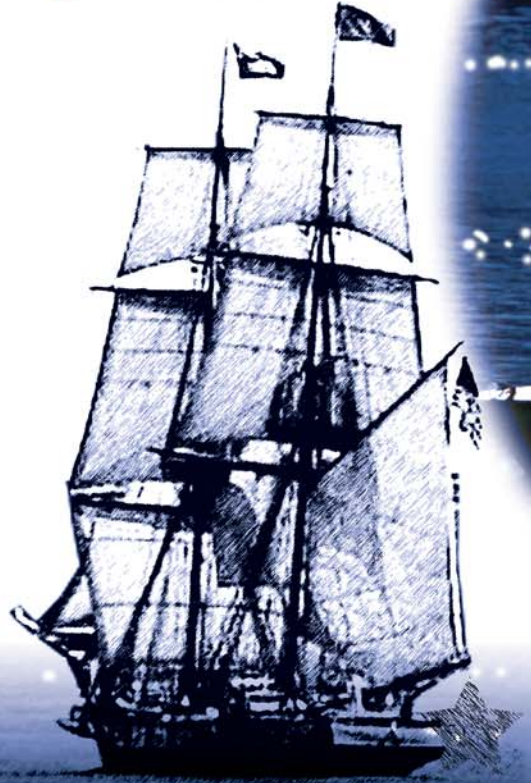


*Delaware River Basin Commission  
Annual Report 2001*



American patriotism was unfurled on the Delaware River shortly after the September 11, 2001, terrorist attacks against the United States.

The rowboat displaying the American flag appeared one morning at the spot where George Washington and his Continental Army crossed the ice-choked river on Christmas night in 1776, en route to a decisive victory over the British Crown.

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About the cover: Clarke Rupert, the commission's assistant public information officer, snapped these photos of the Europa and Niagara navigating the Delaware River during OpSail 2000. The sketches on the cover were rendered by Susan C. Owens, the commission's graphic designer.



Europa

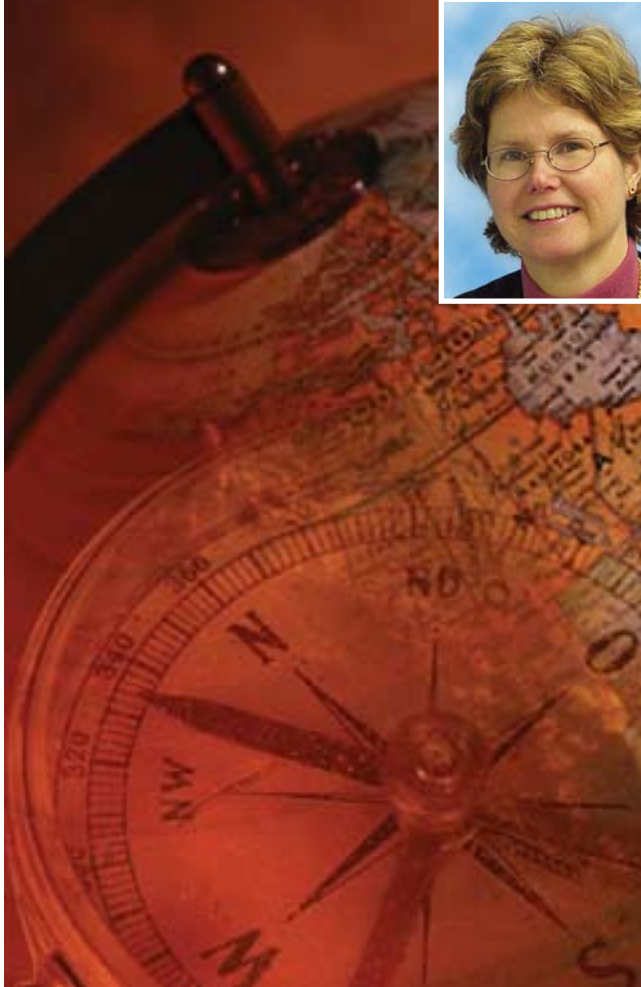


Niagara

# Executive Director's Report

## Map and Compass

By Carol R. Collier



*"If you don't know where you are going, you'll probably end up somewhere else."* The Rabbit in Alice in Wonderland—Lewis Carroll

Have you driven to a place that you have never been before without a map and compass? You might have a general context from previously looking at a small-scale map of the region, but have no idea of specific streets or avenues you should take. You most likely reached your destination, but drove much longer than necessary, took wrong turns and probably arrived in a bad mood.

The DRBC wants to make sure that everyone in the basin has a map and compass as we drive the route of improved water resources management. It takes many people to adequately manage water. If we can all agree to a common set of driving directions we'll end up in the desired location together and not be stuck in gridlock along the way. That is the purpose of the Water Resources Plan for the Delaware River Basin.

There are two stages of plan development: 1) Water Resources Plan and Management Strategies (may be two separate documents); and 2) organizational implementation plans including an update of the DRBC Comprehensive Plan.

## Water Resources Plan for the Delaware River Basin

Since January 2001, DRBC's 40-member Watershed Advisory Council has been working with staff, the nine existing DRBC technical advisory committees, and two newly formed ad hoc technical committees to develop a succinct statement of needs and desired outcomes for effective water management in the basin. The following five Key Result Areas have been proposed:

- **Sustainable Use & Supply**

Desired Result: An adequate, reliable and

sustainable supply of water to meet human and ecological needs.

■ **Waterway Corridor Management**

Desired Result: Functioning waterway corridors that minimize flood loss, have improved recreation access and support healthy ecosystems.

