined by the UIC Final Rule.	Indicator	10	Indicator
Subobjective 2.1.2: Fish and Shellfish Safe to Eat				
FS-SP6.N11	Percent of women of childbearing age having mercury levels in blood above the level of concern.	4.90%	2.3%	Met
FS-1a	Percent of river miles where fish tissue were assessed to support waterbody-specific or regional consumption advisories or a determination that no consumption advice is necessary. (Great Lakes measured separately; Alaska not included) (Report every two years)	Indicator	NA	Indicator
FS-1b	Percent of lake acres where fish tissue were assessed to support waterbody-specific or regional consumption advisories or a determination that no consumption advice is necessary. (Great Lakes measured separately; Alaska not included) (Report every two years)	Indicator	NA	Indicator
Subobjective 2.1.3 Water Safe for Swimming				
SS-SP9.N11	Percent of days of the beach season that coastal and Great Lakes beaches monitored by state beach safety programs are open and safe for swimming.	95%	95.4%	Met
SS-1	Number and national percent, using a constant denominator, of Combined Sewer Overflow (CSO) permits with a schedule incorporated into an appropriate enforceable mechanism, including a permit or enforcement order, with specific dates and milestones, including a completion date consistent with Agency guidance, which requires: 1) Implementation of a Long Term Control Plan (LTCP) which will result in compliance with the technology and water quality-based requirements of the Clean Water Act; or 2) implementation of any other acceptable CSO control measures consistent with the 1994 CSO Control Policy; or 3) completion of separation after the baseline date. (cumulative)	771	775	Met
SS-2	Percent of all Tier I (significant) public beaches that are monitored and managed under the BEACH Act program.	95%	98%	Met

FY14 ACS Code	FY 2014 National Water Program Guidance Measures	FY 2014 National Commitment	FY 2014 EOY Result	FY 2014 EOY Status
Subobjective 2.2.1 Improve Water Quality on a Watershed Basis				
WQ-SP10.N11	Number of waterbodies identified in 2002 as not attaining water quality standards where standards are now fully attained. (cumulative)	3,779	3,866	Met
WQ-SP11	Remove the specific causes of waterbody impairment identified by states in 2002. (cumulative)	12,134	12,288	Met
WQ-SP12.N11	Improve water quality conditions in impaired watersheds nationwide using the watershed approach. (cumulative)	408	411	Met
WQ-SP13.N11	Ensure that the condition of the Nation's streams does not degrade (i.e., there is no statistically significant increase in the percent of streams rated "poor" and no statistically significant decrease in the streams rated "good").	Deferred for FY14	Deferred for FY 14	Deferred for FY 14
WQ-SP14a.N11	Improve water quality in Indian country at baseline monitoring stations in tribal waters (i.e., show improvement in one or more of seven key parameters: dissolved oxygen, pH, water temperature, total nitrogen, total phosphorus, pathogen indicators, and turbidity). (cumulative)	21	21	Met
WQ-SP14b.N11	Identify monitoring stations on tribal lands that are showing no degradation in water quality (meaning the waters are meeting tribal water quality objectives). (cumulative)	Indicator	6	Indicator
WQ-24.N11	Number of American Indian and Alaska Native homes provided access to basic sanitation in coordination with other federal agencies (cumulative).	72,700	75,140	Met
WQ-01a	Number of numeric water quality standards for total nitrogen and for total phosphorus adopted by states and territories and approved by EPA, or promulgated by EPA, for all waters within the state or territory for each of the following waterbody types: lakes/reservoirs, rivers/streams, and estuaries (cumulative, out of a universe of 280).	44	44	Met
WQ-26	Number of states and territories implementing nutrient reduction strategies by (1) setting priorities on a watershed or state-wide basis, (2) establishing nutrient reduction targets, and (3) continuing to make progress (and provide performance milestone information to EPA) on adoption of numeric nutrient criteria for at least one class of waters by no later than 2016. (cumulative)	24.31	24.31	Met
WQ-02	Number of tribes that have water quality standards approved by EPA. (cumulative)	41	41	Met
WQ-03a	Number, and national percent, of states and territories that within the preceding three year period, submitted new or revised water quality criteria acceptable to EPA that reflect new scientific information from EPA or other resources not considered in the previous standards.	37	29	Not Met
WQ-03b	Number, and national percent of tribes that within the preceding three year period, submitted new or revised water quality criteria acceptable to EPA that reflect new scientific information from EPA or other resources not considered in the previous standards.	9	9	Met
WQ-04a	Percentage of submissions of new or revised water quality standards from states and territories that are approved by EPA.	88.00%	89.70%	Met
WQ-06a	Number of tribes that currently receive funding under Section 106 of the Clean Water Act that have developed and begun implementing monitoring strategies that are appropriate to their water quality program consistent with EPA Guidance. (cumulative)	226	228	Met
WQ-06b	Number of tribes that are providing water quality data in a format accessible for storage in EPA's data system. (cumulative)	197	199	Met

