



Delaware River Basin Commission

Annual Report 2015

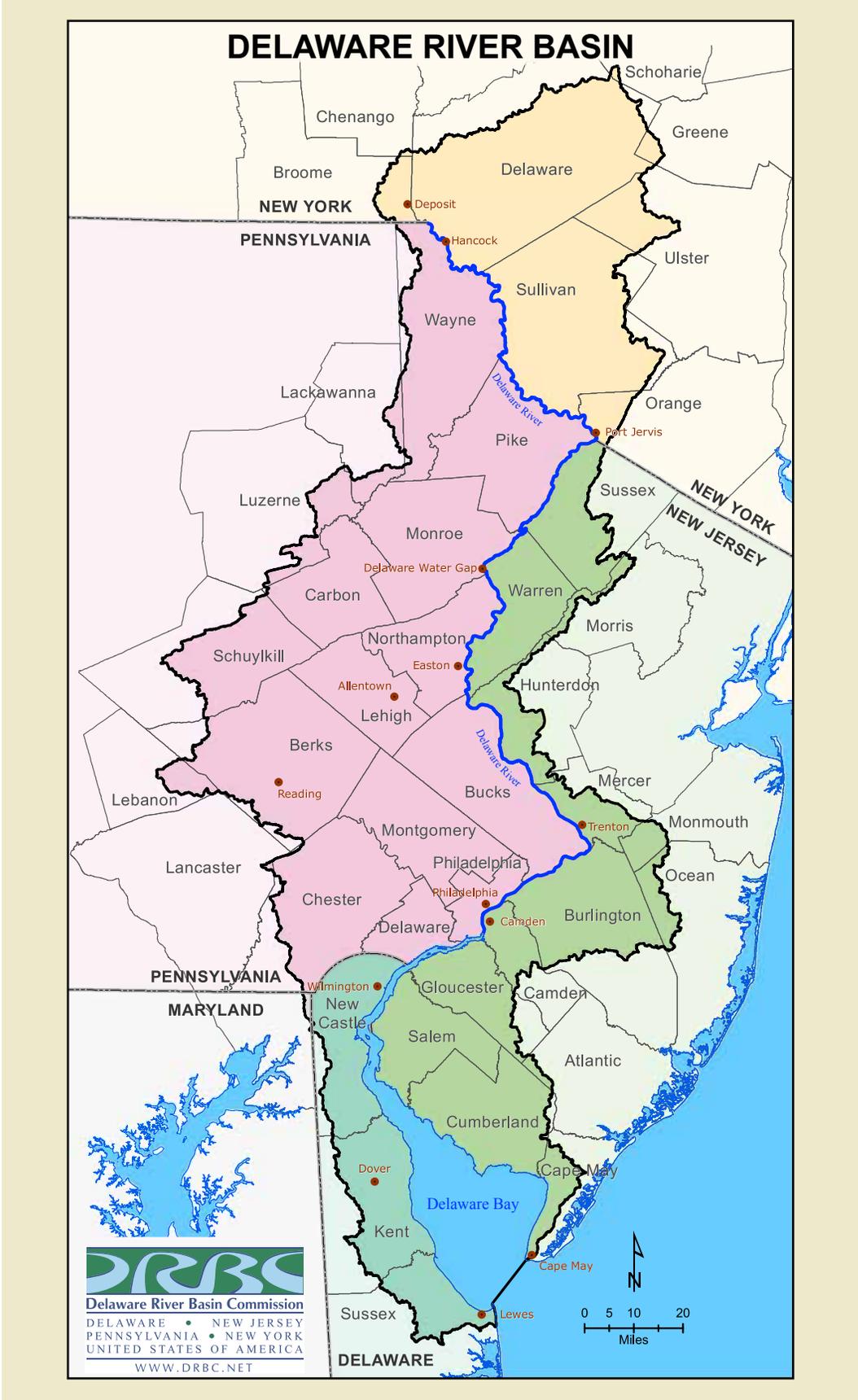
Cover photo: The French vessel L'Hermione is a replica of the 18th-century frigate that carried General Lafayette to the United States to assist the Americans during the Revolutionary War. L'Hermione was one of more than a dozen international and domestic Tall Ships showcased along the Delaware River waterfront in Pennsylvania and New Jersey at Tall Ships® Philadelphia Camden from June 25–28, 2015.
Photo courtesy of Gerard Dewaghe.

This publication covers calendar year 2015. In order to save paper and reduce costs, the public is encouraged to view this annual report on the commission's web site at www.drbc.net. Limited paper copies are available upon request by contacting the DRBC (P.O. Box 7360, West Trenton, NJ 08628; 609-883-9500).

CONTENTS

MAP OF THE DELAWARE RIVER BASIN	2
THE DRBC ... A PLACE IN HISTORY	3
EXECUTIVE DIRECTOR'S MESSAGE	4
THE COMMISSION	6
OUR WATER RESOURCES	
Annual Hydrologic Conditions Summary	8
Updated Water Resource Planning Model	12
DRBC's Water Quality Monitoring Activities	14
DRBC Staff Participates in Frenchtown WWTP Ribbon Cutting Event	15
15-Year Accomplishments of the Lower Delaware National Wild & Scenic River Program	16
DRBC Joins Partners at Schuylkill River Restoration Fund Ceremony	17
New Web-Based Flood Resources Portal	18
OUR REGULATED COMMUNITY	
DRBC Completes One Process/One Permit Rulemaking	19
DRBC Accepts Online Payments for Water Use Charges	20
DRBC 2015 Project Review/Permitting Summary	21
OUR PUBLICS AND STAKEHOLDERS	
New Format for DRBC Public Hearings and Business Meetings	22
DRBC Advisory Committees Have Another Busy Year	23
OUR EMPLOYEES AND WORKPLACE	
DRBC Staffing	24
DRBC's Bill Muszynski Honored as Schuylkill Action Network 2015 MVP	24
DRBC Cares for its Communities	24
21 st Annual Delaware River Sojourn: "Birthplace of America"	26
DRBC Office Gets Greener With New LED Lighting	28
DRBC Staff Shares Knowledge and Experience	28
FINANCIAL SUMMARY	31





THE DRBC . . . A PLACE IN HISTORY



President John F. Kennedy and the basin state governors at the ceremonial signing of the Delaware River Basin Compact at the White House on Nov. 2, 1961. Seated next to President Kennedy (*from right to left*) are Gov. David Lawrence of Pennsylvania, Gov. Elbert Carvel of Delaware, and Gov. Robert Meyner of New Jersey. Gov. Nelson Rockefeller of New York was unable to attend.

“Today’s formal signing of the Delaware River Basin Compact is a significant event. Its significance lies in the unique character of the Compact and the great hope for comprehensive plans for full and effective development of the Delaware River Valley.

The highly industrialized character of the Basin and the heavy population concentrated in the region presents a real challenge to the Commission in its efforts to devise a water resource program suited to the area’s needs.

Included within the Commission’s jurisdiction is the control and development of adequate water supplies, pollution control, flood protection, watershed management, recreation, hydroelectric power and the regulation of withdrawals and the diversion of water.

I am designating the Honorable Stewart L. Udall, the Secretary of the Interior, to be the Federal representative on the Commission. I know he will work with and have the counsel and cooperation of the many departments and agencies of the Federal Government concerned with water and resource development. I am sorry he is not with us today, but as you know, he is out of the country in Japan. He has, however, expressed his willingness to serve in this capacity, and I know he shares the optimism of the four States concerning the future of the Delaware Basin.

We are glad to join with Delaware, New Jersey, New York, and Pennsylvania in this bold venture. The task set for the Commission will not be easy to achieve, but we are confident that the cooperation that has brought forth this Compact will endure, and that working together real progress can be made for the people of the Basin.”

President John F. Kennedy
Remarks at the Signing of the Delaware River Basin Compact
November 2, 1961

EXECUTIVE DIRECTOR'S MESSAGE

By Steve Tambini



I was introduced to a nationwide event in 2015 called “*Imagine a Day without Water.*” Imagining a day without water is not an easy task. We open faucets . . . it’s there. We go to the store . . . it’s there . . . only all bottled up in plastic. We walk or drive outside and our rivers, streams, lakes, and oceans may fluctuate, but never seem to go dry. Can we really *imagine a day without water*, especially here in the Delaware River Basin?

The fact is, our freshwater resources are not without limits and not without threats. Only about 2.5% of the water on earth is freshwater (the rest is saltwater). Almost 70% of the freshwater available is “locked away” in glaciers and ice caps. Managing what water we have access to for our needs, for support of our ecosystems, and for future generations is a continuing challenge. In addition, sobering headlines continue to alert us to the vulnerabilities and threats to the quality of our source waters and our drinking water.

This report and my comments in this message highlight just some of the activities, results, and people at DRBC who accept the wide-ranging water resource management responsibilities and challenges defined in the Delaware River Basin Compact.

Our Water Resources in the Delaware River Basin were characterized by dry conditions in early 2015 leading to state-declared drought watches in several counties in Pennsylvania and New Jersey. During periods when we experience extreme low flows, DRBC water operations define and direct releases from dedicated storage in Lower Basin reservoirs to ensure adequate freshwater flows past Trenton, N.J. to the tidally influenced portion of the Delaware River. The goal is to keep the concentration of salt-laced water away from drinking water intakes and aquifers. While severe flooding was not experienced in 2015, DRBC developed a web-based flood resources portal to provide data and information that will be useful in planning to minimize flood loss and to ensure public safety. Last, but certainly not least, DRBC’s ongoing monitoring programs help to protect and restore water quality in the basin because water resources cannot be properly managed if they are not measured.

Our Regulated Community includes thousands of water users, wastewater discharges, and sponsors of other projects that could have a significant impact on the water resources of the basin. In 2015, DRBC approved rulemaking to provide for a One Process/One Permit Program to streamline the review of water withdrawal and

wastewater discharge projects. The program will improve responsiveness, efficiency, and collaboration with other agencies of similar scope and mission. The goal is to avoid duplication of unnecessary effort while maintaining the authority and high standards of each agency.