■ **Integrated Land & Water Resource Management**

Desired Result: Land use and growth management decisions that value and protect the water resource systems that sustain our quality of life and commerce.

■ **Institutional Coordination & Cooperation**

Desired Result: Improved coordination, cooperation, and information exchange.

■ **Education & Participation for Stewardship**

Desired Result: An understanding and appreciation of our water resources and the commitment to their protection, restoration, and enhancement.

There is a broad realization that to be effective, management of wastewater, storm-water and water supply must be integrated. The plan must address the needs of different users of the water (human and ecological) and the sensitivities of different sub-regions of the basin. It is also recognized that each layer of government, each member of the private sector, and each non-governmental water resource organization has a distinct role to play.

There are certainly different ways to reach the desired goals. A critical step in the process is developing management scenarios. Each management scenario will address the required tasks, performance measures and indicators by which to gage progress, lead and support organizations, time frame and potential funding sources.

Our hope is that the Water Resources Plan for the Delaware River Basin will be finalized by December 2003 and embraced by all the key agencies and organizations in the basin.

## DRBC Comprehensive Plan

Improvements will not be realized unless the plan is implemented. Each organization identified as a lead entity is asked to develop a strategy for implementation. As part of this task, the DRBC will be updating its Comprehensive Plan (as required by the Delaware River Basin Compact) and the six-year Water Resources Program, which is our internal action plan.

I hope that you will be an active participant in the plan development and implementation.

*"There are risks and costs to a program of action. But they are far less than the long-range risks and costs of comfortable inaction."*

-President John F. Kennedy

# The Commission

## Equal Partners in Watershed Planning

A breakthrough in water resources management occurred in 1961 when President Kennedy and the governors of Delaware, New Jersey, Pennsylvania, and New York signed concurrent compact legislation into law creating a regional body to oversee a unified approach to managing a river system.

The members of this regional body—the Delaware River Basin Commission—include the four basin state governors and a federal representative appointed by the President of the United States.

When the DRBC was created, some 43 state agencies, 14 interstate agencies, and 19 federal agencies exercised a multiplicity of splintered powers and duties within the watershed, which stretches 330 miles from the Delaware River's headwaters near Hancock, N. Y., to the mouth of the Delaware Bay.

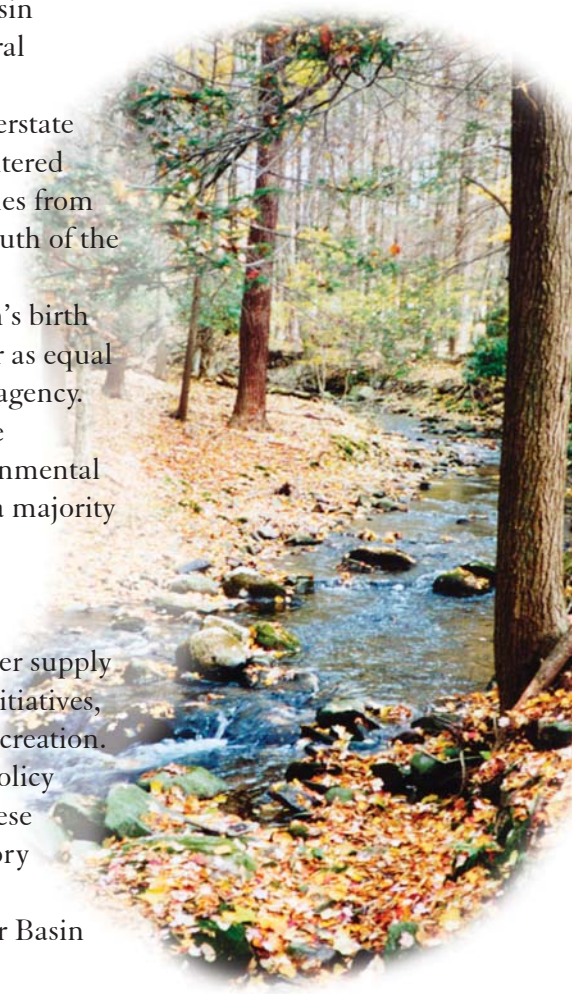
The compact's signing marked the first time since the nation's birth that the federal government and a group of states joined together as equal partners in a river basin planning, development, and regulatory agency.

The five members appoint alternate commissioners, with the governors selecting high-ranking officials from their state environmental agencies. Each commissioner has one vote of equal power with a majority vote needed to decide most issues. Exceptions are votes on the commission's annual budget and drought declarations, which require unanimity.

Commission programs include water quality protection, water supply allocation, regulatory review (permitting), water conservation initiatives, watershed planning, drought management, flood control, and recreation.

The commission holds business meetings and hearings on policy matters and water resource projects under regulatory review. These sessions, along with meetings of the commission's various advisory committees, are open to the public.

To learn more about the commission and the Delaware River Basin visit the DRBC web site at [www.drbc.net](http://www.drbc.net).



### Deputy Executive Director Named

Robert Tudor, former deputy commissioner of New Jersey's Department of Environmental

Protection (NJDEP), is the commission's new deputy executive director. The appointment became effective October 1, 2001.

During his 21 years with NJDEP, Mr. Tudor served as administrator of both the department's Land Use Regulation Program and the Office of Environmental Planning, playing a lead role in

watershed management initiatives and in the development of the state's Freshwater Wetlands Program.

He also was director of the Delaware Estuary Program, part of a federal effort to protect estuarine systems of national significance.

