

National Water Program

Performance, Trends and Best Practices Report

Fiscal Year 2015





Table of Contents

Executive Summary	1
Introduction	2
Key Changes in FY 2015	4
Performance Results and Recent Trends	6
Regional Performance.....	19
Regional Ambitiousness.....	20
Tribal Measures	23
National Water Program FY 2015 Best Practices	24
New England Cyanobacteria Monitoring Program	25
Real-Time Water Quality Buoy Data Website	27
Reducing Land-Based Aquatic Trash Pollution	29
Chesapeake Bay Watershed States Data Sharing Program	31
Communicating Successful SRF Projects	33
Nonpoint Source Watershed Web Application	35
Monitoring Water Quality at Proctor Creek, An Urban Waters Success Story	37
Little Rock: Main Street Redevelopment Using Green Infrastructure	39
Promoting Energy Management for Water and Wastewater Utilities	40
Delaware Drinking Water Asset Management Grant Program.....	41
Ambassadors – A Framework for Promoting Long-term Productive Partnerships	42



National Water Program FY 2015 Performance Results

Executive Summary

This report presents performance results and trends for the National Water Program using FY 2015 end-of-year data reported by states, tribes, and EPA regional and headquarters offices.

The report includes three key elements:

- An overview of FY 2015 national performance results and trends for all National Water Program measures,
- Highlights of performance trends for a subset of key performance measures, and
- Descriptions of innovative approaches and best practices in program implementation.

Additional information on performance is available at the National Water Program's performance webpage.¹

Overview

The EPA's National Water Program (NWP) tracks 108 performance measures, 78 of which are commitment measures with specified annual targets. Commitment measures are further divided into two categories: 1) outcome measures, which are tied to environmental or public health impacts described in the EPA Strategic Plan, and 2) program activity measures, which track the outputs resulting from program implementation by EPA, states and tribes. For example, the number of permits issued or inspections undertaken are

output measures. The remaining 30 measures are program activity measures that are designated as indicator measures, which do not have annual performance commitments.

For FY 2015 the NWP improved its performance with regard to its outcome measures, meeting 87.5% compared to a historic (2010-2014) range of 63% to 76%, and also met 100% (10 out of 10) of its Tribal Commitments. However, looking at all commitment measures, 68% met their targets, 21% did not meet their targets, and for the remaining 12% of the measures, data were not available or were not reported at the time this report was published. These results represent a decrease in the number of measures that met their commitments, down from 82.9% in 2014.

However, due to the high proportion of measures with data not available, it is difficult to compare the performance of FY 2015 to FY 2014, which had data for all measures. In addition, previous to 2015, end of year results had been compared to the aggregate of regional commitments, and not the budget targets in the EPA Congressional Justification². In an effort to improve transparency and accountability, for FY 2015 and future fiscal years, end of year results in 2015 and in the future are being compared to the budget targets and not the aggregate of regional commitments.

¹ <https://www.epa.gov/water-planning-evaluation>

² <https://www.epa.gov/planandbudget/fy2017>



Introduction

This report describes the progress made in fiscal year 2015 (FY 2015) toward the objectives and subobjectives described in the FY 2015 National Water Program Guidance (NWP) and the EPA Strategic Plan.

EPA's Strategic Plan is divided into five goals. The National Water Program addresses Goal 2, "Protecting America's Waters." Each goal is divided into objectives and subobjectives (see Figure 1). EPA has developed 108 performance measures and indicators, which address all 15 subobjectives, to monitor its progress towards protection of America's waters. These measures can be further divided into two categories: outcome measures and program activity measures (PAMs).

- **Outcome measures:** Measures of environmental or public health changes (i.e., outcomes) that include long-range and, in most cases, annual commitments in the FY 2015 NWP. These are measures where the Agency believes new or significant changes in strategies or performance measurement is most critical to helping EPA better achieve and measure environmental and human health.
- **PAMs:** Core water PAMs (i.e., output measures) address activities implemented by EPA, states, and tribes that administer national programs (e.g., tracking the number of

permits issued or the number of inspections undertaken). They are the basis for monitoring progress in implementing programs to accomplish the environmental goals in the Agency's Strategic Plan. Most but not all PAMs have associated commitments; those without commitments are referred to as indicators.

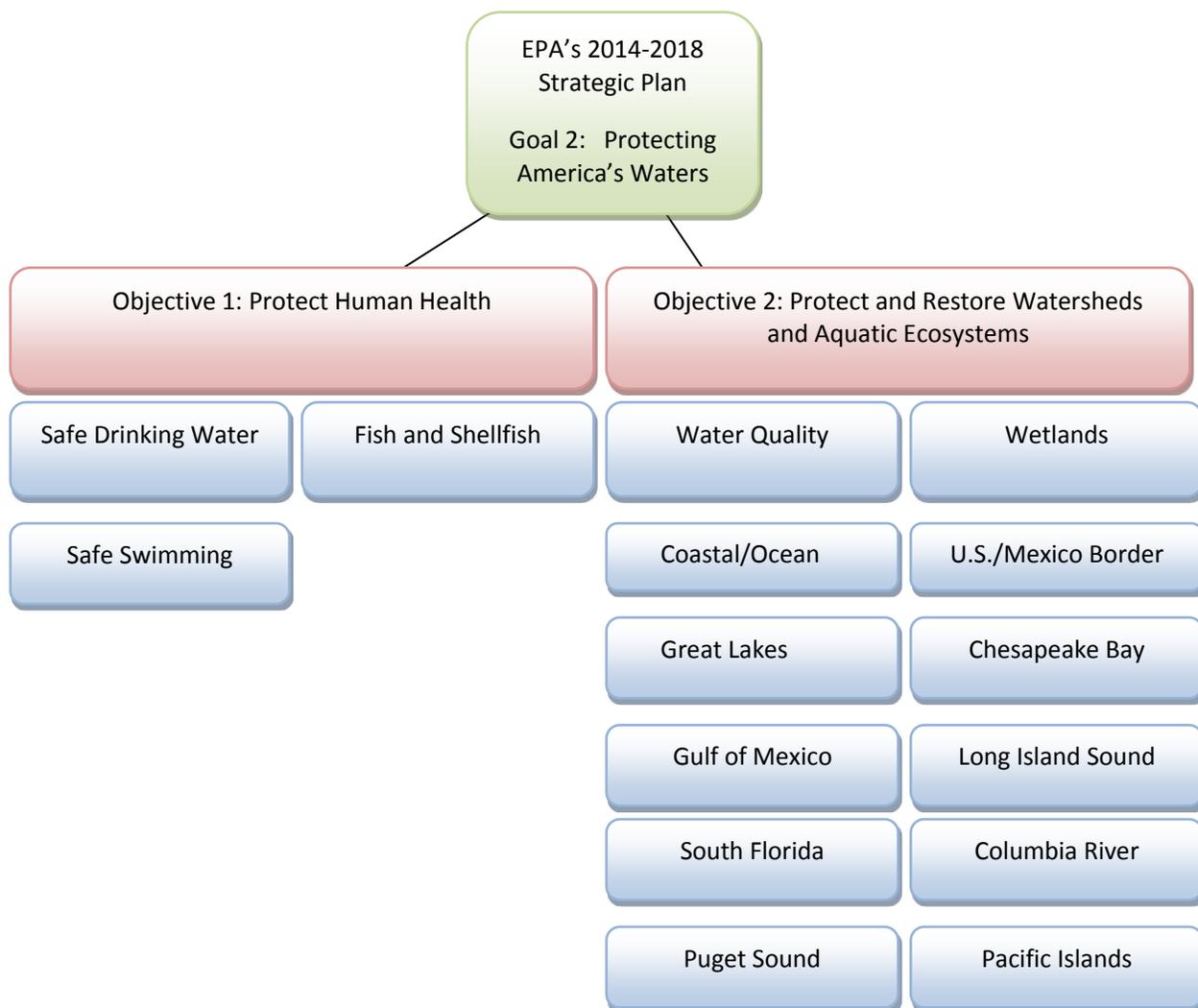
This report includes three key elements:

- An overview of FY 2015 national performance results and trends for all National Water Program measures,
- Highlights of performance trends for key commitment measures, and
- Descriptions of innovative approaches and best practices in program implementation.

Additional information on the performance highlights and challenges for each subobjective area is available online 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.



Figure 1. EPA Strategic Plan Goal 2: Protect America's Waters



Key Changes in FY 2015

The FY 2015 NWPG Addendum and this report include several changes in performance measures compared to the FY 2014 Best Practices and End-of-Year Performance Report. Some of the key changes to performance measures for certain subobjectives are noted below:

- Great Lakes Program: Six performance measures were added and two were modified in FY 2015 to be consistent with the new Great Lakes Restoration Initiative Action Plan.
- Chesapeake Bay: A new measure (CB-05.N14) has been added to track the attainment of water quality standards and to track progress toward Presidential Executive Order 13508 (Chesapeake Bay Protection and Restoration). This measure replaced two previous measures: percent of submerged aquatic vegetation (CB-SP33) and percent of oxygen dissolved (CB-SP34).
- The South Florida Ecosystem: The NWP deleted a measure that tracked the improvement of water quality in the Everglades ecosystem (SFL-SP48) and replaced it with a measure that tracks incremental progress of Everglades Stormwater Treatment Areas (SFL-02).
- Drinking Water Program: Two drinking water measures were added. SDW-20 was proposed to provide greater consistency in measuring progress of tribal community water systems within the full universe of community water systems. SDW-21 was added to track the number of utilities and government officials.
- Water Quality: A new Urban Waters measure (WQ-25b) was created to track the number of urban water projects completed. In addition, two new TMDL measures were added: WQ-27 tracks efforts to identify and restore impaired waters, and WQ-28 measures the activities to restore and protect impaired waters. These measures were created to replace one measure tracking the number of TMDLs established by states and approved by EPA (WQ-08a) and another that tracked the number of TMDLs established and approved by EPA on a schedule consistent with national policy (WQ-08b).

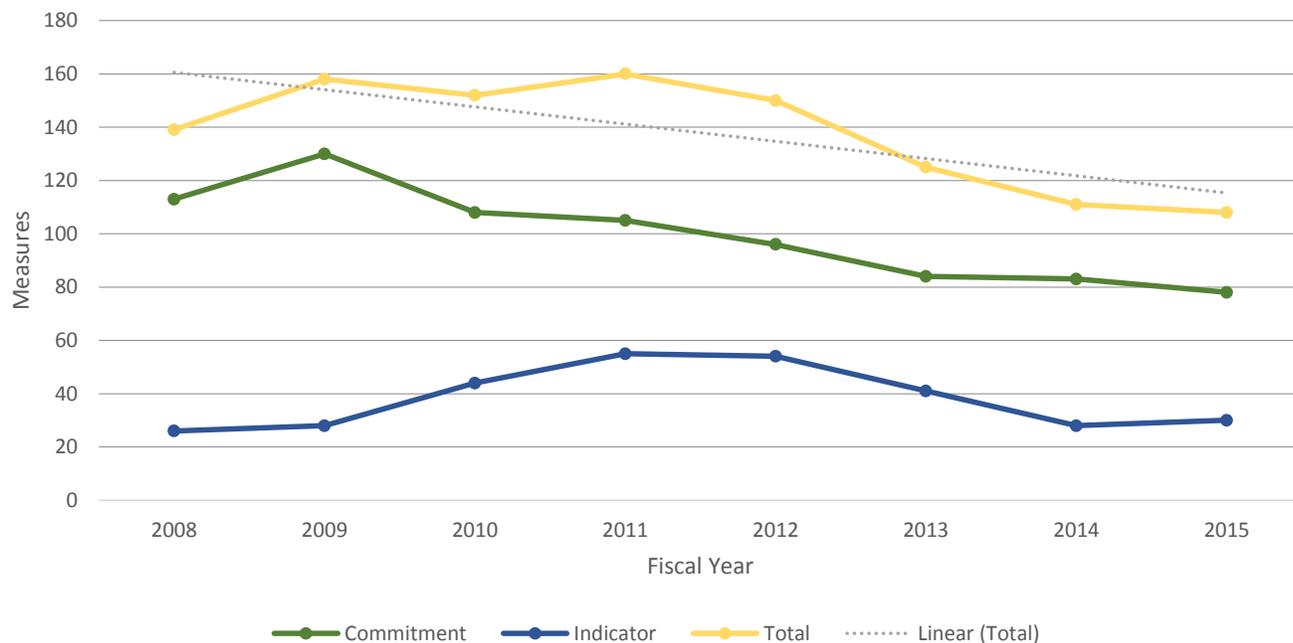
In addition, this report reflects a change in the methodology used when comparing end of year results against targets. Historically, end of year results were compared to the aggregate of regional commitments, and not the budget targets in the EPA Congressional Justification.³ In an effort to improve transparency and accountability, for FY 2015 and future fiscal years, end of year results will now be compared to the budget targets and not the aggregate of regional commitments.

Over the course of 8 years, the National Water Program has worked toward a smaller and more meaningful set of measures and has strived to align its focus areas with what is important to EPA headquarters, EPA regions, states, and tribes. The National Water Program deleted 16 measures, modified six measures, and added 13 measures in its *FY 2015 NWPG Addendum*.⁴ As a result, the total number of performance measures decreased from 111 in FY 2014 to 108 in FY 2015 (see Figure 2).

³ <https://www.epa.gov/planandbudget/fy2017>

⁴ <https://www.epa.gov/water-planning-evaluation/fy-2015-national-water-program-guidance-addendum>

Figure 2. Number of Performance Measures Over Time



Of the 108 measures, 55 are part of EPA’s Congressional Justification. These “budget” measures are a subset that helps to show EPA’s progress toward the strategic objectives of protecting human health and improving water quality on a watershed basis. More information about the 55 measures can be found in EPA’s FY2015 Annual Performance Report.⁵ The budget measures are identified with an asterisk in the heat maps shown in the “National Water Program Long-Term Performance Trends” section later in this document.