FY14 ACS Code	FY 2014 National Water Program Guidance Measures	FY 2014 National Commitment	FY 2014 EOY Result	FY 2014 EOY Status
WQ-08a	Number, and national percent, of TMDLs that are established or approved by EPA [Total TMDLs] on a schedule consistent with national policy. Note: A TMDL is a technical plan for reducing pollutants in order to attain water quality standards. The terms 'approved' and 'established' refer to the completion and approval of the TMDL itself.	2,177	3,329	Met
WQ-08b	Number, and national percent, of approved TMDLs, that are established by states and approved by EPA [State TMDLs] on a schedule consistent with national policy.Note: A TMDL is a technical plan for reducing pollutants in order to attain water quality standards. The terms 'approved' and 'established' refer to the completion and approval of the TMDL itself.	2,180	3,329	Met
WQ-09a	Estimated annual reduction in million pounds of nitrogen from nonpoint sources to waterbodies (Section 319 funded projects only).	9.1	11.3	Met
WQ-09b	Estimated annual reduction in million pounds of phosphorus from nonpoint sources to waterbodies (Section 319 funded projects only).	4.5	2.7	Not Met
WQ-09c	Estimated annual reduction in million tons of sediment from nonpoint sources to waterbodies (Section 319 funded projects only).	1.2	1.7	Met
WQ-10	Number of waterbodies identified by states (in 1998/2000 or subsequent years) as being primarily nonpoint source (NPS)-impaired that are partially or fully restored. (cumulative)	537	560	Met
WQ-11	Number, and national percent, of follow-up actions that are completed by assessed NPDES (National Pollutant Discharge Elimination System) programs. (cumulative)	Indicator	404	Indicator
WQ-12a	Percent of non-tribal facilities covered by NPDES permits that are considered current. [Measure will still set targets and commitments and report results in both % and #.]	86.00%	90.00%	Met
WQ-12b	Percent of tribal facilities covered by NPDES permits that are considered current. [Measure will still set targets and commitments and report results in both % and #.]	85.00%	85.00%	Met
WQ-13a	Number, and national percent, of MS-4s covered under either an individual or general permit.	Indicator	7851	Indicator
WQ-13b	Number of facilities covered under either an individual or general industrial storm water permit.	Indicator	93,042	Indicator
WQ-13c	Number of sites covered under either an individual or general construction storm water site permit.	Indicator	164,494	Indicator
WQ-13d	Number of facilities covered under either an individual or general CAFO permit.	Indicator	6,946	Indicator
WQ-14a	Number, and national percent, of Significant Industrial Users (SIUs) that are discharging to POTWs with Pretreatment Programs that have control mechanisms in place that implement applicable pretreatment standards and requirements.	20,647	20,748	Met
WQ-14b	Number, and national percent, of Categorical Industrial Users (CIUs) that are discharging to POTWs without Pretreatment Programs that have control mechanisms in place that implement applicable pretreatment standards and requirements.	Indicator	1,642	Indicator