Mr. Tudor serves under DRBC Executive Director Carol R. Collier in helping to oversee the commission's project review, planning, monitoring and modeling, information services, and basin operations programs.

He is a graduate of Rutgers College and the University of Connecticut.

He succeeds Dr. Jeffrey Featherstone, who retired to pursue a second career as associate professor of planning and director of the Center for Sustainable Communities at Temple University Ambler (Pa.).

Dr. Featherstone worked for the commission for 19 years, establishing an aggressive water conservation program that earned both national and international recognition. He served as the first chair of the American Water Works Association's Water Conservation Division. In 1995 he traveled to China as a member of the U.S. Water Resources delegation to advise government officials on conservation and sustainability issues.

## Officers Elected

The federal government was elected to chair the commission for the year July 1, 2001 through June 30, 2002 at a commission meeting in June of 2001.

The federal government's DRBC representative at the time was Maj. Gen. Jerry L. Sinn. A month later, President Bush appointed Brig. Gen. M. Stephen Rhoades to succeed him.

Elected vice chair was Pennsylvania Governor Tom Ridge. The second vice chair

post went to New Jersey Acting Governor Donald T. DiFrancesco.

The other commission members are Delaware Governor Ruth Ann Minner and New York Governor George E. Pataki.

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

The current list of commission members and their alternates can be viewed at <http://www.nj.gov/drbc/commiss.htm>.

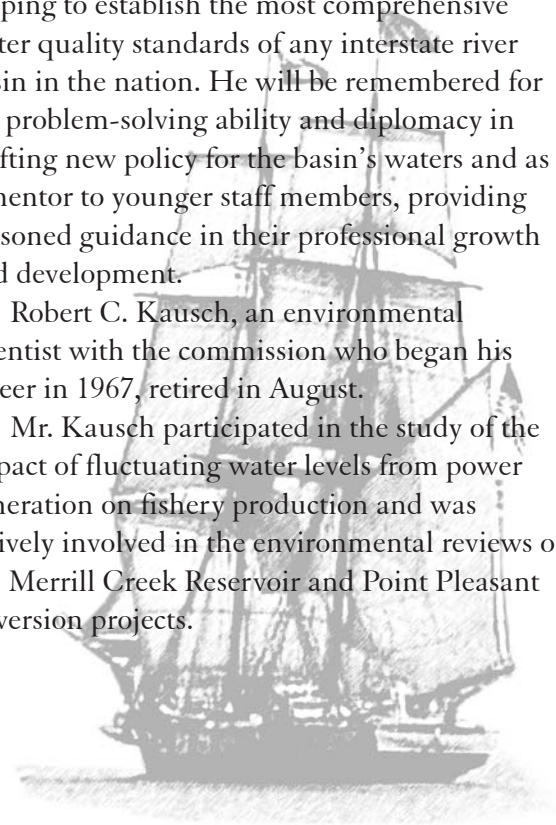
## Farewell

David P. Pollison, who served with the commission for almost 38 years, retired in April of 2001.

Mr. Pollison was among the pioneers who blazed a new trail in water pollution abatement, helping to establish the most comprehensive water quality standards of any interstate river basin in the nation. He will be remembered for his problem-solving ability and diplomacy in crafting new policy for the basin's waters and as a mentor to younger staff members, providing seasoned guidance in their professional growth and development.

Robert C. Kausch, an environmental scientist with the commission who began his career in 1967, retired in August.

Mr. Kausch participated in the study of the impact of fluctuating water levels from power generation on fishery production and was actively involved in the environmental reviews of the Merrill Creek Reservoir and Point Pleasant Diversion projects.



# Signatory Members

## United States



Brig. Gen. M. Stephen Rhoades  
*Chair*



Col. John P. Carroll  
*Alternate*

## Pennsylvania



Gov. Tom Ridge\*  
*Vice Chair*



Irene B. Brooks  
*Alternate*

## New Jersey



Acting Gov. Donald T.  
DiFrancesco  
*Second Vice Chair*



Robert C. Shinn, Jr.  
*Alternate*

## New York



Gov. George E. Pataki  
*Member*



N. G. Kaul  
*Alternate*

## Delaware



Gov. Ruth Ann Minner  
*Member*



Nicholas A. DiPasquale  
*Alternate*

## Alternates/Advisors

### United States

Lt. Col. Timothy Brown  
*Second Alternate/Advisor*

### Pennsylvania

William A. Gast  
*Second Alternate*  
Kumar Kishinchand  
*Advisor*

### New Jersey

Dennis Hart  
*Second Alternate*

### New York

Warren T. Lavery  
*Second Alternate*  
Joel A. Miele, Sr.  
*Advisor*

### Delaware

Kevin C. Donnelly  
*Second Alternate*  
Dr. Harry W. Otto  
*Third Alternate*

\* Lt. Gov. Mark Schweiker was sworn in as Pennsylvania's 44th governor on October 5, 2001, following Gov. Ridge's appointment by President Bush to head the nation's Office of Homeland Security

# Commission Staff

## Welcome Aboard

- Ronald A. MacGillivray, *Environmental Toxicologist, Modeling & Monitoring Branch*
- Kenneth F. Najjar, *Planning & Implementation Branch Head*
- Jessica Rittler Sanchez, *River Basin Planner, Planning & Implementation Branch*
- Alysa Suero, *Geologist, Project Review Branch*
- Kenneth J. Warren, *Wolf, Block, Schorr, and Solis-Cohen, LLP, General Counsel*

All staff can be reached by phone at 609-883-9500. Follow the e-mail addresses with @drbc.state.nj.us  
The DRBC staff directory is available on-line at: <http://www.nj.gov/drbc/staff.htm>