Our Publics and our Stakeholders have a long and valued history of providing input and advice to DRBC through our advisory committees, through opportunities for public comment on proposed rules and projects, and through public input and dialog at our quarterly commission meetings. DRBC revised its public hearing format on a trial basis in 2015 to provide more time between the acceptance of comments and commission decision making at business meetings to ensure adequate deliberation and review of all public input. At the same time, DRBC continues to provide opportunities for “Open Public Comment” where individuals may speak directly to the DRBC commissioners. Our advisory committees continue to provide valued input on toxics management, water quality criteria, flow management, reduction of flood losses, and water quality monitoring.

Our Employees and Our Workplace demonstrate how a relatively small group of professionals effectively manages a significant water resource. From planning, to science, to engineering, to professional support...from project review, to water operations to modeling, monitoring and assessment, the results of our employees' commitment to the basin are outlined on the pages that follow. In addition, our employees showed that “DRBC Cares for its Communities” through service projects that included several river clean-ups, actively supporting the Delaware River Sojourn, and volunteer work at a local food bank and adult care facility.

At DRBC we have been effectively managing our shared water resources since 1961. We'll never say we have all the answers to ensure that we never go a day without water; however, we work hard every day towards that goal.



THE COMMISSION

NEW YORK

Chair (January-June)



Gov. Andrew M. Cuomo



DEC Commissioner Joseph Martens
Alternate to Gov. Cuomo (January-July)

DELAWARE

*Vice Chair (January-June)
Chair (July-December)*



Gov. Jack A. Markell



DNREC Secretary David Small
Alternate to Gov. Markell

FEDERAL GOVERNMENT

*Second Vice Chair (January-June)
Vice Chair (July-December)*



Brig. Gen. Kent D. Savre
(January-March)



Brig. Gen. William H. Graham
(March-December)



Lt. Col. Michael Bliss, USACE
Phila. District Commander
Alternate to Brig. Gen. Savre/Graham

PENNSYLVANIA

Second Vice Chair (July-December)



Gov. Tom Wolf

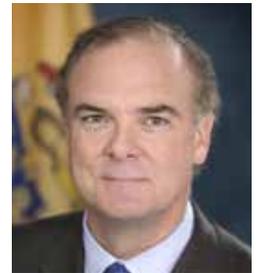


DEP Secretary John Quigley
Alternate to Gov. Wolf

NEW JERSEY



Gov. Chris Christie



DEP Commissioner Bob Martin
Alternate to Gov. Christie

*The current list of
commission members
and their alternates
can be viewed at
[www.nj.gov/drbc/
about/commissioners/](http://www.nj.gov/drbc/about/commissioners/).*

The Delaware River Basin Commission (DRBC) is a federal-interstate agency created in 1961 by compact legislation signed into law by President John F. Kennedy and the governors of the four basin states with land draining to the Delaware River. The passage of this compact marked the first time that the federal government and a group of states joined together as equal partners on a regional body with the force of law to oversee a unified approach to managing a river system without regard to political boundaries. DRBC programs focus on the subjects of water supply, water conservation, water quality, flow/drought management, flood loss reduction, project review, and planning.

The Delaware is the longest un-dammed river in the United States east of the Mississippi, extending 330 miles from the confluence of its East and West branches at Hancock, N.Y. to the mouth of the Delaware Bay where it meets the Atlantic Ocean. In all, the Delaware River Basin (DRB) contains 13,539 square miles, draining parts of Pennsylvania, New Jersey, New York, and Delaware. Over 15 million people (approximately five percent of the nation's population) rely on the waters of the DRB for multiple uses, but the

watershed drains only four-tenths of one percent of the total continental U.S. land area. The population served by DRB water includes about 8.3 million basin residents as well as over seven million people in the New York City area and northern New Jersey who live outside the basin. New York City gets roughly half its water from three large reservoirs located on tributaries to the Delaware.

DRBC Signatory Members

The *ex officio* members of the Delaware River Basin Commission include the four basin state governors and the Commander of the U.S. Army Corps of Engineers (USACE) North Atlantic Division (NAD), who serves as the federal representative.

The five members appoint alternate commissioners, with the governors typically selecting high-ranking officials from their state environmental agencies (Department of Environmental Conservation [DEC], Department of Natural Resources and Environmental Control [DNREC], and Department of Environmental Protection [DEP]). Each commissioner has one vote of equal power with a majority vote needed to decide most issues. Exceptions are votes to apportion among the signatory members the amounts required to support the current expense budget and votes to declare a state of emergency resulting from a drought or catastrophe, which require unanimity.

The Delaware River Basin Compact requires the annual election of a chair and vice chairs, which historically has been based upon rotation of the DRBC's five members.

ALTERNATES/ADVISORS

NEW YORK

2nd Alternate: Mark Klotz, Director, DEC Division of Water
 3rd Alternate: Tom Cullen, Assistant Director, DEC Division of Water
 4th Alternate: Angus Eaton, Director, DEC Bureau of Water Resource Management
 Advisor: Emily Lloyd, New York City DEP Commissioner

DELAWARE

2nd Alternate: Kara Coats, DNREC Deputy Secretary
 3rd Alternate: Virgil Holmes, Director, DNREC Division of Water: Management Section
 4th Alternate: Bryan Ashby, Manager, DNREC Surface Water Discharges Section

FEDERAL GOVERNMENT

2nd Alternate: David Leach, USACE NAD Programs Director
 3rd Alternate: Henry (Hank) Gruber, USACE NAD Deputy Chief of Planning & Policy Division

PENNSYLVANIA

2nd Alternate: Kelly Jean Heffner, DEP Special Deputy Secretary for Water Resources Planning

NEW JERSEY

2nd Alternate: Daniel Kennedy, DEP Assistant Commissioner for Water Resource Management
 3rd Alternate: John Giordano, DEP Assistant Commissioner for Compliance and Enforcement
 4th Alternate: Fred Sickels, Director, DEP Division of Water Supply and Geoscience (*Retired mid-year*)

OUR WATER RESOURCES

Annual Hydrologic Conditions Summary

State-Issued Drought Watches in Pennsylvania and New Jersey During 2015

Dry conditions impacted the northeastern portion of Pennsylvania during early 2015. Due to below-normal groundwater levels, the Pennsylvania Department of Environmental Protection (DEP) issued a drought watch on March 24 for 27 counties. Eight of these counties were in the Delaware River Basin (DRB): Berks, Carbon, Lackawanna, Luzerne, Monroe, Pike, Schuylkill, and Wayne. A drought watch is the first and least severe of three drought classifications in Pennsylvania. Residents in counties under the drought watch were requested to conserve water by limiting non-essential water use.

This brief hydrological recap for 2015 was prepared by the DRBC's Operations Section. More detailed information about the basin's hydrologic conditions can be found on the DRBC web site at www.nj.gov/drbc/hydrological.

Below-normal precipitation continued through the spring and on June 17 the drought watch was expanded to 10 additional counties, including Lehigh and Northampton in the DRB. Conditions improved by early summer with above-normal rainfall during June.

The 30-day average streamflow increased and groundwater levels returned to normal or above-normal conditions. Consequently, PADEP lifted the drought watch for all 37 counties on July 10.

Dry conditions occurred in northern New Jersey later in 2015 due to low precipitation during the summer which stressed drinking water supply reservoirs. Concerned that the dry weather would continue into autumn, New Jersey DEP issued a drought watch on September 23 for the Northeast, Central, and Coastal North regions of the state. These regions included small sections of the following DRB counties: Morris, Hunterdon, Mercer, Monmouth, and Ocean. NJDEP urged residents in these counties to conserve water, especially for non-essential uses such as lawn watering and car washing. The drought watch was still in effect at the end of 2015.

Salt Front

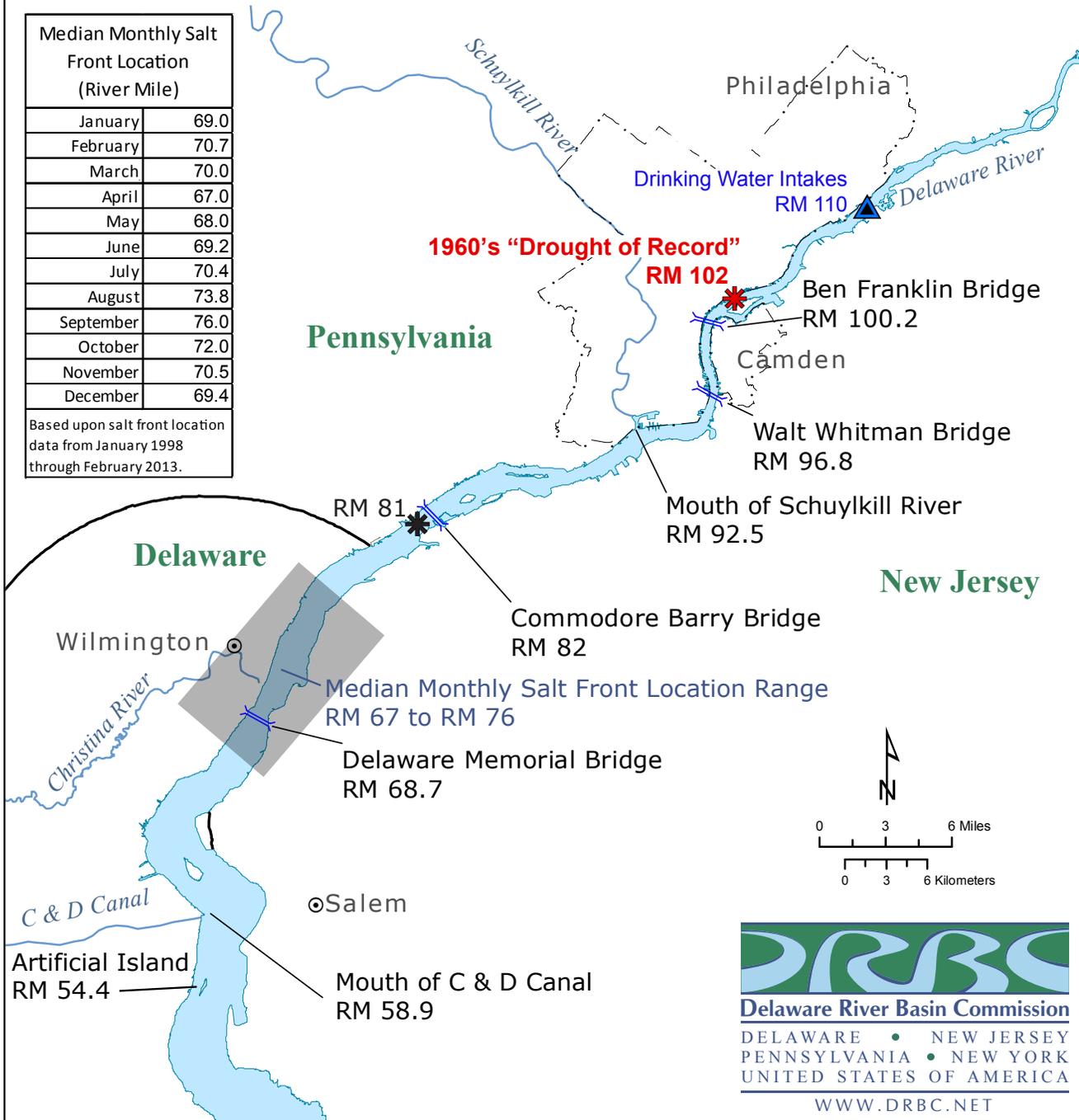
The salt front or salt line is defined as the 250 parts-per-million (or milligram-per-liter) chloride concentration. The seven-day average location of the salt front is used by DRBC as an indicator of salinity intrusion in the Delaware Estuary. The salt front's location fluctuates along the Delaware River as streamflow increases or decreases in response to inflows, diluting or concentrating chlorides in the river.