FY14 ACS Code	FY 2014 National Water Program Guidance Measures	FY 2014 National Commitment	FY 2014 EOY Result	FY 2014 EOY Status
WQ-15a	Percent of major dischargers in Significant Noncompliance (SNC) at any time during the fiscal year.	22.5%	22.2%	Met
WQ-16	Number, and national percent, of all major publicly-owned treatment works (POTWs) that comply with their permitted wastewater discharge standards. (i.e. POTWs that are not in significant non-compliance)	86.00%	88%	Met
WQ-17	Fund utilization rate [cumulative loan agreement dollars to the cumulative funds available for projects] for the Clean Water State Revolving Fund (CWSRF).	94.50%	98.00%	Met
WQ-19a	Number of high priority state NPDES permits that are issued in the fiscal year.	486	516	Met
WQ-19b	Number of high priority state and EPA (including tribal) NPDES permits that are issued in the fiscal year.	532	556	Met
WQ-22a	Number of regions that have completed the development of a Healthy Watersheds Initiative (HWI) Strategy and have reached an agreement with at least one state to implement its portion of the region's HWI Strategy.	Indicator	9	Indicator
WQ-23	Percent of serviceable rural Alaska homes with access to drinking water supply and wastewater disposal.	93.50%	94%	Met
WQ-25a	Number of urban water projects initiated addressing water quality issues in the community.	30	65	Met
Subobjective 2.2.2 Improve Coastal and Ocean Waters				
CO-222.N11	Prevent water pollution and protect coastal and ocean systems to improve national and regional coastal aquatic system health on the 'good/fair/poor' scale of the National Coastal Condition Report.	2.5	2.5	Met
CO-SP20.N11	Percent of active dredged material ocean dumping sites that will have achieved environmentally acceptable conditions (as reflected in each site's management plan and measured through on-site monitoring programs).	95%	95%	Met
CO-02	Total coastal and non-coastal statutory square miles protected from vessel sewage by "no discharge zone(s)." (cumulative)	Indicator	64,535	Indicator
CO-04	Dollar value of "primary" leveraged resources (cash or in-kind) obtained by the NEP Directors and/or staff in millions of dollars rounded to the nearest tenth of a percent.	Indicator	$578	Indicator
CO-06	Number of active dredged material ocean dumping sites that are monitored in the reporting year.	Indicator	41	Indicator
CO-432.N11	Working with partners, protect or restore additional acres of habitat within the study areas for the 28 estuaries that are part of the National Estuary Program (NEP).	100,000	93,557	Not Met

FY14 ACS Code	FY 2014 National Water Program Guidance Measures	FY 2014 National Commitment	FY 2014 EOY Result	FY 2014 EOY Status
Subobjective 2.2.3 Increase Wetlands				
WT-SP22	In partnership with the U.S. Army Corps of Engineers, states and tribes, achieve 'no net loss' of wetlands each year under the Clean Water Act Section 404 regulatory program.	No Net Loss	No Net Loss	Met
WT-01	Number of acres restored and improved, under the 5-Star, NEP, 319, and great waterbody programs (cumulative).	220,000	221,000	Met
WT-02a	Number of states/tribes that have substantially built or increased capacity in wetland regulation, monitoring and assessment, water quality standards, and/or restoration and protection. (Annual)	Indicator	36	Indicator
WT-03	Percent of Clean Water Act Section 404 standard permits, upon which EPA coordinated with the permitting authority (i.e., Corps or State), where a final permit decision in FY 14 documents requirements for greater environmental protection* than originally proposed.	Indicator	77%	Indicator
Subobjective 2.2.4 Improve the Health of the Great Lakes				
GL-433.N11	Improve the overall ecosystem health of the Great Lakes by preventing water pollution and protecting aquatic ecosystems.	23.4	24.5	Met
GL-SP29	Cumulative percentage decline for the long term trend in average concentrations of PCBs in Great Lakes fish.	46%	49.50%	Met
GL-SP31	Number of Areas of Concern in the Great Lakes where all management actions necessary for delisting have been implemented (cumulative)	5	7	Met
GL-SP32.N11	Cubic yards (in millions) of contaminated sediment remediated in the Great Lakes (cumulative from 1997).	12	13.3	Met
GL-05	Number of Beneficial Use Impairments removed within Areas of Concern. (cumulative)	46	52	Met
GL-06	Number of nonnative species newly detected in the Great Lakes ecosystem.	0.8	0.67	Met
GL-07	Number of multi-agency rapid response plans established, mock exercises to practice responses carried out under those plans, and/or actual response actions (cumulative).	35	38	Met
GL-08	Acres managed for populations of invasive species controlled to a target level (cumulative).	38,000	84,500	Met
GL-09	Percent of populations of native aquatic non-threatened and endangered species self-sustaining in the wild (cumulative).	0	0	Met
GL-10	Number of acres of wetlands and wetland-associated uplands protected, restored and enhanced (cumulative).	88,000	102,349	Met