	Tel.	Ext.	E-Mail Address		Tel.	Ext.	E-Mail Address
<b>Directorate</b>							
Carol R. Collier, <i>Executive Director</i>	200		ccollier	Robert Limbeck, <i>Watershed Scientist</i>	230		rlimbeck
Robert Tudor, <i>Deputy Executive Director</i>	208		rtudor	Todd Kratzer, <i>Water Resources Engineer</i>	261		tkratzer
Anne Zamonski, <i>Secretary</i>	222		annez	Donna Gushue, <i>Secretary</i>	257		dgushue
Pamela Bush, <i>Commission Secretary and Assistant General Counsel</i>	203		pbush	Pamela V'Combe, <i>Watershed Planner</i>	226		pvcombe
Judy Scouten, <i>Secretary</i>	224		jscouten	David Sayers, <i>Environmental Technician</i>	236		dsayers
Christopher Roberts, <i>Public Information Officer</i>	205		croberts	Jonathan Zangwill, <i>Water Resources Planner</i>	307		zangwill
Clarke Rupert, <i>Assistant Public Information Officer</i>	260		crupert	Patricia McSparran, <i>Water Resources Engineer</i>	269		pmcsparran
Denise McHugh, <i>Secretary</i>	240		dmchugh	<b>Project Review Branch</b>			
Forsyth Kineon, <i>Director, Delaware Estuary Program</i>	217		fkineon	Thomas Brand, <i>Branch Head</i>	221		tbrand
Martha Maxwell-Doyle, <i>Estuary Program Asst.</i>	215		mmaxwell	Peg Lebo, <i>Secretary</i>	216		plebo
<b>Administrative</b>							
Richard Gore, <i>Chief Administrative Officer</i>	201		rgore	Alysa Suero, <i>Geologist</i>	264		asuero
Carol Adamovic, <i>Accounting Assistant</i>	249		carola	Paul Scally, <i>Water Resources Engineer</i>	251		pscally
Denise McHugh, <i>Secretary</i>	240		dmchugh	Anthony Bonasera, <i>Geologist/Hydrologist</i>	303		bonasera
Joseph Sosi, <i>Head, Financial Section</i>	211		jsosi	<b>Modeling and Monitoring</b>			
Dennis Herbert, <i>Support Services Technician</i>	245		dherbert	Thomas Fikslin, <i>Branch Head</i>	253		tfikslin
<b>Information Services</b>							
Warren Huff, <i>Branch Head</i>	237		whuff	Gregory Cavallo, <i>Geologist</i>	270		gcavallo
Karl Heinicke, <i>RIMS Manager</i>	241		heinicke	Ronald A. MacGillivray, <i>Environmental Toxicologist</i>	252		rmacgill
Timothy Lazaro, <i>Network Administrator</i>	274		tlazaro	Donna Gushue, <i>Secretary</i>	257		dgushue
Donna Woolf, <i>Secretary</i>	228		dwoolf	Geoffrey Smith, <i>Field Technician</i>	234		gsmith
Karen Reavy, <i>GIS Coordinator</i>	273		kreavy	Edward Santoro, <i>Monitoring Coordinator</i>	268		esantoro
Judith Strong, <i>Librarian</i>	263		jstrong	Namsoo Suk, <i>Water Res. Engineer/Modeler</i>	305		nsuk
Susan Owens, <i>Information Services Technician</i>	213		sowens	Daniel Liao, <i>Water Res. Engineer/Modeler</i>	266		dliao
<b>Planning and Implementation</b>							
Kenneth F. Najjar, <i>Branch Head</i>	256		knajjar	John Yagecic, <i>Water Res. Engineer/Modeler</i>	271		iyagecic
Jessica Rittler Sanchez, <i>River Basin Planner</i>	202		jsanchez	<b>Operations</b>			
				Richard Tortoriello, <i>Branch Head</i>	229		toriello
				Richard Fromuth, <i>Water Resources Engineer</i>	232		rfromuth
				Gail Blum, <i>Water Resources Specialist</i>	219		gblum
				Donna Woolf, <i>Secretary</i>	228		dwoolf
				Hernan Quinodoz, <i>Engineer/Hydrologist</i>	225		quinodoz

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# DRBC Celebrates 40<sup>th</sup> Anniversary

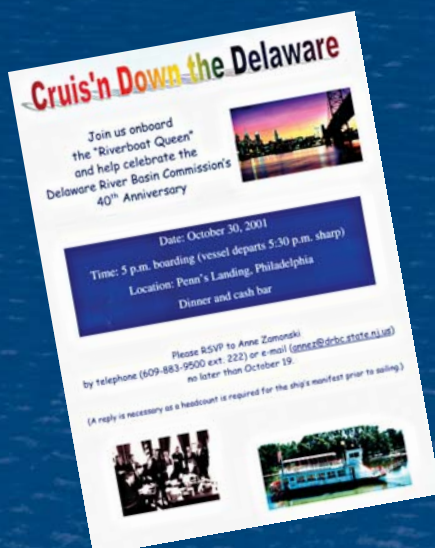
The commission celebrated its 40<sup>th</sup> anniversary in October of 2001 with a boat ride on the Delaware River.