⁵ <https://www.epa.gov/planandbudget/fy-2015-annual-performance-report>

Performance Results and Recent Trends

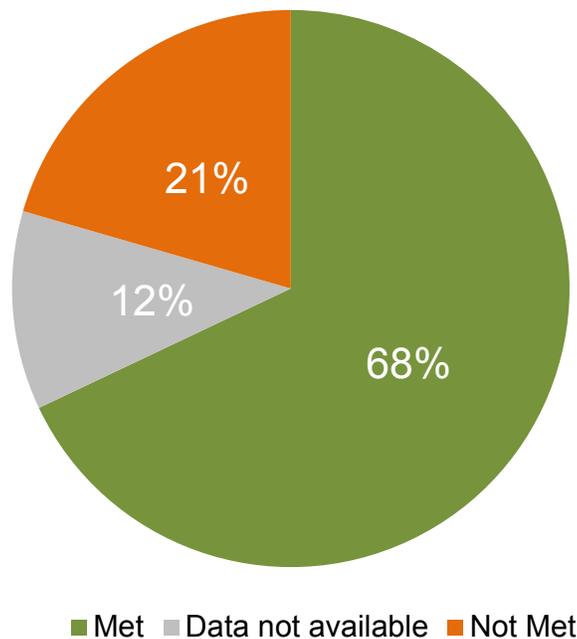
National Performance for Commitment Measures

The FY 2015 results represent a decrease in the number of commitment measures that met their targets compared to FY 2014. Figure 3 illustrates the distribution of results between met, not met, and data not available.

Two noteworthy highlights:

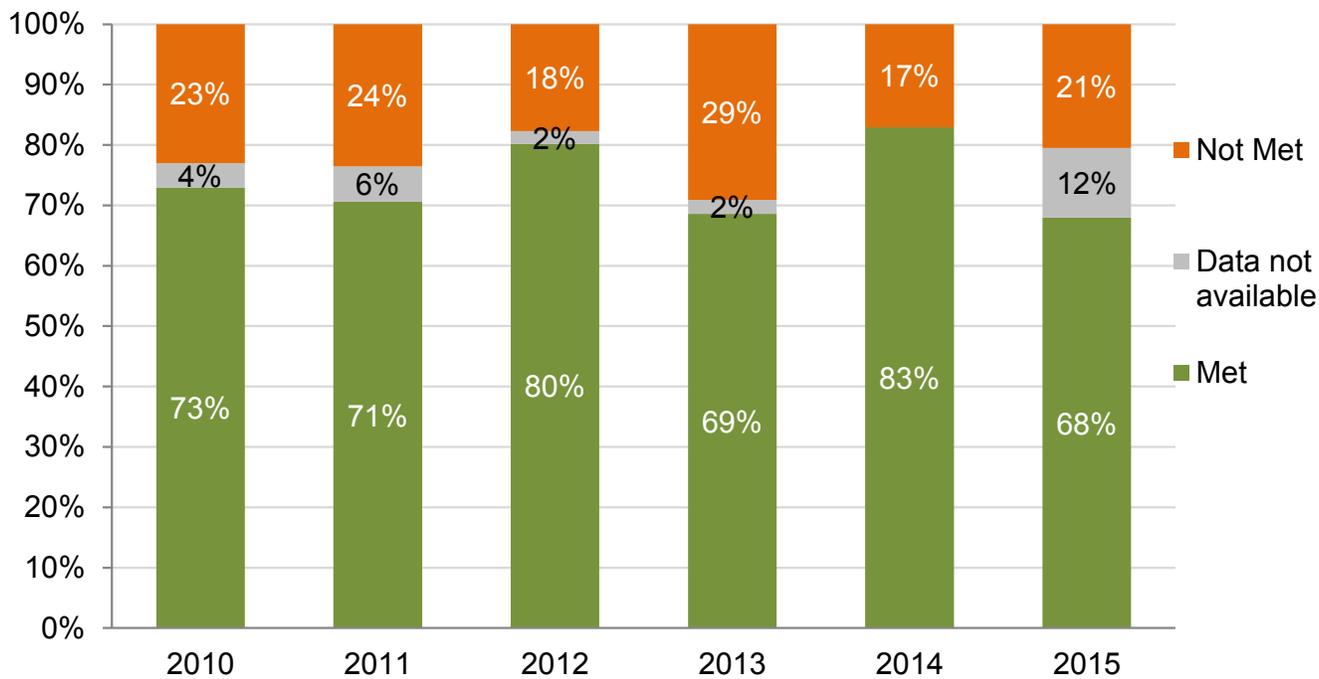
- In FY 2015, the NWP met 87.5% of the 16 measures aligned to the strategic plan. This is an increase from previous years; from 2010-2014, measures met ranged between 63%-76%.
- The NWP met 100% of its Tribal Commitments; all ten of its tribal performance measures were met.

Figure 3. National FY 2015 Performance for its 78 Commitment Measures



Trend data shows that between 2010 and 2015, the NWP has averaged about 74% measures met (range 69%-83%), 22% not met (range 17%-29%), and 4% with data not available or not reporting (range 0%-12%), see Figure 4.

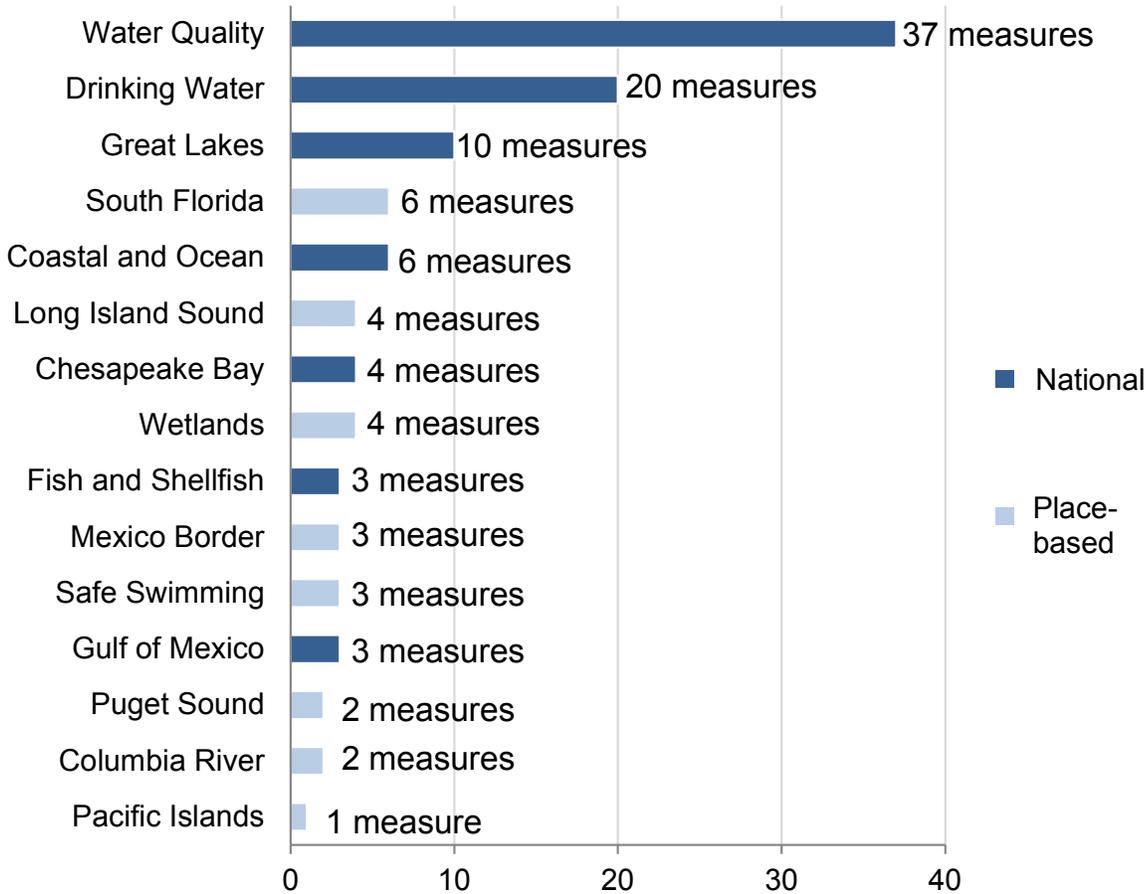
Figure 4. FY 2010-FY 2015 Commitment Measures Performance Trend (78 measures for FY 2015)



Performance by Subobjective

Figure 5 shows the number of measures for each of the 15 subobjectives.

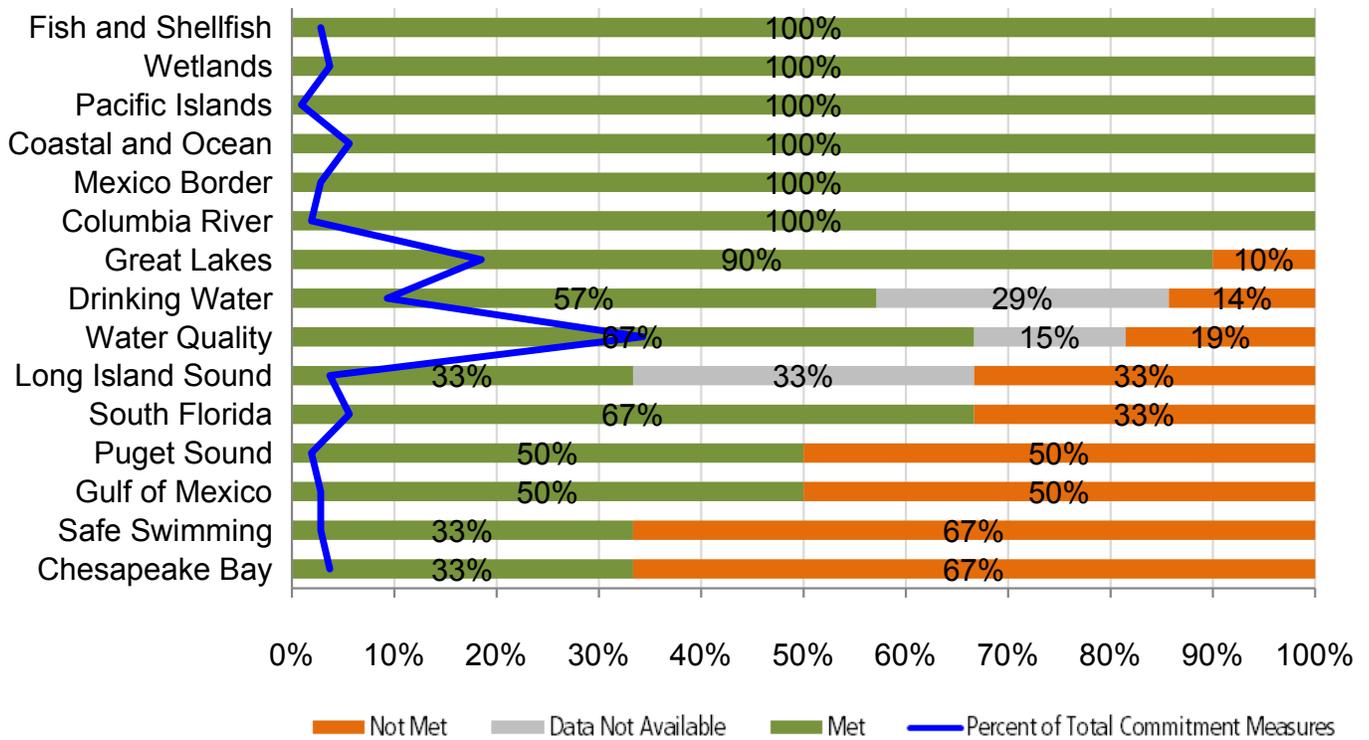
Figure 5. Number of Performance Measures Per Subobjective



As shown in Figure 5, Water Quality has the largest share of performance measures at 34%; Drinking Water is next with 19%; and the Great Lakes is third with 9%. The remaining 38% of the measures were spread among the other 12 subobjectives. See the blue line in Figure 6. Seventy-three measures, or 70% of all commitment measures, pertain to core water programs (e.g., water quality or safe swimming) and 35 measures (30%) track progress in large aquatic ecosystems (LAEs) or geographic programs (e.g., Gulf of Mexico or Chesapeake Bay).

In FY 2015, 71% of commitments were met for the LAEs or geographic programs. The number of national core program measures that met their targets decreased from 92% of commitments met in FY 2014 to 66% in FY 2015. Figure 6 shows the FY 2015 results by subobjective.

Figure 6. Commitment Measures Met and Not Met by Subobjective



Commitments were fully met for six of 15 subobjectives (Fish and Shellfish, Wetlands, Pacific Islands, Coastal and Ocean, Mexico Border and Columbia River), representing 19 measures.

National Water Program Long-Term Performance Trends

The next figures, referred to as heat maps, illustrate the performance history, for different subobjectives over an eight-year period (FY 2008 to FY 2015). The heat maps below indicate whether or not the measure was met in a given year and report the actual result for that measure. The colors on the map represent the commitment status; green for commitment met, orange for commitment not met, blue for performance indicators, gray for data not available or not reporting, and white for measures not in existence in a given year. Below each heat map is a discussion of key points for different subobjectives.

Figure 7: Heat Map for Objective 2.1 – Water Safe to Drink, Fish and Shellfish Safe to Eat, and Water Safe for Swimming

ACS Code	PERS Code	Abbreviated Measure Description	Results and Commitment Status						
			2009	2010	2011	2012	2013	2014	2015
Subobjective 2.1.1 Water Safe to Drink									
SDW-211*	aa	Percent population served by CWSs	92%	91%	93%	95%	92%	93%	91%
SDW-SP1.N11*	apm	Percent CWSs meeting safe standards	89%	90%	91%	91%	91%	91%	90%
SDW-SP2*	dw2	Percent “person months” with CWSs safe standards	97%	97%	97%	98%	97%	97%	96%
SDW-SP3.N11*	E	Percent population served by CWSs Indian country	81%	87%	81%	84%	77%	89%	88%
SDW-20	-	Percent “person months” with CWSs safe standards in Indian country							95%
SDW-SP4a	F	Percent CWSs and source water protection	35%	37%	40%	43%	48%	48%	
SDW-SP4b	-	Percent Population and source water protection	54%	58%	55%	56%	59%	58%	
SDW-18.N11	dw6	Number Indian & Alaska Native homes provided safe drinking water			97,311	104,266	108,881	113,656	
SDW-01a*	aph	Percent CWSs with sanitary survey	88%	87%	92%	89%	93%	87%	91%
SDW-01b	-	Number Tribal CWSs with sanitary survey	63	63	74	82	84	633	646
SDW-04*	apc	DWSRF fund utilization rate	92%	91%	90%	91%	91%	92%	94%
SDW-05	-	Number DWSRF projects initiated (cumulative)	4,576	5,236	6,237	6,781	7,474	8,001	8,625
SDW-07*	aps	Percent Class I, II, or III wells with mechanical integrity				85%	89%	89%	
SDW-08*	apt	Number High Priority Class V wells closed/permitted (cumulative)				25,225	26,027	26,560	27,383
SDW-11	-	Percent DWSRF projects awarded to small PWS			71%	71%	71%	70%	70%
SDW-15	-	Number/Percent small CWS w/health-based violations			1,337	1,230	1,263	1,159	822
SDW-17	-	Number/Percent schools/childcare meet safe standards			7,114	6,991	7,068	6,783	6,795
SDW-19a	-	Volume of CO2 sequestered through injection				40,380	47,781	50,753	
SDW-19b	-	Number of permit decisions that result in CO2 sequestered through injection				0	0	10	
SDW-21	-	Number of utilities and officials receiving training and technical assistance							
Subobjective 2.1.2 Fish and Shellfish Safe to Eat									
FS-SP6.N11*	fs1	Percent Women and mercury blood levels				2.3%	2.3%	2.3%	1.8%
FS-1a	-	Percent River miles fish consumption advisory	39%		36%		36%	NA	36%
FS-1b	-	Percent Lake acres fish consumption advisory	43%		42%		42%	NA	42%
Subobjective 2.1.3 Water Safe for Swimming									
SS-SP9.N11	-	Percent beach days safe for swimming	95%	95%	96%	95%	96%	95%	95%
SS-1	-	Number enforceable long-term CSO control plan with specific dates and milestones in place (cumulative)	693	724	734	748	758	775	785
SS-2	-	Percent significant public beaches monitored	98%	99%	100%	100%	98%	98%	99%

Noteworthy Results for Objective 2.1

Protect Public Health

EPA met 80% of its commitments for all drinking water measures with reported results in FY 2015. Among the highlights are the following:

- 94% of the cumulative amount of Drinking Water State Revolving Funds available had loan agreements in place (commitment 89%). EPA has met its commitment for this measure eight years in a row.
- The cumulative number of Drinking Water State Revolving Fund projects that have initiated operations increased to 8,625 (previous commitment was 8,251).
- 90% of community water systems met all applicable health-based standards through approaches that include effective treatment and source water protection.
- 95.9 % (versus a commitment of 95%) of "Person-Months" (i.e. all persons served by community water systems times 12 months), during which community water systems provided drinking water, met all applicable health-based drinking water standards.