The farthest upstream location of the salt front during 2015 was river mile (RM) 81 in late October. This

Farthest Upstream Salt Front Location During 2015 - River Mile (RM) 81

Median Monthly Salt Front Location (River Mile)	
January	69.0
February	70.7
March	70.0
April	67.0
May	68.0
June	69.2
July	70.4
August	73.8
September	76.0
October	72.0
November	70.5
December	69.4

Based upon salt front location data from January 1998 through February 2013.



The salt front or salt line is defined as the 250 parts-per-million (or milligram-per-liter) chloride concentration. The seven-day average location of the salt front is used by DRBC as an indicator of salinity intrusion in the Delaware Estuary. The salt front's location fluctuates along the Delaware River as streamflow increases or decreases in response to changing inflows, diluting or concentrating chlorides in the river. River Mile (RM) 0 is located at the mouth of the Delaware Bay (i.e., where the bay meets the Atlantic Ocean).

location is three miles upstream of the Pennsylvania-Delaware state line and one mile downstream of the Commodore Barry Bridge. By comparison, the farthest recorded upstream location of the salt front reached RM 102 (two miles upstream of the Benjamin Franklin Bridge in Philadelphia) during the 1960's drought of record.

Precipitation

The majority of the DRB counties (for which information is available) experienced below-normal precipitation during 2015. Only 10 of the 38 reported counties, all located in the southern portion of the basin, recorded normal to above-normal precipitation during the year. Annual precipitation totals ranged from 35.3 inches in Lackawanna County, Pa. (10.4 inches *below* normal) to 52.5 inches in Cumberland County, N.J. (9.1 inches *above* normal).

The precipitation amounts at Montague, N.J., Trenton, N.J., and Wilmington, Del. are used to represent the regional precipitation throughout the DRB. The observed annual precipitation above Montague was 43.3 inches (2.0 inches *below* normal) while observed

2015 precipitation above Trenton was 44.1 inches (3.9 inches *below* normal). These totals contrast with precipitation at Wilmington, which was 48.7 inches (5.7 inches *above* normal) in 2015.

Streamflow

Observed monthly mean streamflows along the main stem of the Delaware River and its two-largest tributaries, the Schuylkill and Lehigh rivers, were below normal during much of the first half of the year. These low flows followed a period of below-normal precipitation that began during the autumn of 2014. The lowest monthly average streamflows of the year occurred during February, when Delaware River flows at Montague and Trenton were 38% and 34% of normal, respectively.

Above-normal rainfall in late June increased streamflows in July and resulted in some of the highest monthly average flows of 2015. The Delaware River at Montague and Trenton averaged 270% and 261% of normal flow, respectively, during this time. Normal to above-normal streamflow continued into September, but flows declined during the autumn months and generally averaged normal to below normal through the end of the year.

Lower Basin Reservoir Storage

Both Beltzville Reservoir (located on the Pohopoco Creek, a tributary of the Lehigh River) and Blue Marsh Reservoir (located on the Tulpehocken Creek, a tributary of the Schuylkill River) maintained storage in the normal range during 2015. Consequently, the DRBC's lower basin drought operating plan was not implemented. Additionally, the commission was not required to make releases from the lower basin reservoirs during 2015 to maintain the Delaware



Beltzville Reservoir (Photo courtesy of the U.S. Army Corps of Engineers)

River streamflow objective of 3,000 cubic feet per second (cfs) at Trenton.

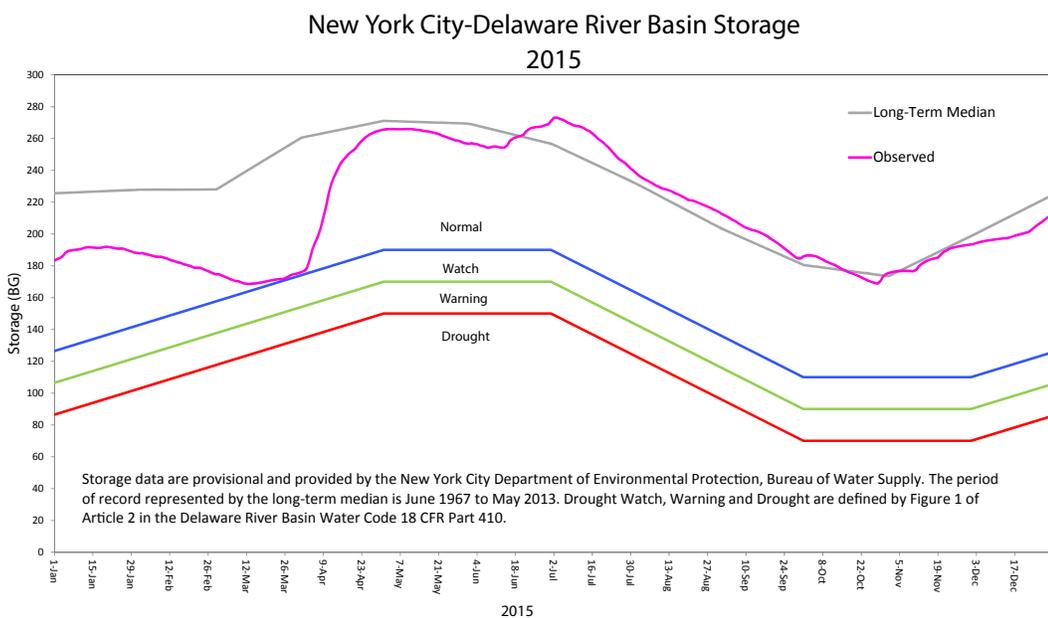
Beltzville’s elevation was below normal at the start of 2015, resulting from drawdown due to DRBC-directed releases made during the autumn of 2014 to maintain Trenton’s streamflow objective. Beltzville returned to normal elevation in early February 2015. Based on weather forecasts, the U.S. Army Corps of Engineers released extra water during the period September 30–October 2 to create additional storage space in Beltzville and Blue Marsh reservoirs in anticipation of Hurricane Joaquin; however, the final track of the storm did not impact the DRB.

No releases were made from Merrill Creek Reservoir during 2015. Storage in this reservoir, located near Phillipsburg, N.J., is used to replace evaporative losses (consumptive use) caused by power generation when the basin is under DRBC-declared drought operations and the equivalent average daily flow target for the Delaware River at Trenton is below 3,000 cfs.

Upper Basin Reservoir Storage

The three New York City (NYC) Delaware reservoirs—Cannonsville, Pepacton, and Neversink—are located in the upper DRB on headwater tributaries feeding the main stem Delaware River. Since the combined storage did not fall below the drought watch level during 2015, the implementation of DRBC’s basinwide drought operating plan was not required.

On January 1, 2015, combined storage in the three NYC Delaware Basin reservoirs was 183 billion gallons (bg), which is 68% of usable capacity and approximately 42 bg below the long-term median usable storage for that date. Combined storage decreased during the first quarter of the year to only a few billion gallons above the drought watch curve; this was deceiving, however, because significant storage was contained in the snowpack above the NYC reservoirs. On March 31, the snow survey conducted by NYCDEP indicated an average snow water equivalent (SWE) of 3.0 inches, or 49 bg. Historically,



This graph shows the observed combined water storage in the NYC-Delaware Basin reservoirs (Cannonsville, Pepacton, and Neversink) during 2015, as well as the long-term median and drought rating curves.

the SWE for late March is 17 bg. The snowpack surrounding the reservoirs melted as the spring season progressed, increasing storage and averting a drought watch condition. Although the reservoirs did not refill by the normal refill goal of May 1, they were full by July 1. Storage was above the long-term median until mid-October, after which below-normal storage persisted for the remainder of 2015. As of December 31, 2015, combined storage in the three NYC reservoirs was 213 bg, which is 79% of usable capacity and 12 bg below the long-term median usable storage for that date.

The Office of the Delaware River Master directed releases of water from the NYC reservoirs totaling approximately 39 bg between May and October to meet the flow objective of 1,750 cfs in the Delaware River at Montague as required by the 1954 U.S. Supreme Court Decree. More than 80 percent of these releases were made during the drier periods in September and October. In comparison, the River Master directed releases totaling 43 bg in 2014 and 101 bg during the drought year 2001.