FY14 ACS Code	FY 2014 National Water Program Guidance Measures	FY 2014 National Commitment	FY 2014 EOY Result	FY 2014 EOY Status
GL-11	Number of acres of coastal, upland, and island habitats protected, restored and enhanced (cumulative).	38,000	48,711	Met
GL-12	Number of acres of coastal, upland, and island habitats protected, restored and enhanced (cumulative).	20,000	33,250	Met
GL-13	Number of species delisted due to recovery.	1	1	Met
GL-16	Acres in Great Lakes watershed with USDA conservation practices implemented to reduce erosion, nutrients, and/or pesticide loading.	30%	68%	Met
Subobjective 2.2.5 Improve the Health of the Chesapeake Bay				
CB-SP33.N11	Percent of Submerged Aquatic Vegetation goal of 185,000 acres achieved, based on annual monitoring from prior year.	Long Term	32%	Long-Term
CB-SP34	Percent of Dissolved Oxygen goal of 100% standards attainment achieved, based on annual monitoring from the previous calendar year and the preceding 2 years.	Long Term	34%	Long-Term
CB-SP35	Percent of goal achieved for implementing nitrogen pollution reduction actions to achieve the final TMDL allocations, as measured through the phase 5.3 watershed model.	30%	27%	Not Met
CB-SP36	Percent of goal achieved for implementing phosphorus pollution reduction actions to achieve final TMDL allocations, as measured through the phase 5.3 watershed model.	30%	43%	Met
CB-SP37	Percent of goal achieved for implementing sediment pollution reduction actions to achieve final TMDL allocations, as measured through the phase 5.3 watershed model.	30%	37%	Met
Subobjective 2.2.6 Restore and Protect the Gulf of Mexico				
GM-SP38	Restore water and habitat quality to meet water quality standards in impaired segments in 13 priority areas. (cumulative starting in FY 07)	360	346	Not Met
GM-SP39	Restore, enhance, or protect a cumulative number of acres of important coastal and marine habitats. (cumulative starting in FY 07)	30,800	30,318.81	Not Met
GM-SP40.N11	Reduce releases of nutrients throughout the Mississippi River Basin to reduce the size of the hypoxic zone in the Gulf of Mexico, as measured by the 5-year running average of the size of the zone.	Long Term	13,080 sq km	Long-Term

FY14 ACS Code	FY 2014 National Water Program Guidance Measures	FY 2014 National Commitment	FY 2014 EOY Result	FY 2014 EOY Status
Subobjective 2.2.7 Restore and Protect the Long Island Sound				
LI-SP41	Percent of goal achieved in reducing trade-equalized (TE) point source nitrogen discharges to Long Island Sound from the 1999 baseline of 59,146 TE lbs/day.	85%	94%	Met
LI-SP42.N11	Reduce the size (square miles) of observed hypoxia (Dissolved Oxygen <3mg/l) in Long Island Sound.	Long Term	87	Long-Term
LI-SP43	Restore, protect or enhance acres of coastal habitat from the 2010 baseline of 2,975 acres.	410	410	Met
LI-SP44	Reopen miles of river and stream corridors to diadromous fish passage from the 2010 baseline of 177 river miles by removal of dams and barriers or by installation of bypass structures.	1.5	21.6	Met
Subobjective 2.2.8 Restore and Protect the Puget Sound				
PS-SP49.N11	Improve water quality and enable the lifting of harvest restrictions in acres of shellfish bed growing areas impacted by degraded or declining water quality. (cumulative starting in FY 06)	4,000	3,249	Not Met
PS-SP51	Restore acres of tidally- and seasonally-influenced estuarine wetlands. (cumulative starting in FY 06)	33,818	41,006	Met
Subobjective 2.2.9 Sustain and Restore the U.S.-Mexico Border Environmental Health				
MB-SP23	Loading of biochemical oxygen demand (BOD) removed (cumulative million pounds/year) from the U.S.-Mexico Border area since 2003.	137.3	131	Not Met
MB-SP24.N11	Number of additional homes provided safe drinking water in the U.S.-Mexico border area that lacked access to safe drinking water in 2003.	1,700	1,468	Not Met
MB-SP25.N11	Number of additional homes provided adequate wastewater sanitation in the U.S.-Mexico border area that lacked access to wastewater sanitation in 2003.	39,500	12,756	Not Met
Subobjective 2.2.10 Sustain and Restore the Pacific Island Territories				
PI-SP26	Percent of population in the U.S. Pacific Island Territories served by community water systems that has access to continuous drinking water meeting all applicable health-based drinking water standards, measured on a four quarter rolling average basis.	80%	98%	Met
Subobjective 2.2.11 Restore and Protect the South Florida Ecosystem				
SFL-SP45	Achieve 'no net loss' of stony coral cover (mean percent stony coral cover) in the Florida Keys National Marine Sanctuary (FKNMS) and in the coastal waters of Dade, Broward, and Palm Beach Counties, Florida, working with all stakeholders (federal, state, regional, tribal, and local).	Indicator	No Net Loss	Indicator
SFL-SP46	Annually maintain the overall health and functionality of sea grass beds in the FKNMS as measured by the long-term sea grass monitoring project that addresses composition and abundance, productivity, and nutrient availability.	Indicator	Maintained	Indicator
SFL-SP47a	At least seventy five percent of the monitored stations in the near shore and coastal waters of the Florida Keys National Marine Sanctuary will maintain Chlorophyll a (CHLA) levels at less than or equal to 0.35 ug l-1 and light clarity (Kd)) levels at less than or equal to 0.20 m-1.	75%	CHLA = 86% Kd = 87.2%	Met