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 NWP. Some key highlights and challenges include:

- Approximately 88% of the population in Indian country was served by community water systems with drinking water that met all applicable health-based drinking water standards (commitment 77%).
- EPA, in coordination with other federal agencies, provided over 81,081 American Indian and Alaska Native homes with access to basic sanitation.

U.S. Environmental Protection Agency Office of Water

Figure 8. Heat Map for Objective 2.2 – Improve Water Quality on a Watershed Basis, Improve Coastal and Ocean Waters, and Increase Wetlands

ACS Code	PERS Code	Abbreviated Measure Description	Results and Commitment Status						
			2009	2010	2011	2012	2013	2014	2015
WQ-SP11*	wq2	Number causes of waterbody impairment removed (cumulative)	7,530	8,446	9,527	11,134	11,754	12,288	12,640
WQ-SP12.N11*	wq3	Number impaired watersheds improved water quality (cumulative)	104	168	271	332	376	411	450
WQ-SP13.N11	wq4	Maintain and Improve nation's stream conditions				Not Maintained			Maintained
WQ-SP14a.N11	wq5	Number of monitoring stations in tribal waters with improved water quality (cumulative)				15	20	21	28
WQ-SP14b.N11	-	Identify number monitoring stations in tribal waters with no degradation in water quality (cumulative)				7	4	6	7
WQ-24.N11	wq7	Number Indian & Alaska Native homes with access to sanitation			56,875	63,087	69,783	75,140	81,080
WQ-01a	-	Number of numeric nutrient water quality standards approved or promulgated by EPA (cumulative)			45	42	44	44	48
WQ-26	-	Number states/territories implementing nutrient reduction strategies (cumulative)					23	24	25
WQ-02	-	Number Tribes with approved water quality standards (cumulative)	35	35	38	39	40	41	43
WQ-03a*	bpw	Number/Percent states/territories with updated water quality criteria	38	38	39	39	32	29	36
WQ-03b	-	Number/Percent Tribes with updated water quality criteria	17	18	13	14	9	9	7
WQ-04a	bpp	Percent states/territorial water quality standards revisions approved	93%	91%	92%	89%	82%	90%	85%
WQ-06a	-	Number Tribes implementing monitoring strategies (cumulative)	134	161	196	214	224	228	248
WQ-06b	-	Number Tribes providing water quality data (cumulative)	86	106	171	184	193	199	221
WQ-09a*	bpq	Number pounds nitrogen reduced from non-point sources (millions)	9.1	9.7	12.8	10.5	10.4	11.3	
WQ-09b*	bpf	Number pounds phosphorus reduced from non-pount sources (millions)	3.5	2.6	4.8	4.4	3.5	2.7	
WQ-09c*	bph	Number tons sediment reduction reduced from non-point sources (millions)	2.3	2.1	2.0	1.0	1.2	1.7	
WQ-10	bpj	Number NPS-impaired waterbodies restored (cumulative)	147	215	358	433	504	560	604
WQ-11	-	Number/Percent NPDES follow-up actions completed (cumulative)	228	253	293	344	364	404	449
WQ-12a	-	Number/Percent Nontribal NPDES permits current	90%	89%	89%	90%	90%	90%	87%
WQ-12b	-	Number/Percent Tribal permits current	85%	88%	87%	86%	83%	85%	85%
WQ-13a	-	Number facilities covered by MS-4 permit	6,541	6,919	6,952	6,888	7,774	7,851	
WQ-13b	-	Number facilities covered by industrial storm water permit	81,660	88,788	84,718	87,060	94,447	93,042	
WQ-13c	-	Number facilities covered by construction storm water permit	200,732	186,874	168,744	166,031	158,525	164,494	
WQ-13d	-	Number facilities covered by CAFO permit	7,900	7,882	7,994	7,587	6,684	6,946	
WQ-14a	-	Number/Percent POTWs SIUs control mechanisms in place	22,270	17,948	20,977	20,733	20,739	20,748	20,471
WQ-14b	-	Number/Percent POTWs CIUs control mechanisms in place	1,338	1,241	1,229	1,667	1,629	1,642	1,542
WQ-17*	bpb	CWSRF Fund utilization rate	98%	100%	98%	98%	97%	98%	98%

Figure 8. Heat Map for Objective 2.2 – Improve Water Quality on a Watershed Basis, Improve Coastal and Ocean Waters, and Increase Wetlands (cont'd)

ACS Code	PERS Code	Abbreviated Measure Description	Results and Commitment Status						
			2009	2010	2011	2012	2013	2014	2015
WQ-19a*	bpl	Number high priority state NPDES permits	1,309	1,008	943	850	404	516	506
WQ-19b*	bpv	Number high priority state & EPA NPDES permits	1,118	1,063	1,005	925	449	556	547
WQ-22a	-	Number regions completed Healthy Watershed Initiative strategy			4	7	7	9	9
WQ-23*	Opb	Percent Alaska homes access to drinking water & sanitation			92%	91%	91%	94%	95%
WQ-25a*	uw1	Number urban water projects initiated addressing water quality issues in the community				46	9	65	28
WQ-25b*	uw2	Number of urban water projects completed addressing water quality issues in the community							49
WQ-27*	bpx	Percent priority areas retored to achieve water quality standards							
WQ-28	-	Percent state-wide activities leading to completed TMDLs, restoration of impaired waters, or protection of unimpaired waters.							
Subobjective 2.2.2 Improve Coastal and Ocean Waters									
CO-222.N11	P2	Improve coastal aquatic system health (index)	2.4	2.8	2.8	3.0	3.0	2.5	2.5
CO-SP20.N11*	co5	Percent ocean dumping sites acceptable conditions	99%	90%	93%	97%	96%	95%	95%
CO-02	-	Number coastline miles protected vessel sewage (cumulative)	33,966,989	53,634	54,494	58,929	63,773	64,535	64,431
CO-04	-	Rate of return federal investment for NEP (million dollars)	514	274	662	323	822	578	491
CO-06	-	Number active dredged material sites monitored annually	38	33	33	35	40	41	33
CO-432.N11*	202	Number additional NEP acres habitat protected or restored	125,437	89,985	62,213	114,579	127,594	93,557	111,584
Subobjective 2.2.3 Increase Wetlands									
WT-SP22*	4E	No net loss of wetlands	No Net Loss	No Net Loss	No Net Loss	No Net Loss	No Net Loss	No Net Loss	No Net Loss
WT-01*	4G	Number wetland acres restored and enhanced (cumulative)	103,507	130,000	154,000	180,000	207,000	221,000	275,555
WT-02a	-	Number states/tribes increased wetland program capacity in one or more core elements	22	47	54	44	37	36	30
WT-03	-	Percent CWA 404 permits with greater environ. protection			88%	85%	78%	77%	85%

Noteworthy Results for Objective 2.2

Restore and Improve Fresh Waters, Coastal and Ocean Waters, and Wetlands

EPA met 67% of its commitments under the Water Quality objective in FY 2015 and either did not meet or data was unavailable for 19% and 15% of the measures, respectively. The percentage of commitments met decreased in FY 2015 over the FY 2014 results (93%). Performance highlights include:

- For the eighth consecutive year, EPA and states achieved the national commitment of having current National Pollutant Discharge Elimination System permits in place for non-tribal facilities (FY 2015 commitment = 85%, result = 87%).
- EPA and authorized states were also successful in meeting the national commitment of issuing high-priority permits, with 547 permits issued (commitment 526).
- EPA and states made significant gains in documenting the full or partial restoration of waterbodies impaired primarily by nonpoint sources. Nationally, EPA exceeded its commitment (600), reaching a cumulative 604 waterbodies documented as partially or fully restored.
- The Clean Water SRF utilization rate reached 98% in 2015.
- The 28 National Estuary Programs and their partners protected or restored 111,584 acres of habitat within the NEP study areas in 2015—11,584 acres above the goal of 100,000. This is an improvement to last year's performance, as they missed the goal of 100,000 by almost 6,000 acres.
- 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 275,555 acres have been restored and enhanced since 2002.
- New measures are under development to track restoration of previously impaired surface waterbodies. EPA and the states are encountering significant hurdles to tracking progress of waterbody restoration using existing measures. Current measures compare the number of restored waterbodies to the number of waters that states listed as impaired in section 303(d) reports prepared in 2002. As a result, these measures do not capture progress achieved for more recently-listed waters.
- For the second time in seven years, states and territories did not meet the national target of meeting water quality standards for formerly impaired waterbodies (FY 2015 target = 4,016, result = 3,944).

For the first time in seven years, EPA failed to meet its national cumulative target of removing specific causes of waterbody impairments identified by states in 2002 (FY 2015 target = 12,788, result 12,640).

Figure 9. Heat Map for Objective 2.2 – Geographic Programs

ACS Code	PERS Code	Abbreviated Measure Description	Results and Commitment Status						
			2009	2010	2011	2012	2013	2014	2015
Subobjective 2.2.4 Improve the Health of the Great Lakes									
GL-SP31*	626	Number Areas of Concern (AOCs) with all management actions implemented (cumulative)	1	1	2	2	3	7	7
GL-05*	625	Number Beneficial Use Impairments (BUIs) removed (cumulative)	12	12	26	33	41	52	60
GL-07*	629	Response plans established, response exercises, and/or response actions (cumulative)			10	23	30	38	21
GL-09*	628	Number acres managed for populations of invasive species controlled to a target level. (cumulative)			13,045	31,474	35,924	84,500	101,392
GL-17*	638	Projected percent phosphorus reductions from GLRI-funded projects in targeted watersheds							160,117
GL-18*	639	Projected volume of untreated urban runoff captured or treated by GLRI-funded projects. (Cumulative)							37
GL-19*	640	Number of miles of Great Lakes tributaries reopened by GLRI-funded projects (cumulative)							3,856
GL-20*	641	Number of miles of GL shoreline and riparian corridors protected, restored, and enhanced by GLRI-funded projects. (Cumulative)							313
GL-21*	642	Number of acres of GL coastal wetlands protected, restored, and enhanced by GLRI-funded projects. (Cumulative)							7,034
GL-22*	643	Number of acres of other habitats in the Great Lakes basin protected, restored, and enhanced by GLRI-funded projects. (Cumulative)							146,816
Subobjective 2.2.5 Improve the Health of the Chesapeake Bay									
CB-05.N14	-	Percent attainment of water quality standards in Chesapeake Bay and tidal tributaries.							29%
CB-SP35*	cb6	Percent Bay nitrogen reduction practices implemented				21%	25%	27%	29%
CB-SP36*	cb7	Percent Bay phosphorus reduction practices implemented	65%	67%		19%	27%	43%	71%
CB-SP37*	cb8	Percent Bay sediment reduction practices implemented	64%	69%		30%	32%	37%	25%
Subobjective 2.2.6 Restore and Protect the Gulf of Mexico									
GM-SP38*	xg1	Number of impaired Gulf water segments and habitat restored (cumulative)	131	170	286	316		346	411
GM-SP39*	xg2	Number of Gulf Acres restored or enhanced (cumulative)	29,344	29,552	30,052	30,796	30,306	30,319	30,574
GM-SP40.N11	22c	Reduce hypoxic zone Gulf of Mexico (sq kilometers)	8,000	20,000	17,520	7,483	15,120	13,080	10,419
Subobjective 2.2.7 Restore and Protect the Long Island Sound									
LI-SP41*	li5	Percent reduction Long Island Sound nitrogen		70%	69%	83%	88%	94%	
LI-SP42.N11	li2	Reduce Long Island Sound hypoxic zone (sq miles)	169	101	130	289	80	87	38
LI-SP43*	li8	Number acres Long Island Sound coastal habitat restored	1,614	7	9	537	336	410	1,678
LI-SP44*	li9	Number miles river and streams for fish passage reopened	147	1	1	72	56	22	0

Figure 9. Heat Map for Objective 2.2 – Geographic Programs (cont'd)