Cannonsville Dam Repairs

Turbid water was observed coming from a rock embankment below



View of cloudy discharge downstream of Cannonsville Dam several days after it was discovered. (Photo by Steve Tambini/DRBC)

Cannonsville Dam during July 2015. The observation was made as borings were being drilled at the dam site in preparation for a 14-megawatt hydroelectric facility. The turbid flow was the result of the drilling, which had released naturally pressurized groundwater and sediment from the borings into the West Branch Delaware River. As a precaution and to facilitate repairs, NYCDEP reduced Cannonsville’s storage by increasing drinking water diversions and downstream releases. The turbid flow was stopped on August 1 after relief wells were used to pump groundwater from the pressurized aquifer that was discharging the sediment into the river. To complete the repair, the original bore holes were enclosed with casing and sealed with grout. During the July 15–August 5 repair period, Cannonsville’s storage was reduced from 97% to 73% through the extra diversions and releases, which represented an approximate 16.5-foot drop in the storage elevation.

Updated Water Resource Planning Model

DRBC in April released the Delaware River Basin-Planning Support Tool (DRB-PST) which provides interested stakeholders with the ability to test flow management scenarios against a set of existing targets, regulations, and laws that govern the use of water within the Delaware River Basin. This updated modeling tool will show users how those scenarios would change an array of outcomes, including the amount of water available for drinking supplies, downstream releases, habitat protection, flood mitigation, and more.

“The availability of the DRB-PST modeling tool is a positive development intended to support a more comprehensive understanding about how reservoir and flow management operating plans affect river flows and related aquatic habitats,” said DRBC Executive Director Steve Tambini. “It will allow interested stakeholders to use a science-based tool to compare the impacts of ‘what-if’ scenarios on multiple and complex water resource goals, targets and objectives.”

River flows, diversions out of the basin, and water uses within the basin are managed, operated, and regulated through a series of complex and interdependent rules and targets. The DRB-PST model uses hydrologic inputs (like runoff and snowmelt), operating conditions, and management rules to help evaluate the impacts of reservoir operating plans on the multipurpose water resource objectives identified in the Delaware River Basin Compact, which created the DRBC in 1961.

Three reservoirs located in headwaters of the Delaware River that are owned and operated by New York City (NYC) provide about half of the city’s water supply. Downstream releases of water from these reservoirs and diversions out of the basin for NYC and New Jersey were established and continue to be negotiated by Delaware, New Jersey, New York, Pennsylvania, and NYC (commonly known as “the Decree Parties”) under the terms of a 1954 U.S. Supreme Court Decree and the subsequent Good Faith Agreement Recommendations.

The DRBC and the Decree Parties have some overlapping membership and a long history of collaboration on planning and modeling issues within

the DRB. The DRBC signatory members include the four basin states and the federal government. NYC is not a DRBC member. The compact prohibits the DRBC from adversely affecting the releases or diversions provided in the 1954 Decree without the unanimous consent of the five Decree Parties.

The Flexible Flow Management Program (FFMP), which has been unanimously approved by the Decree Parties, is intended to meet water supply demands, protect fisheries habitat downstream of the NYC-Delaware Basin reservoirs, enhance flood mitigation, and repel the upstream movement of salt water in the Delaware Estuary. The FFMP’s target numbers and goals are included in the PST-DRB model and any changes to the FFMP in the future can be reflected in the model as well.

The DRBC’s original water supply planning model was developed in 1981. That model was revised several times to include additional data, facilities, and flow management policies, and was moved into OASIS software in the early 2000s. The original OASIS model known as DRB-OASIS can simulate the current FFMP, including the Combined Seasonal Storage Objective for flood mitigation, but not the revised Habitat Protection Program which has evolved since the first FFMP.

The Habitat Protection Program uses simulated forecasts of reservoir inflows to determine the amount of water available for fisheries releases from the three NYC reservoirs. In doing so, modeling can be performed to evaluate scenarios that use water more efficiently for fisheries habitat objectives while maintaining the reliability of critical water supply objectives and flood mitigation components of the FFMP.

Additional information about DRB-PST can be found at www.nj.gov/drbc/programs/flow/drbspst.html.

DRBC's Water Quality Monitoring Activities

The DRBC's water quality monitoring programs play a key role in carrying out its compact-required responsibilities. These monitoring efforts are important because water resources cannot be properly managed if they are not measured. DRBC's monitoring programs help to protect and restore quality in the basin by providing a mechanism to evaluate how water quality criteria are being met and allow for data to be assessed.

A publication was produced in 2015 to help the public better understand the DRBC's past and present water quality initiatives, which can be viewed on its web site at www.nj.gov/drbc/library/documents/WQBooklet_final_print.pdf.

Here are some examples of DRBC staff activities conducted during 2015. Additional information can be found at www.nj.gov/drbc/contact/newsletter_water-qualityJuly2015.html.

Scenic Rivers Monitoring Program

DRBC and the National Park Service partner in this effort to assess whether existing water quality is being maintained in Special Protection Waters. Close to 60 sites are sampled between May and September and analyzed for nutrients, dissolved oxygen, and other conventional pollutants.

Delaware River Biomonitoring Program

This DRBC program assesses ecosystem health and biological water quality criteria in the non-tidal Delaware River. Between August and September, macroinvertebrate

(aquatic bugs) and periphyton (alga) samples are collected at 25 sites.

Delaware Estuary Boat Run Monitoring Program

Initiated in 1967, this effort is one of the longest running monitoring programs in the world. Each year from April to October, DRBC contracts with the Delaware Department of Natural Resources and Environmental Control (DNREC) to collect water samples at 22 sites in the Delaware Estuary from the head of tide at Trenton, N.J. to the mouth of the Delaware Bay.

Fish Tissue Monitoring

DRBC periodically samples fish tissue of resident fish species in the non-tidal and tidal portions of the main stem Delaware River. In the non-tidal portion, samples of smallmouth bass and white sucker are collected at three locations; in the tidal portion, samples of channel catfish and white perch are collected at five locations. The samples are analyzed for PCBs and other chemicals, as well as metals.

Ambient Water Monitoring for PCBs

In support of the PCB Total Maximum Daily Loads (TMDLs) for the Delaware Estuary and Bay, DRBC staff collect ambient water samples to provide data on PCB concentrations in the tidal portions of the Delaware River.

Ambient Toxicity Monitoring with DNREC

In 2015, commission staff collaborated with DNREC to conduct ambient water toxicity testing in several Christina Basin waterways, including the Christina River as well as the Brandywine, Red Clay, and Shellpot creeks. The monitoring was done as

part of DNREC's Watershed Approach to Toxics Assessment and Restoration (WATAR), which is a watershed-scale approach to compile, assess, and access toxics data in Delaware's waterways by sampling water, fish tissue, and sediment. This effort will provide a greater understanding of the status, trends, and sources of toxics, establish a baseline of water quality, and identify toxic hotspots to target for remediation and restoration. Samples collected are being analyzed for toxic substances that include PCBs, mercury, and some organic compounds. Monitoring toxicity in the basin's estuarine waters is an essential component of DRBC's water quality programs, and helping DNREC with its WATAR assessment is a great example of how the commission partners with its basin states to help protect water resources. Learn more by visiting www.dnrec.delaware.gov/dwhs/SIRB/Pages/WATAR.aspx.

DRBC Staff Participates in Frenchtown WWTP Ribbon Cutting Event

DRBC Water Resource Branch Manager William Muszynski in October participated in a ribbon cutting ceremony celebrating the opening of the newly reconstructed Frenchtown Borough (N.J.) wastewater treatment plant (WWTP).

This project was a complete reconstruction of a WWTP located on the non-tidal Delaware River, which is designated as Special Protection Waters (SPW) by the DRBC. SPW designation protects areas of existing high water quality through stricter control of wastewater discharges and reporting requirements. This meant that

when it was time for Frenchtown's WWTP to be upgraded, it had to meet DRBC's anti-degradation requirements under SPW. The new plant is also designed to avoid the impacts and damages that the old plant experienced from flooding events in 2004-2006.

The significant cost to reconstruct was more than the small, rural community could take on without financial assistance. Therefore, a funding partnership was established between the Borough of Frenchtown, the U.S. Department of Agriculture (USDA) Rural Development Program, and the New Jersey Environmental Infrastructure Trust to help finance the project by combining state and federal programs, grants, and loans.

In his remarks, Mr. Muszynski praised Frenchtown for undertaking this successful funding partnership in order to build a plant that will provide sufficient capacity for the community's current and future needs and will better protect the Delaware River. The new WWTP has high quality effluent as a result of the new treatment technology installed, allowing for continued protection of the existing water quality and benefiting downstream communities that use the Delaware River as a source of drinking water. "Treatment plants such as this are often thought of as sources of pollution, when in reality they are the facilities that treat and remove pollution and protect our streams and rivers," Muszynski said. "This facility will be an



(from left to right) DRBC's William Muszynski, USDA Rural Development Program/N.J. State Director Howard Henderson, N.J. Environmental Infrastructure Trust Executive Director David E. Zimmer, former Frenchtown Mayor/Freeholder Ronald Sworen, plant operator Victor Gilardi, Frenchtown Mayor Warren E. Cooper, and N.J. DEP Commissioner Bob Martin are all smiles as they are about to cut the ribbon dedicating the new plant. (Photo by DRBC)

integral part of protecting and preserving the high quality of the Delaware River for years to come.”

Additional information about the DRBC’s SPW program can be found at www.nj.gov/drbc/programs/quality/spw.html.

15-Year Accomplishments of the Lower Delaware National Wild & Scenic River Program

The year 2015 marked the 15th anniversary of the Lower Delaware National Wild and Scenic River Program. Added to the National Wild and Scenic Rivers System by the U.S. Congress and President Clinton in 2000, the lower Delaware River designation includes a 38.9-mile section of the main stem Delaware between the Delaware Water Gap and Washington Crossing, along with about 28 miles of three tributaries (Tinicum, Tohickon, and Paunacussing creeks).