About to cut the commemorative birthday cake onboard

the "Riverboat Queen" is Lt. Col. Timothy Brown, Philadelphia district engineer, U.S. Army Corps of Engineers, and an alternative representative on the commission. Looking on, left to right: Carol R. Collier, the DRBC's executive director, DRBC Commissioner Kevin C. Donnelly, director of the Division of Water Resources, Delaware Department of

Natural Resources and Environmental Control; Joseph Miri, chief of the New Jersey Department of Environmental Protection's Office of Water Policy; DRBC Commissioner Irene B. Brooks, Office for River Basin Cooperation, Pennsylvania Department of Environmental Protection; and DRBC Commissioner Warren T. Lavery, director of the Bureau of Water Permits, Division of Water, in New York State's Department of Environmental Conservation.



# Flood Warning System Upgraded

The flood warning system for the Delaware River and some of its feeder streams is being upgraded, a move aimed at reducing flood losses in future years.

Since April of 2001, the following flood warning improvements have either been completed or funded:

- Full basin coverage by National Oceanic and Atmospheric Administration (NOAA) weather radio except for local terrain interference.
- Satellite and telephone telemetry upgrades at 12 stream, precipitation and lake level gauges.
- Reactivation of eight stream gauges.
- Installation of four new stream gauges and one precipitation gauge.
- Establishment of a Community Flood Alert

Telephone System for the Lower Neshaminy Creek in Bucks County, Pennsylvania.

- Addition of National Weather Service test products from the Advanced Hydrologic Prediction Services (AHPS) utilizing Doppler radar and probabilistic forecasting.

Although the bulk of the funding is from federal and state programs, local and private sources also have contributed.

Serious flooding occurred in the Delaware River Watershed during 2001. Damage estimated at \$35 million resulted from flood waters spawned by Tropical Storm Allison in June. Seven people lost their lives.

Despite programs to acquire flood-prone property, most flood plains in the Delaware River Basin are still highly developed. Flood

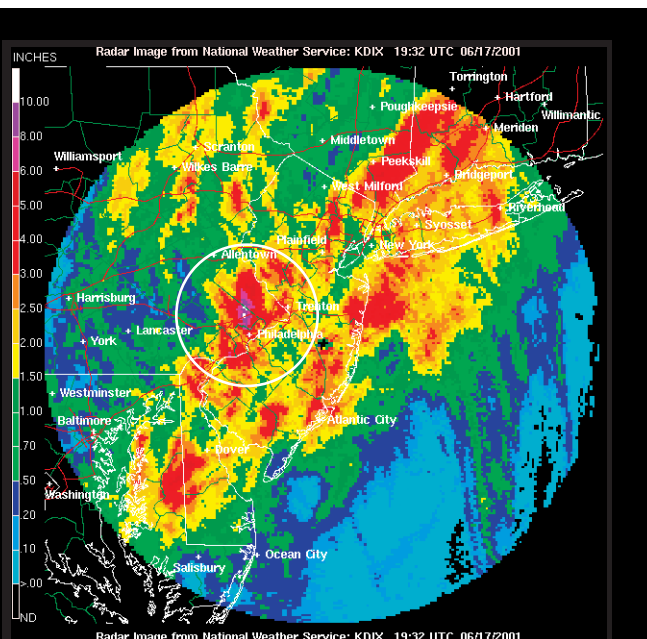
warning, provided by the National Weather Service through a partnership with public and private organizations, is a real, everyday need.

In order to boost public awareness of flooding potential, improve coordination among various agencies, and increase funding levels for much-needed programs, the commission formed a Flood Advisory Committee in March of 2000.

The committee provides a forum for coordination of flood-related activities and efficient use of technical and financial resources for the benefit of the basin community. It forwards recommendations to the commission for submission to organizations with flood preparedness and flood loss reduction responsibilities. The committee recently guided the DRBC staff in the development of a set of flood warning recommendations for the basin. They are included in a May 2001 report, which was updated a year later. This report, along with extensive flood-related information, can be found at [http://www.nj.gov/drbc/Flood\\_Website/floodinf.htm](http://www.nj.gov/drbc/Flood_Website/floodinf.htm).



Horsham, Pa., June 20, 2001. On Olive Street, a large hole was blown in Richard Barrajo's home from Tropical Storm Allison. His son Joe volunteered to go in and remove belongings from the basement. Photo by Liz Roll/FEMA News Photo.



Radar Image on June 17, 2001, during Tropical Storm Allison. Courtesy of the National Weather Service.

# Water Quality

## DRBC Leads Effort to Reduce PCB Contamination

Three meetings were held in 2001 to educate the public about the presence of PCBs (polychlorinated biphenyls) in the Delaware Estuary (the tidal Delaware River) and in the Delaware Bay and to explore ways to reduce the amount of this toxic substance.

The meetings were held during February and March in Wilmington, Philadelphia, and Mt. Holly, N.J. They included presentations on the presence of PCBs in basin waterways as well as panel discussions addressing the regulatory, economic, wildlife, and human health issues related to PCBs.

At the request of Delaware, New Jersey, Pennsylvania, and the U.S. Environmental Protection Agency, the DRBC is taking the lead in developing TMDLs for PCBs in the estuary and bay. TMDLs (total maximum daily loads) set the quantity of a compound that can enter a water body daily without violating water quality standards.

Establishing TMDLs is an important step toward reducing PCB contamination and eliminating fish consumption advisories issued by the three states.

Calculation of the TMDLs will involve an analysis of the amount of PCBs entering the estuary from tributary streams, storm water runoff, riverbed sediments, the atmosphere, and point source (end-of-pipe) discharges.

Once TMDLs are determined, decisions must be made about how these new, lower loading numbers can be achieved. The development of PCB reduction plans will begin even as data collection and calculation of the TMDLs proceeds.