ACS Code	PERS Code	Abbreviated Measure Description	Legend						
			2009	2010	2011	2012	2013	2014	2015
			■ = Met	■ = Indicator/Long-Term (No Commitment)					
			■ = Not Met	■ = Measure Did Not Exist					
			■ = Data Not Available						
Subobjective 2.2.8 Restore and Protect the Puget Sound									
PS-SP49.N11*	ps1	Number acres of Puget Sound shellfish areas improved (cumulative)	1,730	4,453	1,525	2,489	3,203	3,249	4,888
PS-SP51*	ps3	Number acres of Puget Sound estuarine wetlands restored (cumulative)	5,751	10,062	14,629	23,818	30,128	41,006	43,002
Subobjective 2.2.9 Sustain and Restore the U.S.-Mexico Border Environmental Health									
MB-SP23*	4pg	Number million pounds BOD loadings removed Mexico Border (cumulative)		65	109	119.0	128.3	131.0	142.9
MB-SP24.N11*	xb2	Number additional Mexico Border homes access to safe drinking water	1,584	21,650	2,604	5,185	3,400	1,468	878
MB-SP25.N11*	xb3	Number additional Mexico Border homes access to adequate sanitation	43,594	75,175	259,371	31,092	25,695	12,756	44,070
Subobjective 2.2.10 Sustain and Restore the Pacific Island Territories									
PI-SP26*	pi1	Percent Pacific Islands population served by CWS	80%	82%	87%	80%	81%	98%	98%
Subobjective 2.2.11 Restore and Protect the South Florida Ecosystem									
SFL-SP45	-	Achieve no net loss in South Florida stony coral	Loss	No Net Loss	Loss	No Net Loss	7%	No Net Loss	7%
SFL-SP46	-	Maintain health of South Florida sea grass	Not maintained	maintained	Maintained	Not Maintained	maintained	maintained	Maintained
SFL-SP47a*	sf3	Percent South Florida monitoring stations maintain coastal water quality for chlorophyll a & light clarity			85%	70.9%; 72.5%	84.5%; 80.4%	86%; 8.7%	82.0%; 77.3%
SFL-SP47b*	sf4	Percent South Florida monitoring stations maintain coastal water quality for nitrogen and phosphorous			74%	81%; 89.5%	60%; 82.3%	73%; 88%	61.7%; 78.3%
SFL-1	-	Increase percent sewage treatment systems receiving advanced wastewater treatment in Florida Keys			24%	13%	5%	4%	7%
SFL-2*	sf6	The number (STAs) with (TP) outflow less than or the same as the five-year annual average TP outflow							4
Subobjective 2.2.12 Restore and Protect the Columbia River Basin									
CR-SP53	-	Number acres Columbia River contaminated sediments cleaned up (cumulative)	10	20	63	79	79	82	89
CR-SP54	-	Percent reduction Columbia River contaminants in water & fish (cumulative)	0%	0%	92%		99%	90%	

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 summaries are highlights and challenges for each LAE or place-based program with performance measures in the FY 2015 *NWPG*:

U.S.–Mexico Border

- Infrastructure construction project completions through FY 2015 resulted in the removal of 142.9 million pounds of biochemical oxygen demand loadings annually from the U.S.–Mexico border area, more than its commitment of 141.1 million pounds.
- EPA provided access to safe drinking water for 878 additional homes along the U.S.–Mexico border. This was above the annual goal of 600 additional homes.
- EPA provided adequate wastewater sanitation to 44,070 additional homes over the past year, which was above the FY 2015 goal of 40,750 additional homes. The program continues to identify opportunities for expediting construction schedules whenever feasible, resulting in the FY 2015 completion of a project originally scheduled to be completed in FY 2016. In addition, preliminary connection estimates on a large project were exceeded and additional homes in need of services were connected.

U.S. Pacific Island Waters

- 98% 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

- During the first five years of the Great Lakes Restoration Initiative, EPA and its partners removed 42 Beneficial Use Impairments (benchmarks of environmental harm) in 17 Areas of Concern — quadrupling the number of Beneficial Use Impairments removed in the preceding 22 years.
- Through FY 2015, EPA and its partners also protected, restored, and enhanced almost 150,000 acres of wetland, coastal, upland, and island habitat across the Great Lakes Basin, exceeding the FY 2015 commitment of 134,000 acres for these measures.
- The Great Lakes program continues to work to address the challenge of reducing phosphorus loadings that contribute to harmful algal blooms.

Chesapeake Bay

- 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. All jurisdictions are on-track to meet the short-term TMDL goal to have practices in place by 2017 that will result in 60% of phosphorus reductions; four jurisdictions are on target for nitrogen and four for sediment reductions.
- EPA is working with jurisdictions to accelerate the pace of nitrogen and sediment reductions and is taking actions where necessary, such as objecting to permits, increasing enforcement and directing grants to priority agriculture and stormwater sectors.

Gulf of Mexico

- The Gulf of Mexico Program continues to strive toward its cumulative target to restore, protect, or enhance 30,800 acres of coastal and marine habitats.
- Previously funded projects resulted in 255 acres restored for a cumulative 30,574 acres. The program also restored 411 impaired segments in FY 2015.
- EPA continues to work with states and partners in the region to identify restoration projects as the gulf recovers from the BP oil spill.

Long Island Sound

- The Long Island Sound Program restored or protected 1,678 acres of coastal habitat, including tidal wetlands, dunes, riparian buffers, and freshwater wetlands as of FY 2015.
- In FY 2015 there was a 40% decrease in the hypoxic zone from the pre-TMDL baseline and a reduction of 40 million pounds of nitrogen from point sources.

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 2015.
- Water quality of the near shore and coastal waters of the FKNMS showed some improvement in 2015, 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.
- The goal to upgrade all wastewater facilities is 80% complete.
- The South Florida program is challenged to continue long-term (twenty year) monitoring, the Special Studies research program, and water quality planning grants.

Puget Sound Basin

- The effects of climate change negatively impact salmon habitat and shellfish production in the Puget Sound area. Nevertheless, as of the end of FY 2015, 43,002 acres of tidally and seasonally influenced estuarine wetlands have been restored in the Puget Sound Basin since FY 2006 and water quality has been improved in these areas. In addition, 143,000 acres of shellfish beds were protected for safe harvesting in FY 2015.

Columbia River Basin

- The Columbia River Program has cleaned up a total of 89 acres of contaminated sediment in the Lower Columbia River as of the end of FY 2015. These cleanups provide a significant contribution to reducing toxins 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.

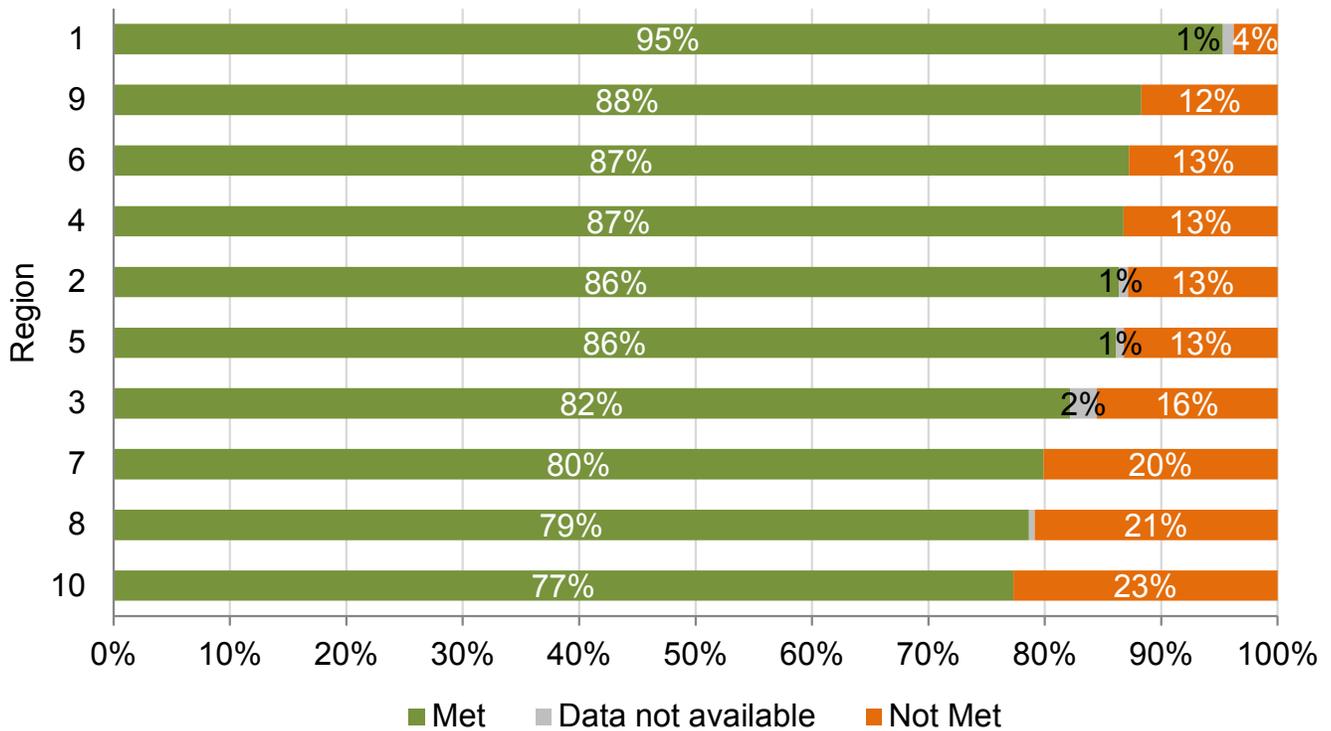
Regional Performance

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, 68% of performance commitments set by the EPA regional offices for activities in their geographic areas were met in 2015, while an average of 8% of commitments were missed, and 24% of the data was unavailable. All regions (except regions 7, 5, and 1) saw a decrease in commitments met in FY 2015 and an increase in the amount of data unavailable.

Regional performance has varied significantly over the last seven years (see Figure 10 below); 77% - 95% of performance commitments set by the EPA regional offices were met between FY 2010 and FY 2015. This variation results from a number of challenges facing each region in meeting its commitments or providing data on the measures. Below are four examples of challenges that can keep regions from meeting their commitments:

- Grant cycles do not align with the NWP reporting cycle and therefore appear as data not available at the time of reporting.
- Project plans are delayed until after the NWP reporting period has ended; regions, therefore, do not meet their commitment until the following fiscal year, consequently, reporting results in an unintended fiscal year.
- Progress for some measures is not linear; meaning, progress is dependent on external factors such as weather and seasons, and therefore it is difficult to forecast commitments.
- Results for some measures are only available once a year making it difficult to monitor progress.

Figure 10. FY 2010-FY 2015 Average Percent Commitments Met/Not Met by Region



Regional Ambitiousness

For many years, the NWP has published the percentage of commitments met and not met nationally and by regions in its End-of-Year reports. 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 NWP 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.⁶ 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 2015 regional commitments and FY 2015 national commitments, and
- The difference between FY 2015 regional commitments and FY 2014 regional end-of-year results.

For each commitment expressed in numeric units, EPA computed:

- FY 2015 regional commitments as a percentage of the 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.

EPA 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 2015 (Figure 11).⁷ As Figure 11 illustrates; two of the three regions with the highest ranking for ambitiousness (Regions 3 and 8) ranked lower than average in the percentage of annual commitments met in FY 2015. 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 first in commitments met. Figure 12 shows the change in a Region's ambitiousness and commitments met rankings from FY 2014 to FY 2015.

⁶ The focus is 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/Geographic programs and place-based programs, which are often reported by only one or two regions.

⁷ Because this ambitiousness analysis focused only on a subset of measures, the rankings for commitments met may be different than those presented earlier in this document. This approach helps ensure appropriate comparability, in this analysis, between the ambitiousness ranks and commitments-met ranks.

Figure 11. FY 2015 Regional Ranks of Ambitiousness vs. Commitments Met

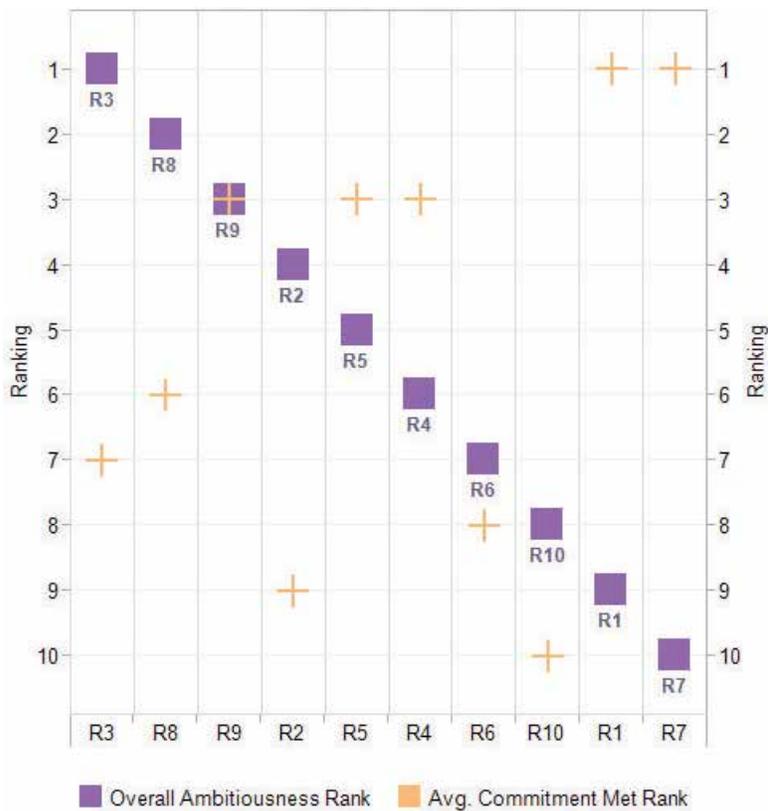
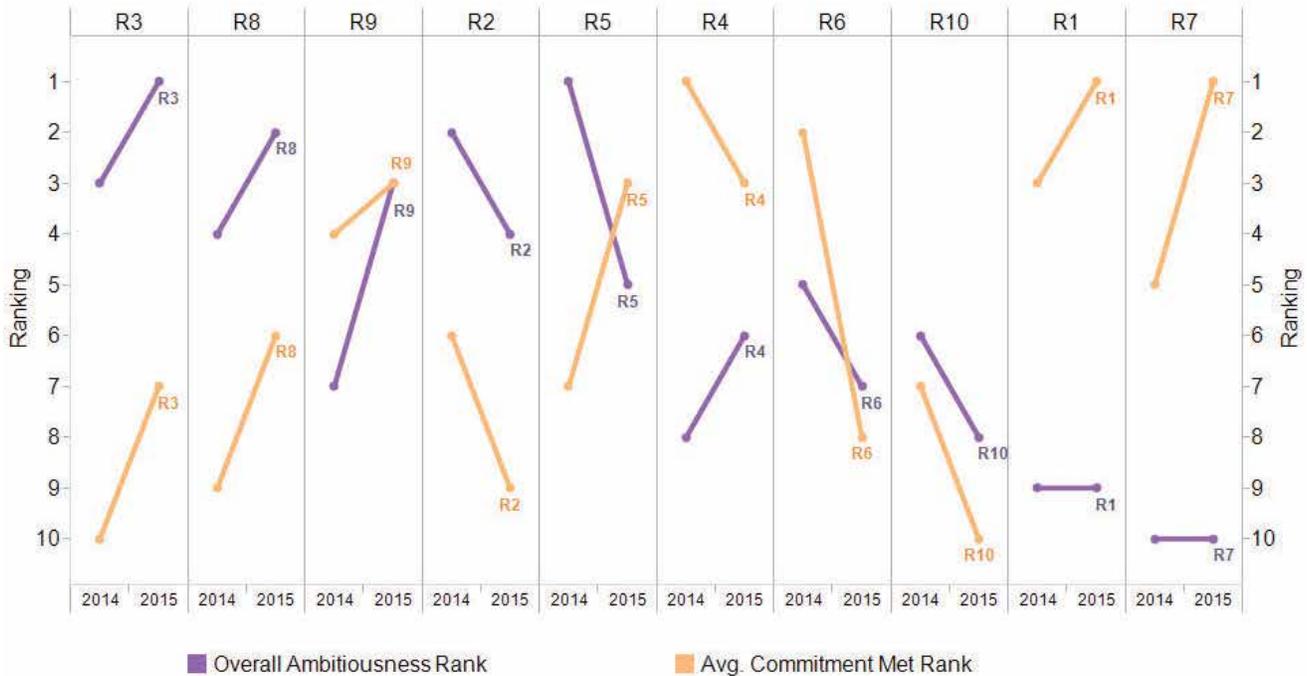