In recognition of this anniversary, the National Park Service (NPS) published “Accomplishments of the

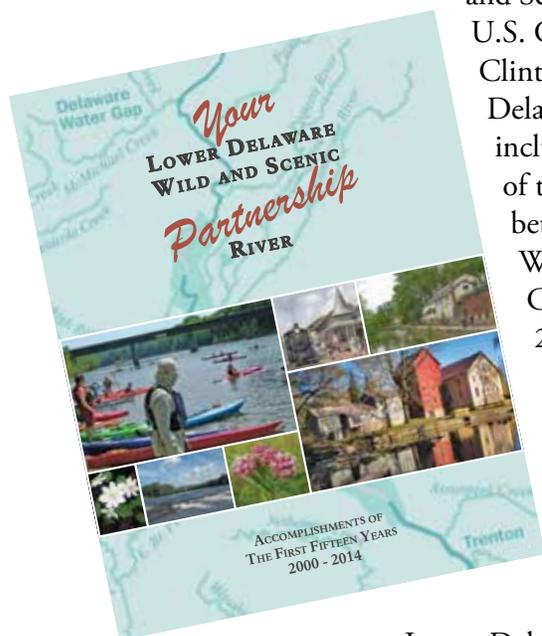
Lower Delaware National Wild and Scenic River Program—the First Fifteen Years.” This report, which was prepared in cooperation with DRBC and the other members of the Lower Delaware Wild and Scenic River Management Committee, chronicles the program’s history and assesses the status of its initial goals and recommendations. DRBC designed the companion brochure that accompanied the full 77-page report.

The lower Delaware is considered

a partnership wild and scenic river, overseen by the Lower Delaware Wild and Scenic River Management Committee, with funding support and oversight from the NPS. With \$1.1 million in federal investment, the program engages more than 50 organizations on more than 60 projects. Thirty-four municipalities are included in the corridor which spans five counties in two states. Successful projects represent a broad array of categories including land stewardship programs, trail development, invasive species removal, monitoring and assessment initiatives, local ordinances and resource inventories, streambank and historic restoration, and the creation of outreach publications and curricula for a floating classroom.

It is hoped that the report and brochure will prompt new partners to engage in the collaborative process of advancing the goals and protecting the special character of this scenic and recreational river.

The Lower Delaware is one of three segments of the Delaware River designated as part of the National Wild and Scenic Rivers System. These three stretches total just over 150 river miles, or three-quarters of the entire non-tidal Delaware. The Delaware Water Gap National Recreation Area, which includes a 40-mile stretch of the total Wild and Scenic designation, celebrated its 50th anniversary in 2015 (www.nj.gov/drbc/home/newsbytes/approved/20150902_dewa-turns-50.html). The NPS web site reports that only 12,709 miles of 208 rivers in 40 states and the Commonwealth of Puerto Rico (just over one-quarter of one percent of the nation’s rivers) are included in the National Wild and Scenic Rivers System (as of December 2014).



Additional information, including links to the complete report and brochure, can be found at www.nj.gov/drbc/basin/wild.html.

DRBC Joins Partners at Schuylkill River Restoration Fund Ceremony

DRBC staff once again participated in the Schuylkill River Restoration Fund (SRRF) awards ceremony in September 2015 to help announce the distribution of over \$274,000 to various water quality improvement projects throughout the Schuylkill River Watershed.

The ceremony took place at the Beth and David Rice Dairy Farm in Kempton, Pa., which was awarded SRRF grant monies in 2014 to implement best management practices for agriculture and stormwater control, including improved manure storage, a new waste transfer system, and grazing controls. These enhancements are helping to reduce pollutant runoff and infiltration into a creek flowing through the property, which eventually reaches the Schuylkill River.

Award ceremony speakers included DRBC Executive Director Steve Tambini, Schuylkill River Heritage Area (SRHA) Executive Director Silas Chamberlin, Kelly Anderson with the Philadelphia Water Department (PWD), Chris Gerdes with Exelon Generation Limerick Generating Station, and David Snyder with The Coca-Cola Company. Mr. Tambini focused his remarks on how the SRRF helps support local conservation projects, which improve water quality and serve as the foundation for healthy watersheds. The SRRF brings together government agencies, private industries, non-profit organizations, local businesses,

and local community members to achieve positive environmental results for the Schuylkill River Watershed, demonstrating how partnering works to accomplish great things.

The \$274,623 distributed from the SRRF in 2015 directly supported six projects and three land transaction grants, all of which will improve the water quality in the Schuylkill River and its tributaries, a source of drinking water for 1.5 million people. The Schuylkill is the Delaware River's largest tributary. The funded projects will mitigate stormwater runoff, abandoned mine drainage, and agricultural pollution, while the land transaction grants will assist with costs associated with permanent protection of priority watershed parcels.

Contributors to the SRRF in 2015 included Exelon Generation LLC, PWD, first-time contributor The Coca-Cola Company, Aqua PA, and MOM's Organic Market. Administered by SRHA, the SRRF was initiated ten years ago with funds from Exelon, which has participated every year. To date, the SRRF has awarded over \$2.5 million to 73 Schuylkill Watershed water quality improvement projects.

The SRRF was originally created under a DRBC docket approved in 2004 and Exelon's desire to support restoration efforts in the Schuylkill River Watershed. DRBC serves on the advisory committee that chooses which projects get funded annually and approves the projects that are selected for grants using the Exelon funds.

Additional information, including the listing of the funded projects in 2015, can be found on the DRBC web site at www.nj.gov/drbc/programs/project/pr/srrf.html.

New Web-Based Flood Resources Portal

The commission unveiled a new, user-friendly flood resources portal on its web site in 2015 that includes links and detailed information about flood alerts, forecasts, zones, preparedness, and history from the National Weather Service (NWS) and the U.S. Geological Survey (USGS), as well as other sources such as federal and state emergency management agencies.

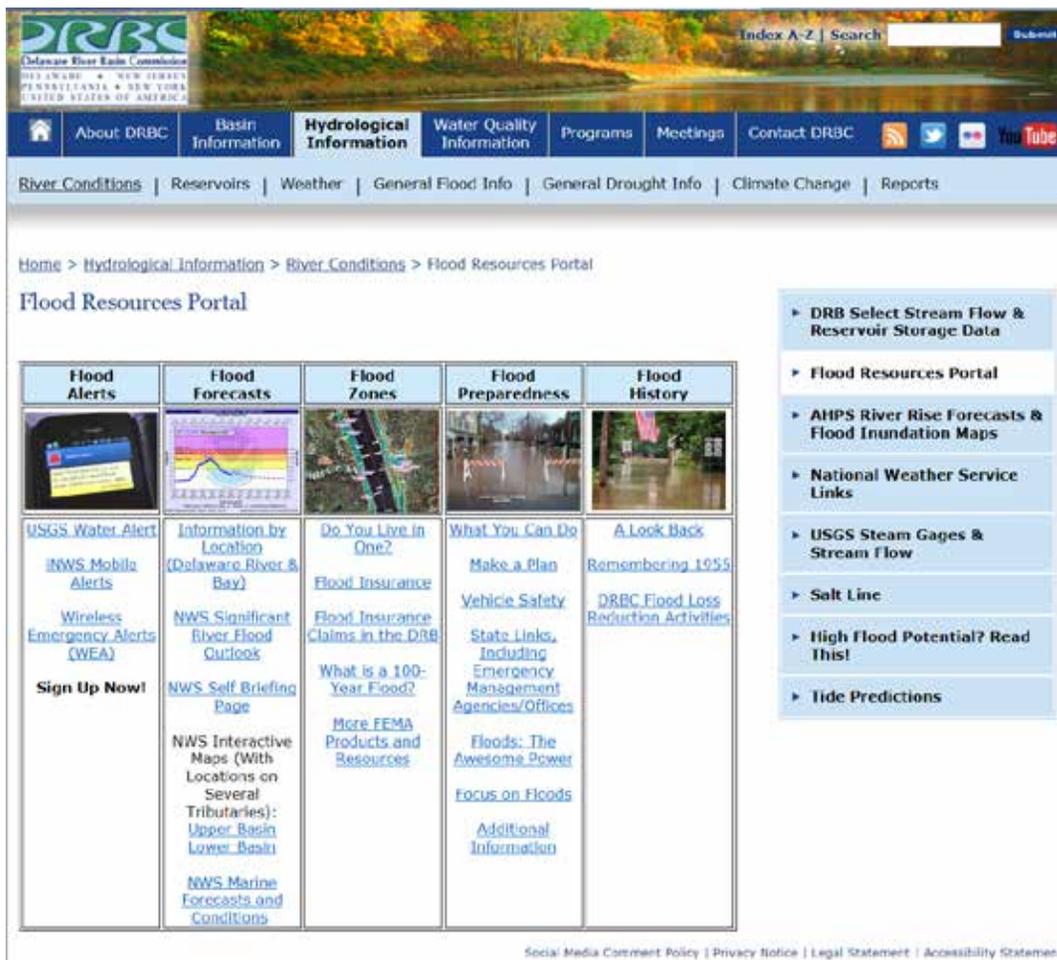
“The time to prepare for floods is not the day before or during the next big storm – it’s now,” said DRBC Executive Director Steve Tambini. “Residents of flood-prone areas are encouraged to visit the portal and learn what it contains

in advance of the next potential flood event.”

The flood resources portal provides easy access to NWS flood information for 17 sites on the main stem Delaware River and Delaware Bay, as well as to interactive NWS maps to view forecast points on several tributaries throughout the basin.

The portal also provides links where the public can learn about or sign up to receive alerts offered by the National Oceanic and Atmospheric Administration (NOAA), NWS, and USGS.

The flood resources web portal can be found at www.nj.gov/drbc/hydrological/river/portal-flood.html.



OUR REGULATED COMMUNITY

DRBC Completes One Process/ One Permit Rulemaking

The DRBC at its December 9, 2015 public business meeting unanimously approved an amendment to its *Rules of Practice and Procedure* to provide for a One Process/One Permit Program to promote interagency coordination and achieve regulatory program efficiencies between the DRBC and the four basin states while achieving the same or improved environmental outcomes. The rule became effective March 4, 2016.

“For those projects subject to regulatory review by both the DRBC and a basin state, the objective of the One Process/One Permit Program is to provide for close collaboration on shared mission objectives and the issuance of a single approval instrument incorporating the applicable requirements of the two authorities,” said DRBC Executive Director Steve Tambini. “The focus is on administrative changes to implement current regulatory programs and, where appropriate, to allow the more protective of DRBC and state requirements to be included in a single permit.”