Stakeholder involvement is essential to achieving the desired water quality improvements.

The DRBC's Toxics Advisory Committee, composed of representatives from industry, municipalities, academia, environmental organizations, and state and federal regulatory agencies, is advising the commission on development of a water quality model to determine the fate and transport of PCBs in the estuary. The model will be used to calculate the TMDLs and the discharge reductions required to achieve them.

While the Toxics Advisory Committee focuses on data collection and model development, the commission in 2001 authorized formation of a new TMDL Implementation Advisory Committee to focus on cost-effective "action now" steps for reducing PCBs and long-term strategies for achieving the estuary water quality standards.

The commission in 2001 engaged the services of the Marasco Newton Group, an environmental consulting firm that specializes in consensus building and dispute resolution, to interview stakeholders to identify their interests and concerns, and to advise the commission on the composition and function of the new advisory committee, which is expected to be convened in 2003.

The commission also entered into an agreement during the year with Rutgers University to conduct sampling and perform analytical and interpretive work on the ambient air, water, and riverbed sediment samples that were collected.

Additional information about the DRBC's ongoing efforts to control toxics in the Delaware Estuary can be found at: [http://www.nj.gov/drbc/toxics\\_info.htm](http://www.nj.gov/drbc/toxics_info.htm).

# Planning for the Future

An updated version of the commission's existing Comprehensive Plan was issued in July of 2001. It consists primarily of a compilation of commission policies and approved projects.

It serves as a starting point for the development of a new, more forward-looking water resources plan for the Delaware River Basin—a plan that will chart a course for the future, and, it is hoped, have the necessary buy-in from other water resource agencies and organizations to ensure its implementation through a set of coordinated policies and programs.

During the year, a “convening paper” was produced by a consultant who provided a summary and assessment of the interests of the various stakeholder groups in the basin. Representatives of many of these groups serve on the Watershed Advisory Council, a broad-based panel created by the DRBC to guide it in the planning process.

At a council meeting on October 1, 2001, members discussed some of the key policy issues being debated. They included:

- Whether inter-basin and inter-watershed transfers of water should be discouraged.
- Whether the prioritization of water uses within the basin should be revised to better balance the water needs of aquatic ecosystems and those of humans.
- Whether and how Comprehensive Plan policies can encourage land use practices that protect water resources.

The council agreed at the October meeting to release an initial set of draft goals and objectives for the plan. Three meetings designed to solicit public input were then held in November in Narrowsburg, N.Y.; at the

commission's offices in West Trenton, N.J.; and in Newark, Del.

Comments received at the meetings were summarized by DRBC staff and addressed at a two-day workshop held in December where council members developed a revised draft set of plan goals and objectives. This draft document was accompanied by a proposal to assign each of the goals and objectives to either existing DRBC advisory committees or to ad hoc subcommittees created to assist in the planning process.

Committee members were then charged with the task of developing management strategies to implement the goals/objectives.

The strategies will define implementation steps and identify the organizations or agencies responsible for carrying out the programs. Funding sources also will be identified, as will indicators to be used in measuring program performance.

More information about the development of the new Comprehensive Plan for the Delaware River Basin can be found on the DRBC web site at: <http://www.nj.gov/drbc/cp.htm>.

*“A critical step in the process is developing management scenarios . . .”*

*— Carol R. Collier, DRBC executive director*



# Commission Declares Drought Emergency

With reservoir storage and ground water supplies well below seasonal averages, the commission declared a drought emergency on December 18, 2001.

Under the emergency order, the commission was empowered to call for releases from federal, state, and privately-owned reservoirs to augment flows in the Delaware River and tributary streams. This additional volume of water in the waterways helps protect aquatic life and repel the upstream migration of salty water from the Delaware Bay, which can cause corrosion problems for riverbank industry and increase water treatment costs for public water suppliers.

The reservoir releases complemented those from three large water supply reservoirs at the headwaters of the Delaware River which were at record low levels.

Combined storage in the impoundments (Cannonsville, Pepacton, and Neversink) stood at just over 63 billion gallons in mid-December, about 115 billion gallons below normal for that time of year. It was the lowest level since the last of the three reservoirs, which are owned by New York City, went on line in 1967.

Under the declaration, water stored at two hydro-electric facilities—Lake Wallenpaupack, located near Hawley, Pa., and the Mongaup reservoir system in New York

State—became available to help increase river flows, as did water stored in the U.S. Army Corps of Engineers' F.E. Walter Reservoir, located on a tributary of the Lehigh River, and in Lake Nockamixon, a recreational reservoir owned by the Commonwealth of Pennsylvania which is located on Tohickon Creek.

A vast amount of drought-related information can be viewed on-line at <http://www.nj.gov/drbc/drought/droughtframeset.htm>.



As shown above, water levels in Cannonsville Reservoir dropped to record lows during December of 2001. *Photo courtesy of the Press & Sun Bulletin*

# Scenic Rivers Protection



View of the Delaware River at Upper Black Eddy looking downstream. *Photo by Robert L. Limbeck.*

In order to protect portions of the lower Delaware River and designated tributaries which recently were added to the National Wild and Scenic Rivers System by Congress, the commission is engaged in a comprehensive monitoring program to define existing water quality in the area and develop protective water quality criteria.

The monitoring data may provide the basis for designation of this portion of the river as “special protection waters” in accordance with a petition submitted to the commission in 2001 by the Delaware Riverkeeper Network.