Figure 12. Change in Regional Rank in Ambitiousness and Commitments Met FY 2014-FY 2015

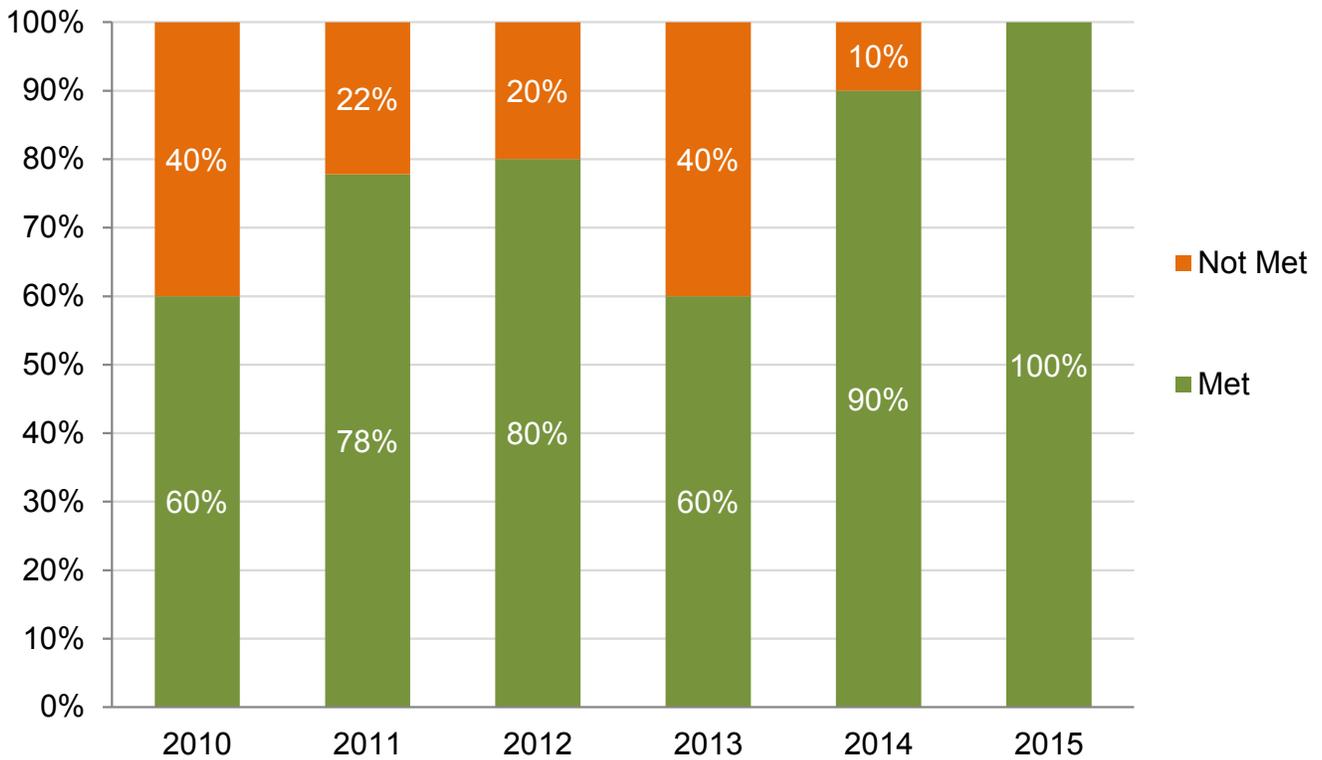


The analysis suggests a relationship between the level of ambitiousness in setting commitments and the percentages of commitments met at the end of the year. Note, however, that there are several key caveats in interpreting the results of this analysis. First, it is based on a relatively small set of 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. Second, 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, etc.). 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 Measures

Ten of the NWP measures focus on drinking water and water quality in American Indian lands. There was a significant increase in the number of commitments met for Tribes in FY 2015 over the results in FY 2014 (Figure 13). In FY 2015, the NWP met 100% its Tribal commitments. For example, 88.4% (versus a commitment of 87%) of the population in Indian Country served by community water systems receive drinking water that meets all applicable health-based drinking water standards.

Figure 13. FY 2015 Percent of Tribal Commitments Met or Not Met



National Water Program FY 2015 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 eleven 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 2015 Performance, Trends, and Best Practices 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.





New England Cyanobacteria Monitoring Program

Brief Description:

Cyanobacteria and their associated toxins are a risk to human and ecological health. A recent example of the potential impacts was the shutdown of the Toledo drinking water system due to the presence of cyanotoxins from a bloom in Lake Erie. Increased nutrient loads to aquatic systems are setting the stage for recurring algal blooms, resulting in the loss of recreation and the increased expenses for public water supply treatment investments. There is a critical need for real-time advanced monitoring and forecasting of cyanobacteria, in order to address and remediate blooms before they become a human health risk or the environment.

Over the past two years, EPA Region 1 has convened a region-wide (including NY) cyanobacteria monitoring and “Bloom Watch” workgroup of stakeholders to establish a consistent regional approach to monitoring cyanobacteria. Workshops included taxonomic identification, methods, and instrument training and calibrations. Monitoring occurred in six states involving over one hundred water bodies. The 2015 monitoring season built on lessons learned, expanded coverage, added more stakeholders, refined techniques, and produced a more reliable and credible monitoring program.

The current program is flexible enough to be easily incorporated into existing monitoring programs, yet rigorous enough to ensure uniformity in the monitoring methods and protocols so that data can be aggregated across the region and utilized by all. The three principal components are: 1) in-lake monitoring, 2) shore-side monitoring, and 3) a qualitative “Bloom Watch” observation component. The site locations are fixed, and additional sites can be added at the discretion of the sampling entity. Samples may be easily analyzed on site or frozen to be analyzed later.

The “Bloom Watch” component tracks the frequency and spatial occurrence of cyanobacteria blooms. Bloom Watch consists of documenting the time and location of a perceived bloom accompanied by photo documentation using smartphone and crowdsourcing technology. Citizen science

Highlights:

- **What:** Region 1 worked with partners to collaboratively design and establish a consistent regional approach to the challenge of predicting and monitoring cyanobacteria; now seen as a prototype across the country.
- **Who:** Region 1’s New England Regional Laboratory in collaboration with ORD’s Atlantic Ecology Division, New England states, drinking water suppliers, and academic and NGO partners.
- **Why:** Cyanobacteria and their associated toxins are a risk to human and ecological health, a coordinated monitoring approach which aggregates and shares data to understand the characteristics and behavior of cyanobacteria will benefit everyone and advance the protection of public health.

is being utilized to educate people on cyanobacteria issues and promote quality assured data submitted by the public. Photo documentation is verified by experts and enhanced by providing additional photos at a microscopic level for algal identification.

A geo-referenced database was developed by ORD’s Atlantic Ecology Division to incorporate the regional data. Smartphone apps have been developed and tested, and additional funding secured to develop a series of additional tools including on-site hands-on training, video training clips, digital image libraries, and cyanobacteria monitoring field kits complete with digital field microscopes and cyanobacteria samplers. It is anticipated that in the future, the database will have the capability of providing “vulnerability assessments” of waterbodies based on hydro-geomorphic characteristics and land use/precipitation patterns in the watershed.

Current Status:

After piloting this approach during 2014 and 2015, the monitoring protocol has been refined and participation expanded. The current focus of the program is on developing the

database of field data and photos. Region 1 has is providing assistance to implement this program in other areas of the country.

Outcomes:

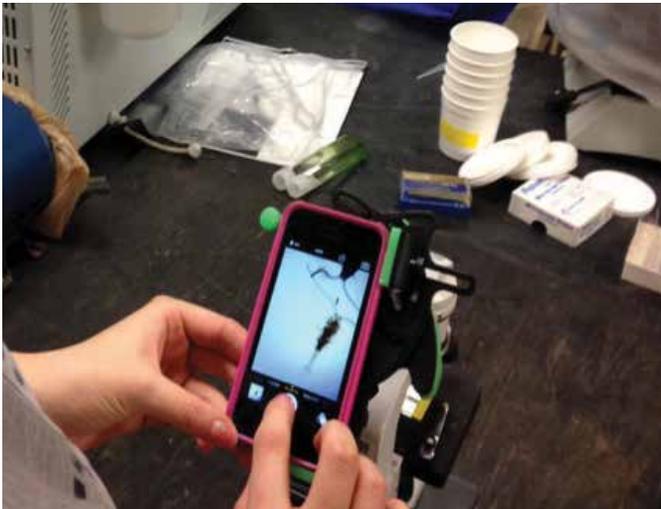
The New England Cyanobacteria Monitoring Program, has developed a simple and affordable, yet effective, monitoring protocol that can be used nationally, engaged various partners from citizens to federal agencies, and improved our understanding of the extent and severity of hazardous algal blooms in New England.

Lessons Learned/Recommendations:

Collaborative partnerships provide an opportunity to aggregate diverse expertise and knowledge in addressing complex problems. Engaging all levels of stakeholders provides additional benefits of building trust between the agency and the public, and opens more doors to collaboration, education and outreach.

Contact Information:

Hilary Snook, 617-918-8670





Real-Time Water Quality Buoy Data Website

Brief Description:

Starting in 2010, the Region 1 Laboratory deployed two buoys to collect real-time water quality data in urban areas, specifically the Mystic River and Charles River watersheds in the Boston metropolitan area. Data transparency and involving the public to both educate and engage them in discussions on the management of these two important natural resources was identified as a high priority for Region 1. The program is designed to both assess water quality conditions and also determine how remote monitoring can help in tracking the occurrence, severity, and duration of cyanobacteria (blue-green algae) blooms. For this project, monitoring sondes with water quality sensors are used to measure temperature, pH, conductivity, dissolved oxygen, turbidity, Fluorescent Dissolved Organic Matter (FDOM), phycocyanin and chlorophyll. The last two factors are used to assess the severity and progress of algal blooms. Cyanobacteria and their associated toxins are a priority issue in New England and of particular concern from a human and ecological health perspective. Cyanobacteria blooms often occur in these urban watersheds and have led to closure of beaches, posted warnings and cancelled swimming races.

During the first years of buoy deployment, the data generated every 15 minutes were transmitted via telemetry to a password protected webpage paid for by EPA. Data were available to project partners; however, EPA was unable to make the provided webpage available to the public due to internal policies. Moreover, the data on the external webpage were not available in a form that was accessible to the public. Development of a publicly available EPA webpage to display the real-time water quality data with the necessary descriptive information became the key objective for convening a Buoy Website Team.

There were two main tracks to the effort; to determine how to flow the data from the buoy datalogger to a webpage and to develop a new webpage that would conform to the new EPA format and display the data in a user-friendly format with

Highlights:

- **What:** The first-ever EPA webpage displaying real-time water quality data to the public.
- **Who:** Region 1 with assistance from the Office of Environmental Information (OEI).
- **Why:** To provide web-based access, to Region 1's real-time water monitoring data, that is both accessible to the general public and appropriate for technical users.

some graphing presentation tools. The website also needed to have clear descriptions and information so it could be understandable by the general public. As part of this effort, EPA was working with the Boston Museum of Science to help develop a new Charles River Exhibit that would showcase the buoy and display the real-time data.

Following much discussion with several HQ offices, including OEI and ORD, the decision was made to flow the raw data directly from the buoy into the agency IT infrastructure via the EPA's exchange network. Region 1 IT staff developed multiple automated scripts to process the data, run QA/QC protocols, and finally push the data to the EPA public facing webpage. The webpage dynamically displays the data through a program that allows users to manipulate how it is displayed graphically.

The webpage design team identified, tested and implemented a new charting tool that could clearly and accurately present the raw data to the public. The site design work, complicated by the dynamic nature of the information being displayed, resulted in a user-friendly display of water quality information that will help the public make informed decisions about their use of the river.

Data from the buoys are now being uploaded to the EPA website, making it directly available to the public. Charles River data was made available in May of 2015 and can be viewed at <http://www2.epa.gov/charlesriver/>

U.S. Environmental Protection Agency Office of Water

live-water-quality-data-lower-charles-river; Mystic River data went live in July and can be seen at <http://www.epa.gov/region1/mysticriver/livewaterqualitydata.html>.

Current Status:

In 2016, EPA will again be operating its buoys with deployment in May, adding another station, updating the websites and working with the Museum of Science to share data from the buoy for their new Charles River exhibit.