FY14 ACS Code	FY 2014 National Water Program Guidance Measures	FY 2014 National Commitment	FY 2014 EOY Result	FY 2014 EOY Status
SFL-SP47b	At least seventy five percent of the monitored stations in the near shore and coastal waters of the Florida Keys National Marine Sanctuary will maintain dissolved inorganic nitrogen (DIN) levels at less than or equal to 0.75 uM and total phosphorus (TP) levels at less than or equal to .25 uM .	75%	DIN = 72.6% TP = 87.6%	Not Met
SFL-SP48	Improve the water quality of the Everglades ecosystem as measured by total phosphorus, including meeting the 10 parts per billion (ppb) total phosphorus criterion throughout the Everglades Protection Area marsh and the effluent limits for discharges from stormwater treatment areas.	Maintain P Baseline	Not Maintained	Not Met
SFL-1	Increase percentage of sewage treatment facilities and onsite sewage treatment and disposal systems receiving advanced wastewater treatment or best available technology as recorded by EDU. in Florida Keys two percent (1500 EDUs) annually.	Indicator	4.2% increase (3466 EDU increase)	Indicator
Subobjective 2.2.12 Restore and Protect the Columbia River Basin				
CR-SP53	Clean up acres of known contaminated sediments. (cumulative starting in FY 06)	86	82	Not Met
CR-SP54	Demonstrate a reduction in mean concentration of certain contaminants of concern found in water and fish tissue. (cumulative starting in FY 06)	Indicator	90%	Indicator

Appendix B: Performance Measurement Changes from FY 2013 to FY 2014[8]

ACS Code	Abbreviated Measure Description	Change in FY 2014
Water Safe to Drink		
SDW-01a	Percent CWSs with sanitary survey	Modified measure to reflect the Ground Water Rule requirements including an expansion of the universe
SDW-01b	Number Tribal CWSs with sanitary survey	Modified measure to reflect the Ground Water Rule requirements including expansion of universe.
Improve Water Quality on a Watershed Basis		
WQ-25b	Number urban water projects completed addressing water quality issues in the community	Deleted
Wetlands		
WT-SP21.N11	Net increase wetlands achieved (acres)	Deleted
Great Lakes		
GL-08	Percent of days of the beach season that monitored Great Lakes beaches are open and safe for swimming	Deleted
GL-15	Five-year average annual loadings of soluble reactive phosphorus draining from targeted watersheds	Deleted
Gulf of Mexico		
GM-435	Improve health—Gulf of Mexico ecosystem (index)	Deleted
Columbia River		
CR-SP-54	Percent reduction Columbia River contaminants in water & fish	Modified measure to an indicator due to the complexity of setting reduction targets.
CR-SP-54	Percent reduction Columbia River contaminants in water & fish	Modified measure to an indicator due to the complexity of setting reduction targets.

[8] Explanation of changes to performance measures from FY 2013 to FY 2014 can be found in Appendix C of the FY 2014 *National Water Program Guidance*, April 2012. http://water.epa.gov/resource_performance/planning/FY-2014-National-Water-Program-Guidance.cfm

Appendix C: Methodology for Measuring Ambitiousness of Regional Commitments

This methodological description supplements the description provided in the Overview chapter of the report. EPA used three methods to evaluate the relative ambitiousness of regional commitments for a set of 28 performance measures.[9] The method or methods utilized depended on whether the commitment is expressed as a percentage or as a numeric value.