“The One Process/One Permit Program is designed to avoid duplication of governmental resources and reduce the potential for confusion on the part of regulated entities and the public regarding regulatory requirements applicable to projects,” said Commission Chair *Pro Tem* Kara Coats, who represents Delaware Gov. Jack Markell

on the DRBC. “It does not alter the regulatory standards of the DRBC or any state agency, and the respective authorities of each agency will be expressly preserved.”

The concept of a “One Permit Rule” was introduced to the basin community during meetings with various stakeholders in February and March, 2015. As directed by the commissioners in a March 11, 2015 resolution to initiate rulemaking, a draft rule was prepared by staff and published on the DRBC web site on May 17. A public hearing was conducted on June 9 and written comments were accepted through July 1.

To address concerns about continued public access to information, the final rule included a new paragraph requiring signatory party agencies to notify DRBC at least monthly of applications received under the One Process/One Permit Program to enable the commission to maintain on its web site a list of all projects being administered pursuant to the program. This modification also will facilitate DRBC’s administration and evaluation of the program.

Other revisions clarified that applications for approvals required by the Delaware River Basin Compact and DRBC regulations, but not within the scope of the One Process/One Permit Program, must continue to be submitted to the commission. The final rule also provided more efficient mechanisms for the disposition of DRBC dockets when a single state permit is issued by the state,

and included a clarification that DRBC’s current project review fee schedule will remain in effect, including for projects administered under the program, unless and until the commission replaces it.

It is expected that the states will be the lead agencies and issue permits under the One Process/One Permit Program for wastewater discharges under National Pollutant Discharge Elimination System (NPDES) water quality programs. For water withdrawals, the lead agency could either be the state or the DRBC, depending upon current state programs and the terms of an administrative agreement between DRBC and the appropriate state agency.

The commission staff and state agencies will continue to collaborate and cooperate within a “one process” system. DRBC staff will continue to provide the current level of technical review under applicable DRBC standards where they have special expertise. DRBC staff also will continue to identify conditions

of approval to ensure that projects subject to review under the compact and implementing regulations do not impair or conflict with the commission’s comprehensive plan.

Revisions appearing in the final rule underscored that participation in the One Process/One Permit Program by signatory party agencies is voluntary and the scope of a signatory party agency’s participation will be defined by an administrative agreement (AA) between DRBC and the agency after the agreement undergoes a duly noticed public hearing. With the approval of the final rule, DRBC and the New Jersey Department of Environmental Protection fully implemented their March 2015 agreement, which had also provided an opportunity for DRBC and NJDEP to “practice” using new collaborative processes between the two agencies for review of wastewater discharge permit applications until the new rules were adopted. Agreements may now be developed with Delaware, New York, and Pennsylvania that would allow for their participation in the One Process/One Permit program.

Detailed information can be found on the commission’s web site at www.nj.gov/drbc/programs/project/op/index.html.

DRBC Accepts Online Payments for Water Use Charges

DRBC began accepting online payments via e-Check (ACH) in October 2015 for the Water Supply Charges Program upon submission by participants of required surface water use reporting. This feature allows users to make convenient electronic payments in a more environmentally friendly manner. DRBC recognizes that some users may



Blue Marsh Reservoir (located on a tributary to the Schuylkill River in Berks County, Pa.) is owned and operated by the U.S. Army Corps of Engineers. DRBC pays the federal government from its Water Supply Storage Facilities Fund for reservoir storage here that is used for directed releases during dry conditions. (Photo courtesy of the U.S. Army Corps of Engineers)

not be able to take advantage of online payment capabilities, so the commission will continue to accept check payments mailed to its West Trenton office.

This is a continuation of a multi-phase technology upgrade that began in 2013 when DRBC announced the launch of its new, online electronic reporting system for Water Supply Charges Program participants designed to simplify surface water use reporting and eliminate the need for paper reports.

Between 1964 and 1974, the commission authorized a system of water supply charges applicable to surface water uses to cover the costs associated with making the basin water supply available and maintaining its continued availability in adequate quantity and quality over time. Surface water charges provide the revenue stream the commission needs to help repay the debt service and cover operations and maintenance costs for its water supply storage in two federal multi-purpose reservoirs, Beltzville and Blue Marsh. These charges also support DRBC administrative and staff costs related to the protection and preservation of the basin's water quantity and quality. Storage in Beltzville and Blue Marsh reservoirs is utilized in the commission's lower basin drought operating plan.

Additional information about the Water Supply Charges Program as well as the online reporting system with payment options can be found at www.nj.gov/drbc/programs/supply/water-charging-program.html.

DRBC 2015 Project Review/ Permitting Summary

The Delaware River Basin Compact provides that no project having a

substantial effect on the water resources of the basin shall be undertaken unless it shall have been first submitted to and approved by the commission. In accordance with Section 3.8 of the compact, the commission is required to approve a project whenever it finds and determines that the project would not substantially impair or conflict with the comprehensive plan. The commission provides by regulation for the procedure of submission, review, and consideration of projects and for its determinations pursuant to Section 3.8.

During 2015, the commissioners approved 128 project permits (referred to as "dockets") at the DRBC's four quarterly business meetings. Of this total, 72 were docket renewals involving no substantive changes, 26 were renewals involving significant changes (such as an increase or decrease in an authorized withdrawal or discharge), and 30 were projects that had not been previously reviewed by the commission. About half of the approved dockets were issued to wastewater treatment plants.

Prior to any action taken by the commissioners, the projects are the subject of a public hearing and comment period to provide interested persons the opportunity to offer written or oral comments (*please see the related article on page 22 regarding the revised hearing and meeting formats to be used on a trial basis*).

Additional information can be found on the DRBC web site at www.nj.gov/drbc/programs/project/.

OUR PUBLICS AND STAKEHOLDERS

New Format for DRBC Public Hearings and Business Meetings

The DRBC announced in October that it would use a new format beginning with its final quarterly public hearing and business meeting in 2015.

Under the new format to be used on a trial basis through the end of 2016, the public hearing on draft project permits (referred to as “dockets” by DRBC) and any applicable resolutions would take place about four weeks prior to the DRBC business meeting where they may be considered for commission action. Written comments on the hearing items would be accepted until close of business on the day following the hearing.

As is currently the case, there would be no opportunity for additional public comments at the business meeting on those items for which a hearing was

completed or the written comment period already ended.

Prior to this change, DRBC public hearings on proposed projects and resolutions had been held on the day preceding the business meetings where they may be considered for commission action. Under the previously used format, comments from the public on draft dockets and resolutions were generally accepted through the close of business on the public hearing date where oral comments could also be provided. However, situations would arise where interested parties offered substantive verbal or written comments, which made it very difficult for the commission to thoroughly consider the public input in the limited time available before the next day’s business meeting for possible action by the commissioners. As a result, consideration of the project by the commissioners might need to be held over until a subsequent meeting three months later.

“Moving the date of the public hearing to four or five weeks preceding the business meeting will afford the commissioners and staff more time to thoroughly review and respond to the comments and concerns of interested parties,” DRBC



Five commissioners and DRBC staff listen to oral comments about a draft docket at the September 2015 public hearing held in Wilmington, Delaware. (Photo by Clarke Rupert/DRBC)

Executive Director Steve Tambini said when making the new format announcement. “We’ll see how the new format works on a trial basis over the next year and make appropriate adjustments as necessary.”

The DRBC also announced plans to afford an opportunity for Open Public Comment for up to one hour following public hearings and business meetings as time allows. During Open Public Comment, individuals may speak to DRBC commissioners and staff about any topic that is relevant to the management of the basin’s waters. Comments are not recorded and are not included in any decision-making official record.

Draft dockets as well as any proposed resolutions on which the public is invited to provide verbal or written comments will continue to be posted on the DRBC web site approximately 10 days prior to the hearing date.

A Frequently Asked Questions (FAQ) document about the changes to the public hearing and business meeting formats, along with updated procedures for hearings, meetings, and open public comment sessions, were posted on the commission’s web site at www.nj.gov/drbc/meetings/upcoming/.

DRBC Advisory Committees Have Another Busy Year

Section 3.10 of the Delaware River Basin Compact provides that the commission “may constitute and empower advisory committees, which may be comprised of representatives of the public and of federal, state, county and municipal governments, water resources agencies, water-using industries, water-interest groups, labor and agriculture.”

Accordingly, the DRBC has established six standing advisory committees: Flood Advisory Committee (FAC), Monitoring Advisory and Coordination Committee (MACC), Regulated Flow Advisory Committee (RFAC), Toxics Advisory Committee (TAC), Water Management Advisory Committee (WMAC), and Water Quality Advisory Committee (WQAC).

The composition of each committee is defined by the DRBC-approved resolution that established it. The number of members ranges from 10 (RFAC) to 22 (FAC).

During 2015, 13 advisory committee meetings took place and all were open to the public. In some instances, an advisory committee may hold a joint meeting with another committee, as was the case in February 2015 when the MACC held a joint meeting with the Partnership for the Delaware Estuary’s Science and Technical Advisory Committee.

The DRBC values its advisory committees as important forums for interjurisdictional and stakeholder information-sharing, dialogue and coordination, including the development of recommendations for the commission’s consideration.

Information about each advisory committee, including current members, upcoming meeting notices, and previously held meeting materials and summaries, can be viewed at www.nj.gov/drbc/about/advisory/.

DRBC’s Six Standing Advisory Committees

- Flood Advisory Committee
- Monitoring Advisory and Coordination Committee
- Regulated Flow Advisory Committee
- Toxics Advisory Committee
- Water Management Advisory Committee
- Water Quality Advisory Committee

OUR EMPLOYEES AND WORKPLACE

The current list of DRBC staff members, including their contact information, can be viewed at www.nj.gov/drbc/about/staff.

DRBC Staffing

The five-member DRBC is served by a professional staff of 39 full-time employees working out of the headquarters building located in West Trenton, N.J. The staff is led by Executive Director Steve Tambini, who reports directly to the commission members.