Outcomes:

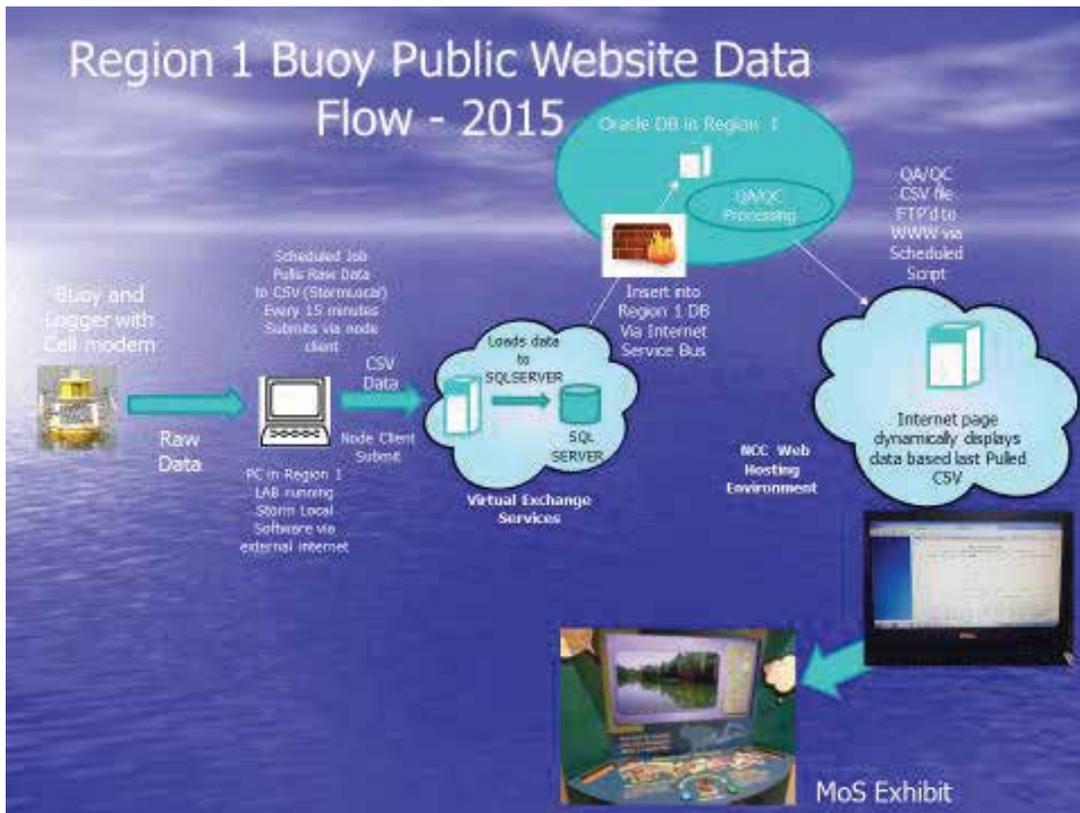
The public can now view real-time water quality data on the Region 1 webpage, to educate and engage them in discussions on the management of these important natural resources. Data is also available for easy download for technical users and decision-makers. This project is a model for other continuous water monitoring projects and the approach has been shared with other Regions.

Lessons Learned/Recommendations:

We learned early in the process that the solution required a team approach which included strong IT support and commitment, buy in from our Regional administrator's office, and sound data collection. We tested several software packages for displaying the data on the website and decided on one that was powerful, user friendly, and licensed to EPA which was key to the success of the project. At the insistence of the Regional Administrator's Office Communication Team, the website had to have clear descriptions and information for the general public.

Contact Information:

Tom Faber, 617-918-8672





Reducing Land-Based Aquatic Trash Pollution

Brief Description:

There are currently 35 regional bodies of water impaired due to floatable trash pollution. Additionally, microplastics (plastic particles 5mm or smaller) have also emerged as a regional water quality threat. Microplastics can enter a water body as a small particle—via Combined Sewer Overflows (CSO) and Wastewater Treatment Plants (WWTP) effluents—or can be generated by the breakdown of pieces of larger plastic trash due to photodegradation, wave action and species interaction.

In response, EPA Region 2 initiated a Trash Free Waters (TFW) Program that focuses on two distinct geographies within the Region; namely, Puerto Rico and NY/NJ. The TFW program places a strong emphasis on collaboration and serves as a catalyst for issue analysis, facilitated dialogue, strategic planning, and project implementation.

The goal of the TFW Program is to eliminate “PB5” (Plastic Bags, microBeads/microplastics, beverage Bottles, single-use food service Boxes, and cigarette Butts) trash discharged into receiving waterbodies within the Region by the year 2025. Specifically, the Program’s strategy entails: (1) providing Clean Water Act regulatory guidance in the development of regional MS4 permits and CSO long-term control plans; (2) supporting and conducting related research, including citizen science; (3) promoting education and outreach; and, (4) building capacity through participation in a stakeholder-driven TFW Partnership, by assisting the implementation and management of achievable and measurable short-term collaborative PB5 reduction projects.

To maximize program effectiveness, TFW program efforts have been integrated with other Region 2 initiatives and programs, including Environmental Justice, Citizen Science, Green Infrastructure, Making a Visible Difference, the New York – New Jersey Harbor and Estuary Program, and Urban Waters.

Highlights:

- **What:** A regional Trash Free Waters (TFW) Program to reduce land-based aquatic trash pollution. The core components include: permitting/regulation guidance, research, and stakeholder capacity building.
- **Who:** EPA Region 2, the New York—New Jersey Harbor & Estuary Program (HEP), the New England Interstate Water Pollution Control Commission (NEIW-PCC), the New York State Department of Environmental Conservation (NYSDEC), the New Jersey Department of Environmental Protection (NJDEP), the New York City Department of Environmental Protection (NYCDEP), and various universities, citizen groups, non-profits, and private businesses.
- **Why:** Land-based trash and floatables pollution has plagued Region 2 for decades, at times rendering surface waters unsafe for swimming. Trash and floatables have been targeted for reduction since 1989 in the implementation of the (ongoing) NY Bight Floatable Action Plan, which is carried out by multiple federal, state and municipal agencies

Current Status:

TFW Partnership members have initiated low-cost land-based aquatic trash reduction projects, and have begun taking effectiveness measurements. Additionally, EPA Region 2 has secured funding for an Aquatic Trash Reduction Grant Program that will support future project implementation.

Outcomes:

NYC’s recent (2015) MS4 SPDES permit for stormwater discharges requires the “control of floatable and settleable trash and debris.” This permit requires an upstream source reduction media campaign, along with establishing a base load of trash pollution to receiving waters, as well as an analysis of new methods to best eliminate trash discharges.

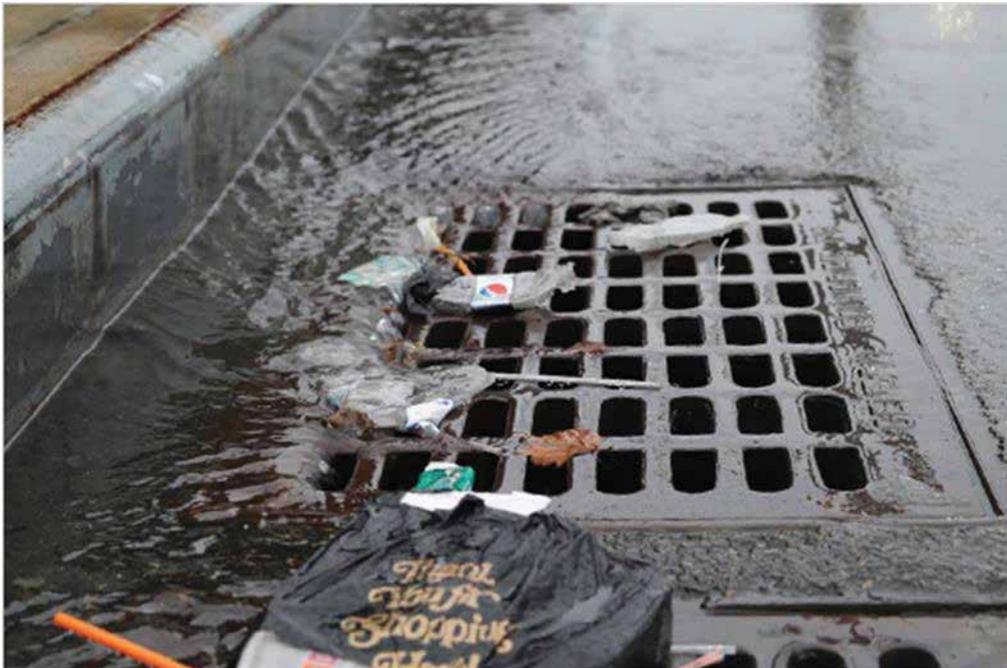
Research has been conducted to show marine debris prevention costs to NY and NJ municipalities within the Hudson-Raritan watershed to average \$60M, or \$6.16 per capita per year. Additionally, there has been extensive stakeholder microplastics research focused throughout NY and NJ; as of now, microplastics have been found in the Great Lakes, Hudson River, Newark Bay, Arthur Kill, Kill Van Kull, East River, Newtown Creek, Upper Hudson River Bay, Lower Hudson River Bay, Sandy Hook Bay and various locations throughout the NJ Shore. Beyond research, stakeholders have also installed water refill stations to reduce single-use plastic bottle waste in public parks with access to water, as well as waste fishing line receptacles.

Lessons Learned/Recommendations:

Showing progress in aquatic trash reduction requires a multi-faceted strategy, namely: analyzing permits and long-term control plans to provide greater trash capture; conducting research to characterize the impact of trash on local surface water ecosystems, as well as to establish baseline trash loading rates; and, involving stakeholders in the process.

Contact Information:

Joshua Kogan, PE
212-637-3733
Coordinator, Trash Free Waters Program
USEPA Region 2
Clean Water Division
290 Broadway, 24th Floor
New York, NY 10007-1866





Chesapeake Bay Watershed States Data Sharing Program

Brief Description:

Onsite (individual and cluster) wastewater treatment—commonly known as septic systems—serve approximately 25% of residents and businesses in the United States. For many years the industry has been improving and developing advanced treatment systems that remove nitrogen. In some cases, these new systems can treat wastewater just as well, if not better, than municipal wastewater treatment. Excess nitrogen loading can cause harmful algal blooms and hypoxic conditions, impairing water quality and aquatic habitat.

The process for approving advanced onsite wastewater technologies is long and expensive for the manufacturer, a drain on dwindling state staff and resources, and expensive for homeowners to purchase. These new technologies can help reduce the nitrogen loading to the Chesapeake Bay, which is the goal of the President's Executive Order issued in 2009.

For the first time in the onsite wastewater treatment industry, states came together to cooperatively and voluntarily develop protocols to share the data collected during the approval process for advanced onsite treatment technologies. The states (DE, MD, PA, VA, WV)* in the Chesapeake Bay Watershed signed the agreement on April 16, 2015 after only a little more than a year with the support and leadership of OWM's Decentralized Wastewater Management Program staff. The Agreement is for a five-year term.

Manufacturers wanting to make their system(s) available need approval by each state individually. Prior to the signing of this agreement the states in the watershed (as in the rest of the country), reviewed and approved these advanced technologies from manufacturers individually and separately, and most states do not share and/or use data collected in another states. Approval for stormwater and green infrastructure best management practices (BMPs) have similar challenges.

Highlights:

- **What:** First ever state agreement signed to share data for the approval of advanced onsite wastewater treatment systems.
- **Who:** Region 3, Region 3 states Chesapeake Bay Program.
- **Why:** States came together to cooperatively and voluntarily develop protocols and formally agree to share data for advanced onsite treatment technologies.

Current Status:

A similar initiative is currently being pursued at the national level with the formation of a steering committee represented by industry stakeholders and lead by OWM's Decentralized Wastewater Management Program staff. Also, Region 1 is pursuing a mechanism for the states in New England joined by Suffolk County, New York to develop something similar to the Chesapeake Bay states. Additionally, application of this agreement is being suggested as a potential process for stormwater water BMPs approvals within Region 3's Chesapeake Bay Program Office.

Outcomes:

This project is part of EPA's Decentralized Wastewater Management Program that collaborates with federal, state, local, industry and non-profit organizations under a Memorandum of Understanding (MOU). The MOU began in 2005 and has grown to 18 signatory partners as of November 2014 for the purpose of effectively, collaboratively, and voluntarily addressing management and performance issues pertaining to decentralized systems across the nation. In addition, the MOU Partners support and help expand the EPA's homeowner education program, SepticSmart (<https://www.epa.gov/septic>). Prior to this MOU, all states nationwide approved

systems on an individual basis and many do not take into account data collected by other state programs. The benefits of sharing this data are:

- Provides certainty with agreed upon protocols that can be used by manufacturing community and shared between states;
- Can bring new technologies, via additional manufacturers, to market more quickly and expand the use of nitrogen reducing treatment systems;
- Reduces burden on states to individually monitor and evaluate performance data; and
- Reduces costs associated with technology approval which can reduce the costs of systems provide savings to the consumer.

These advanced treatment systems reduce nitrogen loading by an average minimum of 50 percent when compared to conventional on-site systems. Onsite systems are the smallest source of nutrient loading to the Bay at 3-4 percent according to modeling efforts at the EPA Chesapeake Bay Program Office.

Additional Information:

- Memorandum of Cooperation (http://executiveorder.chesapeakebay.net/file.axd?file=2015%2f4%2fchesapeake_moc_signed.pdf)
- Test Plan Application Template (<http://executiveorder.chesapeakebay.net/file.axd?file=2015%2f4%2fInitial+Data+Collection+Protocol.pdf>)
- Initial Data Collection Protocol (<http://executiveorder.chesapeakebay.net/file.axd?file=2015%2f4%2fTest+Plan+Application+Template.pdf>)

Contact Information:

Diane McNally, Region 3, 215-814-3297

Jim Edward, CBO 410-267-5705

Kristina Heinermann, Region 2

** New York State participated in the discussions but was unable to sign the agreement as advanced treatment systems are approved at the County level in New York; this is the case in other states across the nation.*





Communicating Successful SRF Projects

Brief Description:

Documentation of environmental outcomes is required for all agency grant programs. Additionally, due to SRF funding levels, the SRF programs are often asked to provide specific input/examples regarding program support for regional and national priorities and goals. Since construction projects take time to complete and require additional time to measure results, it is difficult to document the success of SRF projects.

In response, prior to the annual review, Region 3 identifies completed projects in operation for at least twelve months. To better quantify the environmental benefits achieved, data on metrics such as greenhouse gas reductions, water and energy savings are obtained to more clearly demonstrate how the projects contribute to the Agency's overall goals and priorities. At times, Regional staff follow-up directly with the community to supplement State information and to confirm results. Using project information, specific success stories are prepared and shared. By detailing success stories, the approach provides more information than that included in the Agency's SRF environmental benefits reporting databases.

Current Status:

As of January 31, 2016, the Region collected project specific data on 43 SRF projects and prepared one-page success stories for 22 of these projects. Region 3 is preparing a summary report, to be completed by October 31, 2016 that will include all of the success stories developed during the fiscal year. The Region will share this report with our State partners to use as an additional SRF marketing tool. The Region is continuing to collect data on two projects per State SRF program.