For each commitment expressed as a percentage, EPA computed both:

The difference between FY 2014 regional commitments and FY 2014 national commitments.

The difference between FY 2014 regional commitments and FY 2013 regional results.

For each commitment expressed in numeric units, EPA computed:

FY 2014 regional commitments as a percentage of FY 2014 regional universes for all measures with numeric commitments and results.

Then, for each measure, within each of the analyses above, each region was assigned a rank based on its result relative to other regions (1 = most ambitious, 10 = least ambitious). For instance, for a particular numeric measure, the region committing to the greatest share of its universe would be ranked #1 for that measure, using analysis #3. On the other hand, for a particular percentage measure, regions would each receive two different ranks—one each for analysis #1 and analysis #2. Then, each region was given a weighted ambitiousness rank for each measure, as follows: for percentage measures, this measure-level-weighted rank was the sum of ranks for analysis #1 and analysis #2, divided by 2; for numeric measures, this measure-level-weighted rank was just the value of the rank for analysis #3. This weighting approach was taken in order to avoid giving undue influence to the percentage measures in the overall comparison. EPA repeated this approach with FY 2012 and 2013 data for the same set of measures.

Figure 1, below, shows the range and distribution of the FY 2014 measure-level-weighted ranks within each region. This type of graphic is a variation on a traditional statistical box plot or "box and whiskers" plot, and is intended to help understand the range and distribution of measure-level rankings within each region, as follows:

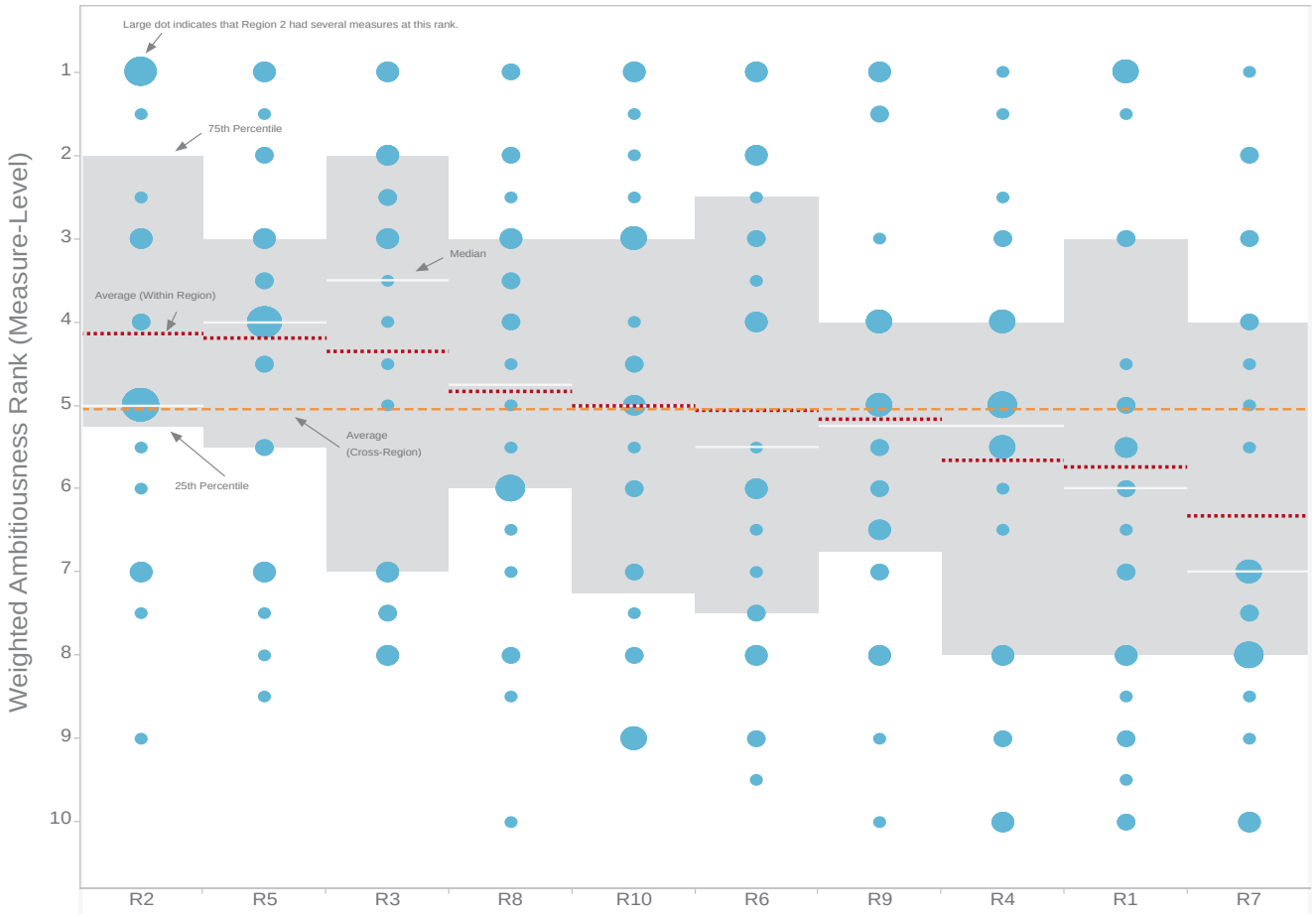
- **Blue dots.** Each blue dot indicates that the particular region in question received a measure-level-weighted ranking of that value for at least one measure. The size of each dot gives a rough indication of the number of measures within each region at that particular rank, ranging from one to nine measures. The larger the dot, the greater the number of measures.
- **Gray boxes.** The gray boxes in the chart represent where the middle 50% of each region's measures are ranked.[10] For example, by examining the gray box at the far left, we see that the middle 50% of Region 2's measures had a ranking between 2 and 6. On the other hand, at the far right, we see that Region 7's middle 50% is lower, ranging from 4 to 8.
- **Light gray lines.** The light gray lines represent the median rank within each region. Fifty percent of all measures rank at or above the median.