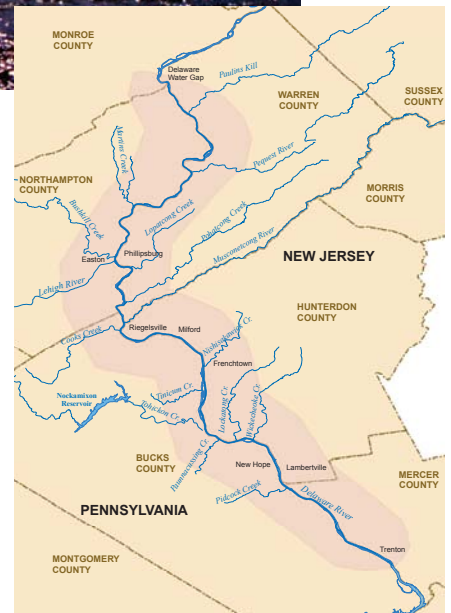
The sampling program is being coordinated with the state environmental agencies in Pennsylvania and New Jersey along with the National Park Service, the Delaware River Greenway Partnership, and the U.S. Geological Survey.

Beginning in the year 2000, staff began assembling baseline data on oxygen levels, pH, specific conductance, temperature, turbidity, hardness, alkalinity, chlorides, bacteria, suspended and dissolved solids, and nutrients.

In 2001, a biological component was added to the program. Benthic macroinvertebrates (bottom-dwelling insects, worms, mussels, and crustaceans) were sampled at 25 locations along 200 miles of the river as part of a three-year survey to build a habitat-based benthic index of the waterway’s biological integrity. It will measure such ecological properties as richness, diversity, balance, and pollution tolerance.

The Lower Delaware Wild and Scenic Rivers Act of 2000 adds about 65 miles of the Delaware and selected tributaries to the National Wild and Scenic Rivers System, linking the Delaware Water Gap and Washington Crossing, Pa., just upstream of Trenton, N.J.

To learn more about the sections of the Delaware and its tributaries that have been included in the National Wild and Scenic Rivers System, visit the DRBC web site at: [http://www.nj.gov/drbc/wild\\_scenic.htm](http://www.nj.gov/drbc/wild_scenic.htm).



# Clean Water and Growth:

## Can You Have Both?

A study is underway to preserve and protect the “special protection waters” of the middle Delaware without impeding growth desired by local municipalities.

The study focuses on a 300 square-mile drainage area in the vicinity of Port Jervis, N.Y., which surrounds 8.5 miles of the river from just north of the Delaware Water Gap National Recreation Area upstream to the southern edge of the Upper Delaware National Scenic and Recreational River. This river reach borders

Pennsylvania, New Jersey, and New York.

Development patterns in this area are critical to the future of the river. It is an area of high potential growth due to highway corridors, the proposed development of casinos by several Native American tribes, and a rail line.

The goal of the three-year study is to develop a watershed management plan that defines how states and local municipalities within the tri-state middle Delaware River region can accommodate anticipated growth while maintaining the existing good water quality of this river segment.

The plan initially would cover the management of point-source (end-of-pipe) discharges, then address non-point sources of pollutants like stormwater runoff.

The commission and the National Park Service are the lead agencies on the project. Partners include the U.S. Environmental Protection Agency, the Departments of Environmental Protection in Pennsylvania and New Jersey, the New York State Department of Environmental Conservation, county and local governments, developers, and watershed associations.

Additional information on the study can be found on the DRBC web site: <http://www.nj.gov/drbc/tristate.htm>.

### Keeping Tabs on the Resource

The commission amended its Comprehensive Plan and Water Code during the year to improve its system for collecting water-use data — information vital to managing the basin’s waters.

Under the regulations, public water suppliers and other users with ground or surface water withdrawals exceeding 100,000 gallons a day must report that usage to their respective states, which will then transmit the data to the commission.

The regulations require that the data be characterized, breaking out such uses as residential, commercial, institutional, industrial, bulk sales, hydroelectric, and agricultural irrigation. They also require the reporting of evaporative losses, the status of water metering, information on whether the water is recycled, and the method used to dispose of wastewater.

Enhanced up-to-date data are needed to develop consumptive water-use estimates, project water use trends, and evaluate the effectiveness of water conservation programs.

The water usage reporting requirement can be viewed on-line at: <http://www.nj.gov/drbc/Res2001-8.htm>.

The entire Comprehensive Plan and Water Code can be downloaded at: <http://www.nj.gov/drbc/regula.htm>.



# Experiencing the Diversity of the Delaware

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Delaware Estuary, Inc., Pennsylvania Department of Environmental Protection, Pennsylvania DCNR, Pocono Environmental Education Center, Pocono Mountains Vacation Bureau, Princeton Hydro, and Upper Delaware Council.

To learn more about the Delaware River Sojourn visit the DRBC web site at: <http://www.nj.gov/drbc/sojourn.htm>.

The Delaware River Sojourn, an annual event to heighten the awareness of and appreciation for the longest undammed river east of the Mississippi, was held June 15 through June 23, 2001.

Titled "A River Odyssey," the eight-day trip covered over 70 miles, combining canoeing, camping, and educational programs.

Sponsors of the 2001 Sojourn were the commission, the Pennsylvania Department of Conservation and Natural Resources (DCNR); the Pennsylvania Organization for Watersheds and Rivers; PPL; Princeton Hydro LLC; Rohm & Haas; and the William Penn Foundation.

The 2001 Sojourn began at Hankins, N.Y., in the Catskill Mountains, and ended on New Jersey's Maurice River, a tributary to the Delaware Bay.

The trip offered a chance to experience the diversity of the Delaware River system.