Outcomes:

There are multiple benefits from this effort, including that the region:

- Demonstrates the benefits of the federal investment in the SRF Programs;

Highlights:

The Clean Water and Drinking Water State Revolving (SRF) Loan Fund Programs are the largest grant programs administered by EPA. The programs provide much needed funds to local communities and accomplish significant environmental and public health protection. To market program benefits, Region 3 Water Protection Division, as part of its required SRF annual review site visits, collects data on projects in order to prepare success stories and track metrics. The Region is gathering project specific data on at least two projects, per state SRF program, related to topics of importance to the Region, including:

- Sustainable/Resilience
- Green Infrastructure
- Water and Energy Efficiency
- Environmental Justice
- Enforcement Targeting Tool
- Chesapeake Bay goals
- Making a Visible Difference Communities

- Contributes to National efforts such as the Climate High-lights Report and Green Infrastructure efforts;
- Contributes to regional efforts such as projects funded in the Chesapeake Bay watershed;
- Shares the success stories so they are carried in Regional and National communications; and
- Uses the information to plan and schedule recognition events to acknowledge and celebrate success.

This best practice is transferrable to other regions and flexible, such that regions could identify categories of success stories appropriate for their respective Regional priorities or do only one project per state (instead of the two currently planned in Region III) based on the resources available in each region.

Lessons Learned/Recommendations:

The States have expressed a great deal of interest in the success stories.

Since the regional staff time is somewhat limited during the actual site visit, it is important to identify projects in advance so the States have the project files available.

While the SRF staff was collecting project data, the Water Division's communications coordinator (C2) created a template for progress stories that were developed throughout the Division's programs and offices. The SRF team used this same template for the SRF projects.

The Division's C2 worked with the SRF staff on several projects; he contacted the local officials and enhanced the stories by obtaining quotes and information on the difference the SRF project made in the communities. By revealing the human interest behind the SRF project, the communications coordinator elevated the basic SRF success story of facts as a Division Progress Story.

Contact Information:

Magdalene Cunningham, 215-814-2338





6 Nonpoint Source Watershed Web Application

Brief Description:

The National Nonpoint Source Program (NPS) began requiring the development and implementation of Watershed Based Plans in 2002. Since then, states in Region 3 have developed over 105 watershed based plans that cover over 270 watersheds; when fully implemented over 3,000 impaired streams are targeted for restoration. In addition, State Management Plans and current State Annual Reports are available. The Nonpoint Source Watershed Web Application was developed to provide a synthesized and innovative way for states, stakeholder and residents to easily identify nonpoint source watersheds, their plans and implementation progress reports in a web-based mapping application. Prior to the development of this application, the resources associated with each watershed plan were hosted on multiple state agency websites and there was no single source geospatial technology that identifies the location and extent of these watersheds.

In partnership with state agencies, EPA Region 3 created a database of state nonpoint source watersheds, delineated by the states to create a multi-state database of all nonpoint source watersheds in Region 3. The Nonpoint Source Watershed Application was the first application created in Region 3 utilizing EPA's GeoPlatform as a tool to help streamline complex data for a public facing website. The application is available for public use on EPA's Nonpoint Source Pollution web page under Technical Resources.

The application provides a generous amount of services and information and is user friendly. Users can click on the delineated state or watershed boundaries of interest and a pop-up appears that provides descriptive data, as well as hyperlinks to the pertinent documentation and reports. Corresponding attribute tables are also available for viewing to provide more information. Users can also change the base maps or toggle on/off data such as watersheds or hydrology.

Highlights:

- **What:** Interactive GeoPlatform-based web application that maps Nonpoint Source (NPS) Watersheds within states.
- **Who:** Region 3 Water Protection Division Office of State and Watershed Partnerships
- **Why:** The application was developed to geographically manage, maintain and graphically display important links to the NPS management plans, annual reports, watershed implementation plans and watershed progress reports developed by the Region 3, Mid-Atlantic states.

Current Status:

This application is currently being managed in Region 3's Office of State and Watershed Partnerships. Future releases of this application will be made available as new or updated data comes available. The application can be accessed on EPA's Nonpoint Source Pollution Technical Resources page (<https://www.epa.gov/polluted-runoff-nonpoint-source-pollution/watershed-approach-technical-resources>).

Outcomes:

By displaying plans, goals and progress, the public is able to see the effectiveness of Nonpoint Source program activities. This transparency showcases accomplishments and provides an opportunity for the public to view the materials that show activities to achieve the goals that have been set. The watershed plan tracker's linkage to GRTS process can be implemented nationally and is easily adoptable.

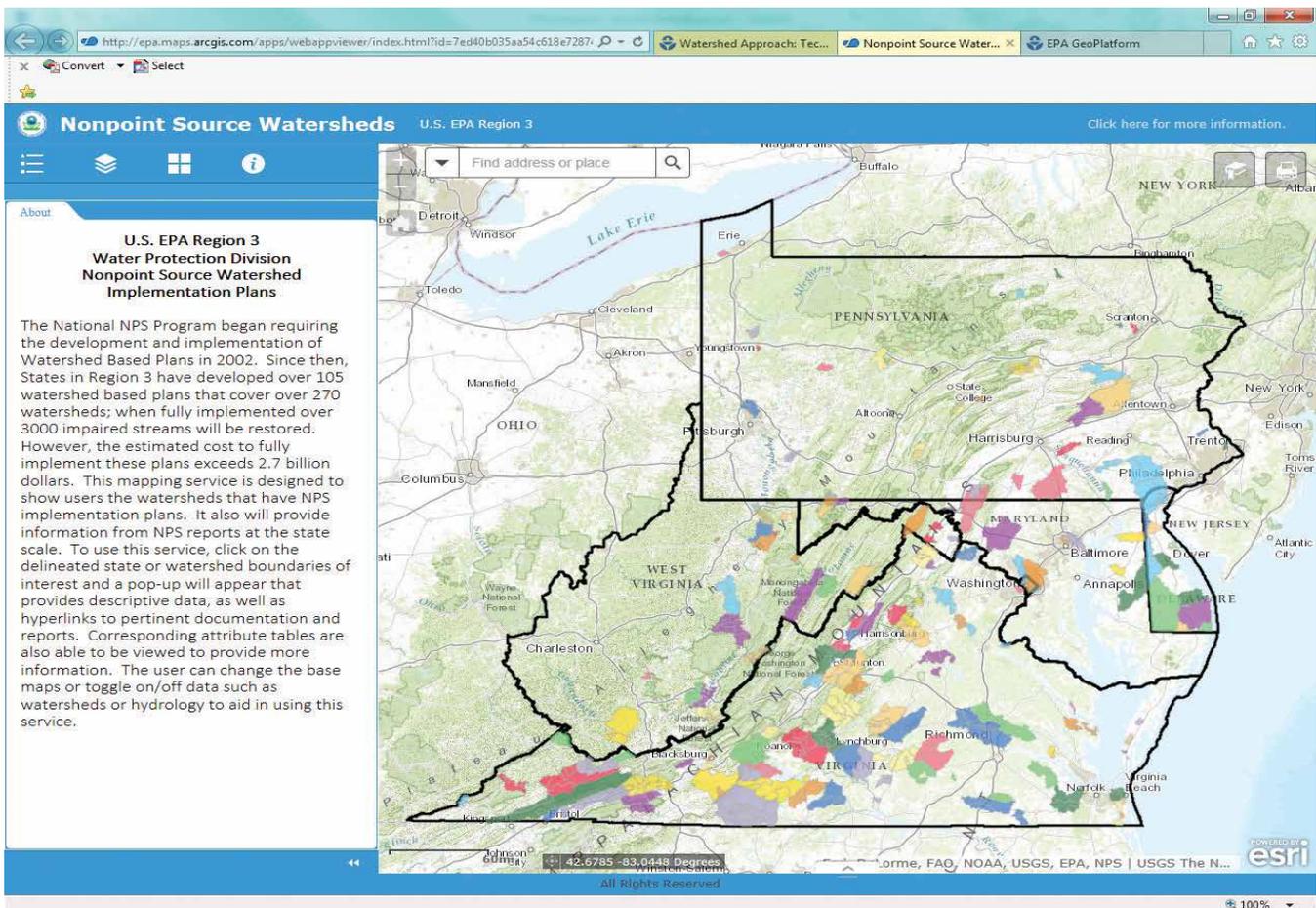
Lessons Learned/Recommendations:

The development and success of the application has led to additional opportunities and internal support to provide creative and innovative ways to geographically display programmatic data and story maps using EPA's GeoPlatform. New opportunities will allow more data to be shared publicly and provide creative ways to highlight the successes of EPA's nonpoint source program.

Contact Information:

Kelly Somers, 215-814-2719
EPA Region 3 Office of State and Watershed Partnerships

Fred Suffian, 215-814-5753
EPA Region 3 Office of State and Watershed Partnerships



<http://epa.maps.arcgis.com/apps/webappviewer/index.html?id=7ed40b035aa54c618e72874cbe0408f9>



Monitoring Water Quality at Proctor Creek, An Urban Waters Success Story

Brief Description:

The watershed includes 11 Neighborhood Planning Units, 38 neighborhoods, 15 Small Business Corridors, 300 urban streams and 69,000 residents. In addition to being an Urban Waters Federal Partnership location, it is also one of EPA's "Making a Visible Difference Initiative" communities. EPA Region 4's Proctor Creek MVD Team works to empower communities, and especially overburdened communities, in the area. Its efforts benefit neighborhoods by reconnecting people with local waterways, strengthening the economy, supporting a healthier environment and building community capacities.

Based on extensive outreach and meetings with local leaders, EPA staff provided residents and leaders with detailed information about projects and activities in the watershed as well as available resources. They also worked hand-in-hand with the community to develop and implement environmental monitoring projects and help people understand permitting decisions.

EPA Region 4's Proctor Creek MVD Team's efforts in FY 2015 included community trainings on grant applications and management. The Team developed an intensive three-step plan for community engagement in the watershed. The Team helped source \$20,000 for a local nonprofit's work as a lead collaborator and community facilitator with EPA. The Team then worked with the community, nonprofits, academia, churches, small business leaders, City Council members, the Mayor's Office, City's Department of Watershed Management, musicians, artists, media, stakeholders and federal agencies. Team members spent more than 80 overtime evening and weekend hours meeting with 11 Neighborhood Planning Units across the watershed's 38 neighborhoods, hosting five community roundtable discussions and co-hosting a community-wide showcase highlighting environmental activities and services in the Proctor Creek watershed. More than 700 residents, stakeholders, partners and community leaders attended the discussion and showcase.

Highlights:

- **What:** Watershed and community outreach projects – including a citizen science water quality program funded by EPA's Urban Waters Program with extensive support from EPA Region 4 – have successfully fostered community investment in the Chattahoochee River and its tributaries and resulted in significant water quality improvements.
- **Who:** EPA's Urban Waters Program, EPA Region 4's Proctor Creek MVD Team (including staff from the Water Protection Division, the Office of Environmental Justice and Sustainability, the Office of Policy and Management, the Air, Pesticides, Toxics Management Division, the Resource Conservation and Restoration Division, the Office of the Regional Administrator; and the Office of External Affairs), the Chattahoochee Riverkeeper (CRK), a nonprofit environmental organization based in Georgia, and the West Atlanta Watershed Alliance (WaWa).
- **Why:** The Proctor Creek watershed, a priority Urban Waters location, is the only major watershed located entirely within Atlanta's city limits, encompassing an area rich in history, culture and environmental resources. Pollution sources in the watershed have resulted in environmental degradation and public health threats. Today, Proctor Creek, a tributary of the Chattahoochee River, is besieged by unsafe bacteria levels, illegal trash dumping, pollution and erosion. EPA partnered with CRK and other local organizations to focus on these problems, supporting outreach and citizen monitoring efforts to promote community education and improved water quality.

Current Status:

In FY 2016, EPA is using information from the community roundtables and other recent engagement efforts to host a community leadership and partners meeting that will identify additional priority restoration and revitalization projects. A follow-on community forum will provide an opportunity to review project progress, address challenges, share lessons learned and discuss next steps.

Outcomes:

Communities in the Proctor Creek watershed are benefiting from increased local capacities, enhanced understanding of environmental issues, new partnership opportunities and meaningful engagement in environmental decision-making. EPA's community outreach work is pivotal to the success of these watershed revitalization projects. Region 4's Proctor Creek MVD team members are proud that they are helping area neighborhoods have a stronger voice in decisions that affect local quality of life. As one community leader said recently, "I imagine a place that's a beautiful, fishable, swimmable creek where kids can safely play. I imagine [it] being a positive amenity and not a dumping ground for scrap tires. Not a place where raw sewage flows. I think of a place that can help transform the neighborhoods." Among other benefits, the projects have resulted in swift and significant improvements in water quality for neighborhoods affected by pollution in the Chattahoochee River and its tributaries.

CRK's Neighborhood Water Watch program illustrates these efforts in action. It engages and educates area communities while working to eliminate pollution in the Chattahoochee River and its tributaries. Community members are trained to collect water quality samples, with weekly sampling leading to specific actions to improve water quality. The number of samples collected has grown from 288 in 2010 to more than 6,000 across 100+ sites in 2015. Data collection is guided by an approved Quality Assurance Project Plan, developed with support from an EPA Urban Waters Small Grant. All data is made publicly available on CRK's website and provided to the Georgia Adopt-A-Stream database and EPA's STORET database. To date, numerous sewer leaks have been reported and thousands of gallons of raw sewage have been

prevented from reaching the Chattahoochee River. CRK's program is remarkable for its scale and effectiveness, leading to innovative collaborations and improved water quality.

Lessons Learned/Recommendations:

Project outcomes are leading to best practices and lessons learned that EPA can apply nationwide. For example, CRK's Neighborhood Water Watch program illustrates how sustained partnerships and citizen science efforts can help local governments rapidly identify and address infrastructure and water quality issues. Engaging communities through training and awareness campaigns promotes watershed stewardship and leads to cleaner waterways.

In turn, watershed outreach efforts have connected area neighborhoods and built community relationships and partnerships, strengthening local commitments to work together for improved public health and environmental outcomes across the Proctor Creek watershed. Collaborative efforts, meetings and trainings have enabled EPA and its watershed partners to build trust, enhance information sharing, identify and address key issues, and work through challenges.