[9] The Office of Water focused only on those measures with eight or more regions setting commitments and reporting results, so that the meaning of different ranks would remain fairly constant across measures. This choice excluded measures for LAEs and place-based programs that are often reported by only one or two regions.

[10] This middle 50% of values is typically called the "interquartile range" in statistics.

- **Red dashed lines.** Each dashed red line in the chart represents, for each region, the average of all its measure-level-weighted ranks. This is referred to elsewhere in the report as the average weighted rank for each region. The regions in the chart are sorted by this measure, which is the basis for Figure 13 in the Overview chapter.
- **Orange dashed line.** The orange dashed line indicates the average of all weighted ranks, across all regions and measures.

Figure 1: Weighted Ambitiousness Ranks, By Region and Measures (FY 2014)



In addition to the calculations described above, regions were rank-ordered by this average weighted rank, with the region with the highest average weighted rank receiving a rank of 1, etc. Table 1 provides details on the number of measures and average weighted rank, for each region. These average weighted ranks are the basis for the overall ambitiousness ranks, displayed in the table and in Figures 14 and 15 in the Overview chapter.

Table 1: Number of Measures and Rankings By Region and Year

Region	2013			2014		
	# of Measures Ranked	Average Weighted Rank (Across Measures)	Overall Ambitiousness Rank	# of Measures Ranked	Average Weighted Rank (Across Measures)	Overall Ambitiousness Rank
R2	28	4.71	3	28	4.14	1
R5	28	3.71	1	28	4.20	2
R3	23	5.39	7	23	4.35	3
R8	26	4.67	2	26	4.83	4
R10	28	4.96	5	28	5.00	5
R6	27	5.43	8	27	5.06	6
R9	28	4.79	4	28	5.16	7
R4	28	5.71	9	28	5.66	8
R1	27	6.19	10	27	5.74	9
R7	26	5.29	6	26	6.33	10

For the same set of measures used to assess commitment ambitiousness, EPA also developed regional rankings for the percentage of commitments met for FY 2013 and FY 2014. Because this ambitiousness analysis focused only on a subset of the Office of Water's measures, the rankings for commitments met may be different than those presented elsewhere in this report (for instance, see Figure 9 in the Overview chapter of the report). This approach helps ensure appropriate comparability, for this analysis, between the ambitiousness ranks and commitments-met ranks. EPA compared the rankings for ambitiousness and commitments met to understand whether ambitiousness in setting of commitments appears to be correlated with the meeting of commitments. Figures 14 and 15 in the Overview chapter show comparisons of these ranks.

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