The full-time staff positions are organized into the following functional areas:

- Directorate – Five, plus one shared position.
- Administrative – Three, plus two shared positions.
- Communications – Two, plus one shared position.
- Planning and Information Technology Branch – Eight, plus

one shared position, in two sections (Water Resource Planning Section and the Information Technology and Water Use Section).

- Water Resource Management Branch – Eleven in two sections (Operations Section and Project Review Section).
- Modeling, Monitoring and Assessment – Seven, plus one shared position, in two sections (Modeling Section and the Standards and Assessment Section).

DRBC Cares for Its Communities

While the main efforts of DRBC staff members are focused on managing and protecting the shared interstate waters of the Delaware River Basin, they also care



Bill Muszynski (left) with Schuylkill River Heritage Area's Tim Fenchel after receiving SAN's Kevin Munley MVP Award. (Photo courtesy of SAN).

DRBC's Bill Muszynski Honored as a Schuylkill Action Network 2015 MVP

The Schuylkill Action Network (SAN) honored DRBC Water Resource Management Branch Manager Bill Muszynski with the Kevin Munley Most Valuable Partner (MVP) Award at its November 2015 annual meeting. This award recognizes the special contributions of individuals who have demonstrated special interest in and support for source water protection and restoration in the Schuylkill River Watershed.

Bill was honored for his efforts regarding the establishment, implementation, and expansion of the Schuylkill River Restoration Fund (SRRF). An article about the SRRF appears on page 17 of this annual report.

Formed in 2003, SAN brings together federal, state, and local agencies, businesses, industry, non-government organizations, and many individual volunteers to work to improve the water quality of the Schuylkill River, the Delaware's largest tributary. DRBC serves as a member of SAN's steering committee.

about our local communities. During 2015, staff volunteered their time for a variety of public service projects.

Several of these public service activities were water-related. In May, staff helped to clean up a section of Miry Run, a tributary to the Delaware River, in Warwick Park, Hamilton Township, N.J. While portions of the park are landscaped, the natural areas along Miry Run are not formally maintained. Due to its proximity to a commercial plaza and large residential neighborhood, trash and other debris frequently end up in this waterbody, which flows through wetlands and is home to various wildlife. Staff were assisted by DRBC-hosted Americorps N.J. Watershed Ambassador Jordan Foreman and also by coordinators with N.J. Clean Communities of Hamilton. Removing trash from local

waterways and adjacent land helps to improve water quality and habitat.

Staff in July spent a day cleaning up a section of the lower Delaware River from Lambertville, N.J. to Milford, N.J. Using the commission's boat, staff were able to target sites that are frequently used by the public, but are not within specific park boundaries and therefore are not routinely maintained. Staff removed about 20 bags of trash and recyclables as well as multiple tires from sites along the Pa. and N.J. shorelines and from several islands in the river.

As the summer season came to a close, DRBC staff volunteers helped to clean up the Delaware River shoreline near the Delair Boat Ramp in Pennsauken, N.J. This event was organized by Living Lands and Waters (LLW), a not-for-profit organization dedicated to improving



Clockwise: The DRBC team of volunteers who helped sort and prepare food donations for distribution to hunger relief programs during the holiday season. (Photo by DRBC)

Watershed Ambassador Jordan Foreman grabbed the prize for the largest item removed from Miry Run during the May 2015 cleanup effort: a tractor tire. (Photo by DRBC)

DRBC staff dig trenches for walkways that will connect the courtyard's picnic areas to other spaces at the Trenton Rescue Mission. (Photo by DRBC)

the health of U.S. inland waterways and watersheds through hands-on stewardship and education. Despite the summer heat and humidity, the DRBC team enjoyed working alongside staff from LLW, the Philadelphia Water Department, and Adventure Aquarium. Volunteers traveled by boat to access additional shoreline areas not easily accessible by foot. Multiple bags of trash and recyclables were collected and properly disposed of by the team.



DRBC's Elaine Panuccio hauls three bags of trash and recyclables collected during the Delaware River shoreline cleanup at Pennsauken. (Photo by DRBC)

Several public service activities also took place away from the water. In April, DRBC staff volunteered at the Rescue Mission of Trenton, a vital resource in the City of Trenton that serves at-risk men and women who are in need of shelter, food, and clothing to help them get back on their feet. Staff worked to beautify the Rescue Mission's courtyard gardens, weeding and digging trenches for walkways that will connect the picnic areas to other spaces. They also helped frame artwork that was later auctioned off at the annual Art All Night Trenton fundraiser.

To round out the year, DRBC staff in December volunteered at the Mercer Street Friends Food Bank in Ewing Township, N.J., the municipality where the commission's office building is located. The team of DRBC volunteers helped sort and prepare food donations for distribution to hunger relief programs all throughout Mercer County. In addition, they brought with them about a dozen bags of non-perishable food items donated by staff. Mercer Street Friends annually distributes over two million pounds of donated food to a network of 60 shelters, soup kitchens, and food pantries. In addition to running the food bank, Mercer Street Friends also offers a free preschool and many programs for youth, adults, and parents. During the holiday season and all throughout the year, DRBC staff are proud to do their part to help those in need.

Additional information about staff public service projects can be found at www.nj.gov/drbc/about/staff/public-service.html.

21st Annual Delaware River Sojourn: "Birthplace of America"

The Delaware River Sojourn, one of the oldest river sojourns in the nation, was held June 20-June 27 and enjoyed another successful year. The theme in 2015 was *Birthplace of America*, celebrating the rich history of the Delaware River and the surrounding region.

Split into daily trips ranging from eight to 13 miles, sojourners paddled nearly 75 miles of the main stem Delaware over the eight-day event that combined the experiences of guided river



DRBC staff with collected trash during the July 2015 Delaware River clean-up. Most of this boatload came from a single collection site. (Photo by Namssoo Suk/DRBC)

excursions with interpretive programs, camping, and camaraderie. From the pristine wilds of the upper basin, through the tranquility of the Delaware Water Gap, to the suburban lower Delaware and urban tidewaters around Philadelphia, the sojourn offered a full experience of the river to paddlers of all skill levels. This year's sojourn also visited Crosswicks Creek, a N.J. tributary to the Delaware River.

Participation numbers were high, with 241 people registered for one or more days. Thanks to grant monies, the sojourn was able to provide free or reduced registration to several youth groups, including students from the William Penn Charter School, Philadelphia Wooden Boat Factory, and Bristol (Pa.) High School.

Educational programming highlighted the Lenape Native Americans, the history of the Delaware Water Gap National Recreation Area and Washington Crossing, and the Delaware River's important role in timber rafting and the U.S. Navy. Participants had the opportunity to tour the Fort Delaware

Museum in Narrowsburg, N.Y., visit the new Tulpehaking Nature Center in Hamilton Township, N.J., and enjoy an overnight stay at the Independence Seaport Museum in Philadelphia. Sojourners also had the option to participate in Tall Ships® Philadelphia Camden, the largest sailing event of its kind in the U.S. in 2015.

By getting individuals out on the river to experience it first-hand, the Delaware Sojourn aims to promote stewardship of the Delaware River Basin and its resources.

The non-profit, annual event is organized by a steering committee comprised of representatives from federal, state, and local agencies, non-profit organizations, and individual volunteers. DRBC has proudly served on the steering committee since the sojourn's early years and is represented by Communications Specialist Kate Schmidt. The 2015 committee was co-chaired by Ian Kindle, an environmental educator with Pennsylvania's Delaware Canal State Park, and John Mauser, director of the



Paddlers approach the Narrowsburg, N.Y. Bridge on day three of the 2015 Delaware River Sojourn. (Photo by Troy Bystrom)

Martins Jacoby Watershed Association.

For more information, please visit www.delawareriversojourn.org.

DRBC Office Gets Greener With New LED Lighting

The DRBC office building became “greener” with the installation of new Luxrite LED light panels. The panels, purchased with the help of a New Jersey Clean Energy Program rebate, was piloted for installation in the building’s kitchen and lunchroom. The new technology uses significantly less energy than the previous lighting, improves light color, and will not need to be replaced for well over a decade, benefiting the environment and the employee workspace, while also providing cost savings to the commission. The program was based upon a suggestion by former DRBC intern Eric Wentz.

Piloting this new technology in the lunchroom is just one way the commission is working to make its office more energy efficient. The pilot program will evaluate the functionality of the LED retrofit; based on the results, the commission could move forward with an office-wide economic/energy savings analysis. Other environmentally friendly improvements already implemented at DRBC’s headquarters include motion sensors that automatically turn off lights in offices and meeting rooms not in use, a retrofit to the retention basin in the front of the building that helps reduce stormwater runoff, and enhanced recycling efforts. Additional “green improvements” will be explored and implemented in the future based upon employee input and available funding.



(from left to right) DRBC’s Chad Pindar, Denise McHugh, and Jerrell Spotwood show one of the new, thin Luxrite LED energy efficient light panels that were installed in the staff lunchroom. (Photo by DRBC)

DRBC Staff Shares Knowledge and Experience

Here is a sampling of the many professional gatherings and outreach events held during 2015 where DRBC staff members informed attendees about the Delaware River Basin and the commission’s ongoing efforts to manage the water resources of the basin without regard to political boundaries:

DRBC Programs Highlighted at PDE Science & Environmental Summit

The Partnership for the Delaware Estuary (PDE) held its 10th Science and Environmental Summit in January. Themed “Balancing Progress and Protection - Ten Years of Science in Action,” the conference brought together scientists, outreach specialists, and resource managers from all over the Delaware Estuary for informative presentations and collaborative networking. DRBC speakers included Basin Planner Jessica Sanchez, Geologist Greg Cavallo, Modeling, Monitoring and Assessment Branch Manager Tom Fikslin, and Standards and Assessment Section Supervisor John Yagecic.