Contact Information:

Surabhi Shah, 202-564-3833
Director, EPA Urban Waters Program
shah.surabhi@epa.gov

Cynthia Edwards, 404-562-9340
Project Officer, EPA Region 4
edwards.cynthia@epa.gov

<http://www.epa.gov/urbanwaterspartners/proctor-creek-watershedatlanta-georgia>



From Left: A trained volunteer collects water samples from a public bridge (Source: CRK). Community Engagement Images



Little Rock: Main Street Redevelopment Using Green Infrastructure

Brief Description:

In 2010, the city of Little Rock was awarded a Greening America's Capital technical assistance grant which allowed the city to design concepts to increase green space and parks, attract more pedestrian traffic, and to improve storm water capture on Main Street in downtown Little Rock. In 2012, EPA and ANRC worked collaboratively to select the city of Little Rock to receive a \$900,000 Clean Water Act Section 319(h) grant to implement green practices in the corridor, including rain gardens and bio-swales to reduce run-off and increase infiltration. In addition, the Little Rock Arts district on Main Street received a Brownfields cleanup loan of \$900,000 from Pulaski County Brownfields Cleanup Revolving Loan Grant. The city and Pulaski County have also received additional brownfields grants/loans to increase the number of available residential units on Main Street. EPA's investment has served as a catalyst for economic development along the Main Street Corridor totaling over \$41 million dollars.

EPA's investment in Little Rock's Main Street Redevelopment, which now serves as a sustainability model for others nationwide, has spurred interest from other federal agencies including HUD, USDA, and FHWA under the Partnership for Sustainable Communities. These agencies are now looking for opportunities to invest in the Main Street Corridor. The cross-media Little Rock Arkansas Main Street Redevelopment Team's dialogue, collaboration, information sharing and cooperation among federal, state, and local entities promoted sustainability and increased economic local opportunities, thus ensuring future sustainable redevelopment along the Main Street Corridor.

Current Status:

Little Rock's Main Street Low Impact Development project funded under CWA Section 319(h) was officially dedicated in August 2015. EPA Region 6 Regional Administrator Ron Curry and Administrator Gina McCarthy visited the project area during the dedication to showcase Little Rock as a model.

Highlights:

The Region 6 Water and Superfund Divisions, working in conjunction with the Arkansas Natural Resources Commission (ANRC), Arkansas Department of Environmental Quality and the city of Little Rock, revitalized the dreary downtown Main Street corridor with \$3 million dollars in green infrastructure practices and healthy buildings. EPA's investment of Clean Water Act 319(h) grants and Brownfields Cleanup loans and grants in Little Rock's Main Street corridor served as a catalyst for over \$41 million dollars in private investments which now makes downtown a live, work and play community for present and future generations.

Outcomes:

By implementing the low impact development practices in the downtown corridor there will be reduced sediment loading to the Arkansas River watershed. In addition, the project has been able to yield economic benefit totaling \$41 million dollars in private investment. The success of this project can be replicated in other areas.

Lessons Learned/Recommendations:

The success of this project can be replicated in other areas, when local governments, the State and EPA conduct early planning.

Contact Information:

Claudia Hosch (Water), 214-665-7170

Anthony Talton (Superfund), 214-665-7205

Curry Jones (Water), 214-665-6793



Promoting Energy Management for Water and Wastewater Utilities

Brief Description:

The key elements of conducting these workshops are:

- EPA Region 6 takes a leadership role in organizing and facilitating the workshops.
- Technical information is disseminated based on EPA material and assessment tools, ISO 50,001 Energy Management Systems, and the Department of Energy assessment tools.
- Workshops are held at least annually, allowing utilities to report out and provide updates on their systems' efforts.
- The workshops provide a means for networking among utility staff promoting peer-to-peer learning.
- Utilities are in close geographic proximity to each other which facilitates greater engagement and follow-up visits by staff to see energy management practices being implemented.

This approach succeeds by providing current technical information on energy management practices to utility staff. The advantage of conducting workshops for water and wastewater utilities in a geographic area is that it helps build a "community of practice" in implementing energy management activities.

The region has co-hosted these meetings, through an informal partnership, with the Border Environment Cooperation Commission (BECC), an agency that funds water and wastewater infrastructure projects in Mexico along the U.S. Mexico border.

Current Status:

Energy management workshops are conducted annually for 13 communities along the US – Mexico border and twice a year for 12 communities in the Dallas-Fort Worth area. These workshops have been conducted since 2009. Guest speakers include staff from water or wastewater utilities, energy service providers, and the State Revolving Funding Agency.

Highlights:

EPA Region 6 Water Division promotes Energy Efficiency throughout the Region by hosting semi-annual Energy Management Workshops. The workshops target water and wastewater utilities units in given geographical areas. The knowledge obtained in the Workshops has resulted in a reduction in the amounts of energy consumed by water utilities, which helps decrease the impact of climate change, while simultaneously lowering energy costs for the utility.

Outcomes:

Water or wastewater utilities are adopting more energy management practices such as measuring and monitoring energy consumption, co-generation and using produced methane gas, developing an energy management plan, and establishing an energy management baseline to benchmark continuous energy improvement. A mentoring relationship among utilities facilitates the sharing of information on the cost of investment and savings realized in reducing energy consumption.

The workshop is scalable to the number of water and wastewater utilities in a given geographic area allowing for the logistical consideration in securing a meeting location and establishing the workshop agenda.

Lessons Learned/Recommendations:

There is value gained in conducting workshops with water and wastewater utilities in a geographic area. The proximity of utilities provides greater opportunity for networking and on-site observation of energy management practices. Workshops held on a regular basis allow utility staff to network, provide system updates, and build a "community of practice" focused on energy management practices.

Contact Information:

David Reazin, 214-665-7501
Reazin.david@epa.gov



Delaware Drinking Water Asset Management Grant Program

Brief Description:

Asset Management is a strategic process for acquiring, maintaining, rehabilitating and replacing water system equipment and components in a manner that maintains a desired level of customer service at the best appropriate cost. Municipal drinking water systems (DW), although willing to perform the work required, often lack time and staff for meaningful AM planning and budgeting. Using the DWSRF non-federal Administration Fee account as a funding source, the Delaware Division of Health and Social Services (DHSS)/Division of Public Health (DPH), with approval from the Water Infrastructure Advisory Council, is providing up to \$100,000 per municipality for the development of a Drinking Water Asset Management Program. The non-Federal Fee Account is a special account, separate from the DWSRF, funded by fees collected from Delaware DWSRF borrowers. The AM grants allow systems to hire staff or contractors to prepare AM plans. The plans identify needs and set priorities for the repair and replacement of critical infrastructure including budgeting for major capital improvements; the DWSRF is designed and intended to assist with the financing of such projects through the issuance of low interest loans. The DE Clean Water State Revolving Fund (CWSRF) program offers an identical program.

Current Status:

Currently, there are 4 Delaware grant recipients preparing to commence AM plan preparation. The DE DWSRF program has an additional five grant applications pending approval. Combined, 23 percent of the state's municipalities are involved in AM planning.

Outcomes:

Outcomes/results are positive. Municipalities are mapping and locating assets as the first step. Mapping/identification is motivating upper management to concentrate on buried assets and is bringing drinking water infrastructure needs to the forefront of local decision makers.

Highlights:

As a part of the Drinking Water State Revolving Fund Program (DWSRF), Delaware is providing funding for the development of asset management (AM) plans to local water utilities. Asset Management is a widely recognized tool used to manage water and wastewater infrastructure such as pipelines, tanks, pumps and other facilities.

Lessons Learned/Recommendations:

The program is transferable in all states where funding is available.

The DWSRF small systems (2%) and local assistance (15%) set-aside accounts, as well as a matching program, in which the DWSRF program provides an equal amount of funding for every dollar spent by the DW system for an AM plan, are additional options for AM plan funding.

EPA's five core components are universal. These are: Current state of utility assets; The required sustainable level of service of assets; Critical assets; The minimum life-cycle costs; and, The best financing strategy.

As an incentive, a state DWSRF program could consider offering a one-half percent reduction on the loan in the form of a rebate.

Contact Information:

Heather Warren, 302-744-4739
Heather.warren@state.de.us

Vince Gallo, 215-814-5773
EPA Region 3



Ambassadors - A Framework for Promoting Long-term Productive Partnerships

Brief Description:

Funded by EPA and Federal agency partners through the UWFP, Ambassadors, among other roles, support planning and implementing on-the-ground projects as well as community engagement in stewardship of urban watersheds. The Ambassadors position can start as a federally funded position and can transition to a locally supported position. Having a long-term Ambassador in a community can lead to better coordination among all stakeholders and agencies and accelerate project completion.

Current Status:

The Ambassador position is key to successful local urban waters partnerships. Currently, 15 of the 19 UWFP locations include an Ambassador position. Thirteen positions are funded through a variety of federal agencies, with two funded locally with no federal resources.

Outcomes:

In two UWFP locations, the Ambassadors implemented all of their duties in such an excellent fashion leading for four years collaboration among Federal agencies, state and local agencies, non-profits and businesses. Projects were implemented through negotiated work plans addressing a set of diverse needs and priorities.

In New Orleans, an EPA-funded full-time Ambassador, who previously worked for the U.S. Army Corps of Engineers New Orleans District, worked in City's Deputy Mayor's office. With the Ambassador in place, the local partnership was able to move forward on the five initial focus areas in the Lake Pontchartrain Basin. One of the priority projects is the city-led Lafitte Greenway project. The Lafitte Greenway project transformed three miles of fallow land into a multi-use trail and linear park that will link several neighborhoods, including communities with environmental justice concerns, to the Mississippi River, Bayou St. John and Lake Pontchartrain.

In Los Angeles, the Ambassador coordinated the efforts of the Los Angeles River Watershed Partnership. The

Highlights:

- The EPA Urban Waters Program created and funded Urban Waters Ambassador (Ambassador) positions in New Orleans and in Los Angeles to accelerate and coordinate on-the-ground projects that advance waterway protection and restoration goals.
- The Ambassador position in New Orleans, Louisiana, created a model for community involvement and for moving from a federally funded Ambassador position to a more sustainable position that is funded locally, while sustaining the location partnership for four years.
- Ambassadors at the Urban Waters Federal Partnership (UWFP) 19 locations serve as coordinators, facilitators, leaders, and reporters coordinating among Federal agencies and other organizations and providing support in both strategic planning, project implementation and communicating results. One goal of the Ambassador program relative to water quality is to accelerate and prioritize on-the-ground projects, through a process to achieve a negotiated overall workplan, that improve water quality, restore outdoor spaces, and foster community stewardship in urban-related watersheds.

Ambassador has engaged and involved new local partner organizations, governmental and non-governmental, in the Partnership, growing the number of 10 initial partners to 30. As a result of the Ambassador's work, projects, studies and outreach in the Los Angeles area are coordinated and now focus on a wide range of local issues, including: green space initiatives, solutions for urban stormwater runoff, waterway channelization in communities with environmental justice concerns, and wetlands and river restoration, among others. Specifically, for several projects, the Ambassador worked closely with the U.S. Army Corps of Engineers to complete a Restoration Feasibility Study, and engaged new local partners to support a new initiative regarding "Brownfields to Health-fields" in Los Angeles' underserved communities.

Both Locations demonstrate the value of the Ambassador position. Indeed, in New Orleans, the local partners

realized the value and need for the Ambassador functions and transferred them to local partners through an extensive planning process. All of partners met regularly and negotiated a transition so that the key functions (as coordinator, facilitator, leader and reporter) were picked up by several local agencies while state and federal agencies continue participation in the Partnership.

The transfer of funding from Federal to local sources for the Ambassador position can be replicated in any location. The image below depicts a focus on adapting the Ambassador position to the needs of the local partnership and community. This best practice reflects and supports the EPA Administrator's priority of launching a new era of state, tribal, and local partnerships.

Lessons Learned/Recommendations:

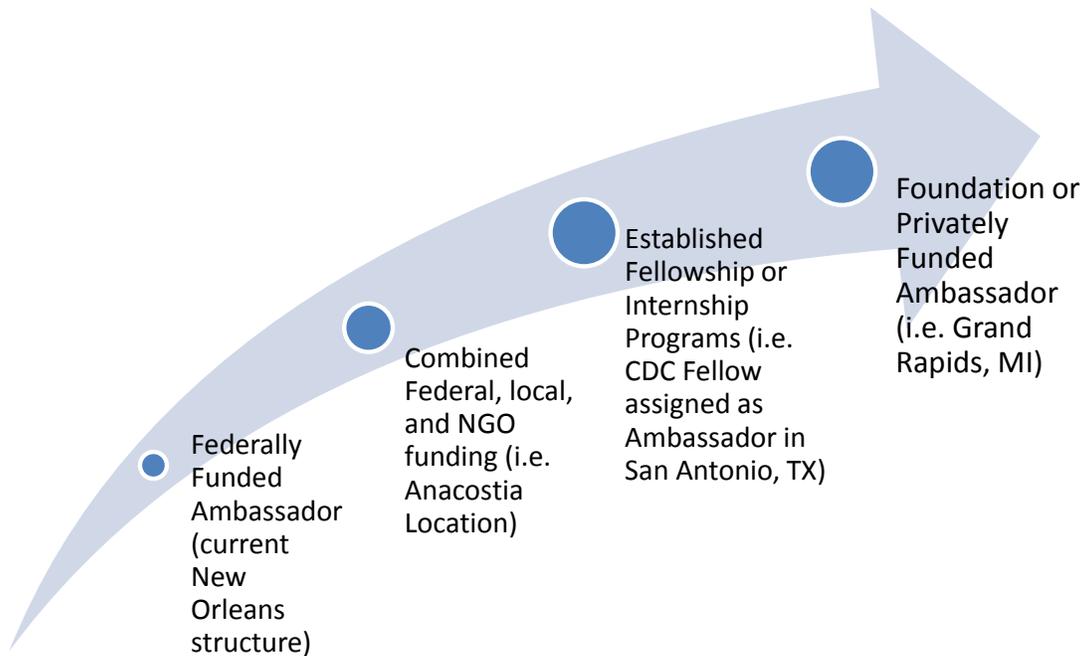
An Ambassador provides the linchpin for local urban waters partnerships building and maintaining relationships and capacity for long-term collaborative successes on projects. Funding by Federal agencies involved in the UWFP, therefore, catalyze support for Ambassadors and seed the process leading to funding from local organizations for support critical Ambassador functions.

Contact Information:

Surabhi Shah, 202-564-3833
Director, EPA Urban Waters Program
shah.surabhi@epa.gov

<http://www.epa.gov/urbanwaterspartners>

TRENDING MODELS FOR AMBASSADOR PROCUREMENT





United States Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460
EPA 800-R-16-003
June 2016
www.epa.gov



Recycled/Recyclable • Printed on 100% Postconsumer, Process Chlorine Free Recycled Paper that has been manufactured with Wind Power