An added attraction in 2001 was an art, essay, and poetry contest open to students in grades 8-12 who resided within the Delaware River Basin. The contest's theme was "Delaware: River of Life."

Carol R. Collier, the DRBC's executive director, chaired the 2001 Delaware River Sojourn Steering Committee which organized the event. Other committee members included: American Canoe Association, Bucks County River Country, Delaware and Raritan Greenway, Delaware Canal State Park, Delaware River Greenway Partnership, Friends of the Delaware Canal, Heritage Conservancy, Kittatinny Canoes, Inc., National Canoe Safety Patrol, Natural Lands Trust, National Park Service, Delaware & Lehigh National Heritage Corridor, New Jersey Department of Environmental Protection, Partnership for the

## Follow That Trail

The commission and the Schuylkill River Greenway Association have obtained a \$60,000 grant from the Pennsylvania Community Conservation Partnerships Program to update a popular set of Schuylkill River recreation maps and to design a "water trail" along the river.

Water trails consist of river access and parking locations; signage to guide trail users on land and water; literature identifying access locations, and river-related natural, cultural, and recreational features of interest. Educational and outreach programs inform people about the trail and promote stewardship of the river.

The commission also is working with the Delaware River Greenway Partnership, the National Park Service (including the Delaware and Lehigh National Heritage Corridor), and the Pennsylvania Department of Conservation and Natural Resources in designing a water trail for the Delaware River. It would connect the river's headwaters near Hancock, N.Y. to the head of tide at Trenton, N.J.

# Everyone Plays A Role

The commission again coordinated “Water Snapshot” in 2001, an annual event that draws basin residents to the banks of their streams, lakes, and rivers to check out the water quality.

Some participants conduct a visual assessment while others use simple test kits or sophisticated instruments. The data are recorded on sheets provided to participants and forwarded to the DRBC, where the information is posted on the commission’s web site.

“Snapshot results are compiled without regard to the precision of the testing equipment or the expertise of the data collector, so they are not intended to reflect exact science,” Ms. Collier said. “These results, however, certainly demonstrate the public’s desire to learn more about the quality of the

basin’s waters.”

Thanks to donations from the William Penn Foundation and the DRBC, a limited number of free, water sampling kits were made available to interested schools and organizations on a first-come, first-served basis.

Several training opportunities were offered to interested Snapshot participants, thanks to the efforts of the Delaware Riverkeeper Network, Pennsylvania Department of Conservation and Natural Resources (DCNR), Pocono Environmental Education Center (PEEC) and Delaware Stream Watch, a

joint effort of the Delaware Department of Natural Resources and Environmental Control (DNREC) and the Delaware Nature Society.

In addition to the DRBC, the Snapshot steering committee includes representatives from DNREC, Delaware Estuary Program, Delaware Riverkeeper Network, National Park Service, New Jersey Department of Environmental Protection, New York Department of Environmental Conservation, Pennsylvania DCNR, Pennsylvania Department of Environmental Protection, Pennsylvania Environmental Council, PEEC, Upper Delaware Council, U.S. Environmental Protection Agency, and the U.S. Geological Survey.

You can learn more about Water Snapshot by visiting the DRBC web site at: <http://www.nj.gov/drbc/snapshot.htm>.



*Faced with the challenge of measuring the water quality of the Delaware River, a youngster concentrates on conductivity readings during a 2001 Snapshot event at Lambertville, New Jersey.*

“This popular, water quality sampling activity takes a ‘snapshot’ of the health of Delaware River Basin waterways for 10 days around Earth Day, April 22,” DRBC Executive Director Carol R. Collier noted. “We hope Water Snapshot will not only create a heightened awareness about our watersheds and the need for stewardship, but provide much-deserved recognition to those volunteers who participate in water quality monitoring programs throughout the year.”

Snapshot is an opportunity for the young and old, experienced and first-timers, to collect water quality data.

# Divvying Up the Water Pie

A consultant working for the commission has completed a modernized daily flow model that depicts changes in streamflows and reservoir storage under different drought operating plans. It is more flexible than the commission's existing model and provides graphical output of flows and storage.

Designed by Hydrologics, Inc., the Oasis model is being used as part of a study exploring ways to resolve flow management issues for the regulated rivers and streams under the jurisdiction of the commission and the parties to the 1954 U.S. Supreme Court decree that apportioned the waters of the Delaware.

Although the Delaware River Basin receives an average of over 40 inches of precipitation annually, reservoir storage is needed to support huge demands on the river system. In addition to water supply, storage is used for flood control, recreation (including "white water" releases),

water quality protection, hydropower generation, replacement of consumptive use (mostly evaporative water losses), meeting mandated downstream flow targets, controlling reservoir pool elevations, and protection of fisheries.

This diversity of uses has over the years resulted in disagreements among those who benefit from and depend on the river and its tributaries. It is hoped the study and the new daily flow model will provide additional management tools to more effectively address these controversial streamflow issues.

The DRBC Flow Management Technical Advisory Committee meets throughout the year to discuss various flow-related issues. Upcoming meeting notices and agendas are available on the DRBC web site at: <http://www.nj.gov/drbc/meetings.htm>

Delaware River Basin Commission	
Fiscal Summary-All Funds	
Year Ending June 30, 2001	
Revenues:	
Signatory	2,448,000
Grants & Projects	1,267,900
Fees & Other	5,157,100
Expenditures:	
Salaries & Benefits	3,225,600
Operating Expenditures	3,935,700
Amortization & Depreciation	426,800
Principal Payments on Debt	405,400