DRBC Staff Moderate and Present at the 100th NJWEA Conference

The New Jersey Water Environment Association (NJWEA) held its 100th Annual Conference in May. NJWEA is a non-profit organization dedicated to preserving and improving New Jersey’s waters through education, training, and information sharing on the latest technologies and scientific advancements. Its members include engineers, operators, students, and other professionals in the water and wastewater fields. Commission staff support NJWEA and its annual

conference in various ways. DRBC Water Resource Management Branch Manager Bill Muszynski, a long-time member of NJWEA, and DRBC Operations Section Supervisor Amy Shallcross moderated the session, “Watersheds: Projects and Management Programs,” and Project Review Section Supervisor David Kovach presented on DRBC’s proposed One Process/One Permit Program rule which would be adopted by the commissioners in December (*please see the article appearing on page 19*). Water Resource Engineers Shane McAleer and Steve Walsh have attended NJWEA’s annual conferences since 2009 and have represented DRBC at its informational booth since 2011.

DRBC Executive Director Speaks at Delaware Watershed Forum

Executive Director Steve Tambini was a featured speaker at the 3rd Annual Delaware River Watershed Forum in October. Speaking on “Water Use in the Delaware River Basin: Reliance and Risks,” he focused on the role of water storage in the basin and that one must look at current water use and needs as well as plan for the future in order to manage water resources effectively. DRBC does that by studying basin water use data, encouraging water conservation from the source to the consumer, managing flow to help ensure that there will be adequate water supply in times of low flow and drought, and by planning



DRBC periodically receives requests to meet with international delegations to discuss the commission and its approach to river basin management. DRBC Executive Director Steve Tambini is pictured here hosting a South Korean delegation in July 2015. (Photo by Katharine Schmidt/DRBC)

for future water supply needs in light of climate change.

The forum, held at the University of Delaware, was hosted by the Coalition for the Delaware River Watershed, which is comprised of not-for-profit organizations whose focus is to help protect and restore the Delaware River, its tributaries, and surrounding landscapes.

DRBC Offers Water Quality Education Outreach

While environmentally focused events take place throughout the year, holding them during the weeks around Earth Day, April 22, is very common. 2015 marked the 45th anniversary of Earth Day.

DRBC staff members were, once again, particularly busy during this period, participating in three outreach events. On April 24, staff participated in Temple University’s 2015 EarthFest held at its Ambler, Pa. campus. This free event attracted about 6,000 students and featured nearly 80 exhibits that provided attendees with hands-on learning activities. Over the years, DRBC has been a frequent EarthFest exhibitor, using its Enviroscope model to teach about different sources of water pollution and what we all can do to help keep our waterways clean.

The 34th Annual Lambertville (N.J.) Shad Festival took place during the last weekend in April. The Delaware River is an important waterway for American shad, and their presence is indicative of the water quality improvements that have occurred over time. DRBC staff exhibited on Lewis Island along the banks of the Delaware, talking with festival attendees about the river as well as DRBC programs and initiatives. Staff also collected macroinvertebrates

(aquatic bugs) from the Delaware and discussed their connection to the river’s water quality. Some bugs are much more sensitive to pollution than others; finding them in numbers—which staff did on both days—is a positive indicator of the health of the river. The Lewis Fishery, the only remaining N.J. commercial shad fishery on the non-tidal Delaware, was on hand to demonstrate how to “seine” (catch with nets) for American shad from the island that now bears the family’s name.

Lehigh Valley Water Suppliers, Inc., held the 15th HydroMania event on May 14 at Cedar Crest College in Allentown, Pa. About 1,200 third and fourth graders attended this annual event, which focuses on watershed education and the importance of protecting and preserving our natural resources. The students were easily engaged by the hands-on learning experience provided by the DRBC’s Enviroscope watershed model.



Steve Meserve holding an American Shad. Steve leads his family’s shad fishery tradition that was started by his great-grandfather, William Lewis, in 1888. Steve spoke to DRBC staff in November at a “brown bag lunch” program, sharing some of his family’s remarkable shad fishery history, how they “seine” every spring, their role in helping to start the Lambertville Shad Festival over 30 years ago, and his unique personal perspectives about American shad and the river that come from spending so much time on and around the Delaware. (Photo by Katharine Schmidt/DRBC)

FINANCIAL SUMMARY

"The respective signatory parties covenant and agree to include the amounts so apportioned for the support of the current expense budget in their respective budgets next to be adopted, subject to such review and approval as may be required by their respective budgetary processes."

—Delaware River Basin Compact (Public Law 87-328, Section 13.3c)

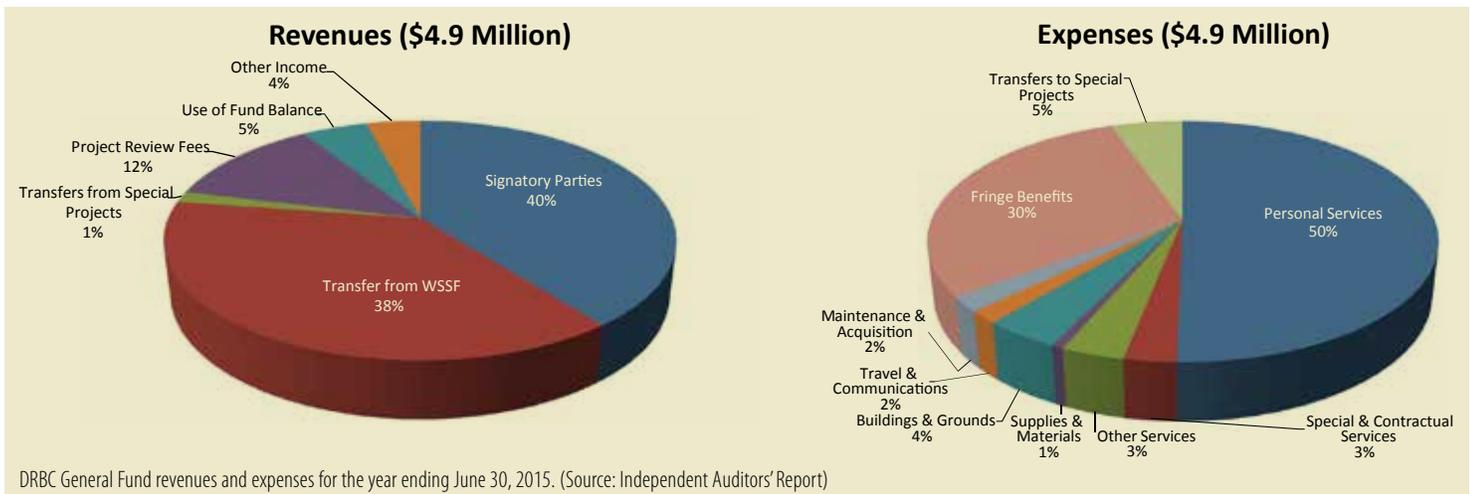
This annual report covers calendar year 2015 (January 1 – December 31), which does not coincide with DRBC fiscal years extending from July through June. As a result, portions of two fiscal years comprise this 2015 annual summary.

The DRBC operates and maintains two funds for budgeting purposes: a General Operating Fund and a Water Supply Storage Facilities Fund (WSSF).

The General Operating Fund is the basic and routine operating budget for the DRBC. It includes all revenues and expenses required for the year-to-year operations and maintenance of the agency. Revenues are provided through several key sources, including signatory party contributions, project review fees,

compliance-related actions, transfers from the WSSF, and other sources. The use of equity, or the General Fund's balance of unspent revenues accumulated since the DRBC was created in 1961, closes budget gaps when expenses exceed revenues in any given year.

The WSSF was created to fund certain water supply storage facility projects in the basin. The WSSF is used to repay the obligations the DRBC assumed to purchase storage capacity at the federal government's Beltzville and Blue Marsh reservoirs in Pennsylvania. The WSSF also supports DRBC's pro rata share of the annual operations and maintenance costs of the two reservoirs, the water supply share of any future required



improvements at these two facilities, a share of DRBC operating costs to support a sustainable water supply within the basin (transfers to the General Fund), and any future required storage in the basin. Revenues for the WSSF are generated from charges for surface water withdrawals in the basin; however, waters allocated before the DRBC was created in 1961 are exempt from water use charges. The balance in the WSSF at the end of FY 2015 was approximately \$17.4 million.

The Delaware River Basin Compact, which created the DRBC in 1961, requires each signatory party to include in its budget an apportioned amount to annually support the DRBC's operating budget. While the four states have generally and historically met this statutory obligation, the United States has not contributed its apportioned share

DRBC's financial records are audited annually as required by the Delaware River Basin Compact. The most recent annual independent audits are available at www.nj.gov/drbc/about/public/annual-audit.html.

of this legal obligation since October 1, 1996 (with the exception of a congressionally directed appropriation in federal FY 2009). The cumulative federal shortfall from October 1996 through the end of FY 2015 (June 30,

2015) totals \$12,139,250, or more than twice the size of the DRBC's FY 2016 budget.

DRBC Fiscal Year 2015 (July 1, 2014 – June 30, 2015)

Actual expenses totaled \$4,899,324, or \$558,176 below the originally budgeted amount. Primarily due to the reduced signatory party contributions, it was necessary to use approximately \$241,000 in equity to balance the General Fund operating budget.

The following signatory party contributions were received during the fiscal year ending June 30, 2015: Delaware \$447,000, New Jersey \$693,000, New York \$359,500, Pennsylvania \$434,000, and the federal government \$0.

Under the tacit agreement reached by the commission members in 1988 to apportion signatory party contributions, the annual full payments would have been Pennsylvania \$893,000 (25%), New Jersey \$893,000 (25%), federal government \$715,000 (20%), New York \$626,000 (17.5%), and Delaware \$447,000 (12.5%).

DRBC Fiscal Year 2016 (July 1, 2015 – June 30, 2016)

Following the public hearing held on June 9, 2015, the commissioners on June 10, 2015 approved the DRBC's current expense budget of \$5,675,100 for the fiscal year ending June 30, 2016. It calls for the following signatory member contributions totaling \$2,964,500: Pennsylvania \$750,000, New Jersey \$693,000, federal government \$715,000, New York \$359,500, and Delaware \$447,000. In addition, the commissioners approved the DRBC's WSSF budget providing for revenues of \$4,053,300 and expenditures of \$3,642,900.

Delaware River Basin Commission
P.O. Box 7360
West Trenton, NJ 08628

Phone: 609-883-9500
Fax: 609-883-9522
Web Site: www.drbc.net