



## **Transitions**

**2017**

**NEW ENGLAND INTERSTATE WATER POLLUTION CONTROL COMMISSION**

Seventy years ago, the legislatures of Connecticut, Massachusetts, and Rhode Island ratified the New England Interstate Water Pollution Control Commission compact. Subsequently New York, Vermont, New Hampshire, and Maine became signatories.

The compact's purpose was to coordinate the water pollution activities of the states in a region where most of the watersheds are interstate in nature. Each signatory state pledged itself to pollution abatement and control. In 1947, progress in controlling pollution was hampered by a lack of public concern, inadequate laws, and reluctance of municipalities and industrial facilities to take on the burden of financing waste treatment.

Seventy years later, these same issues persist. Nonetheless, NEIWPCC's achievements are noteworthy. Under the constant and able leadership of the Commission and its past leadership, most notably Ronald F. Poltak, who retired July 31, 2017, NEIWPCC has led in water-pollution control and resource protection. Today, NEIWPCC is a diligent, transparent, and outgoing group of 120-plus professionals. We assist our seven member states protecting and restoring the waters of the United States and in training environmental professionals across the region and the nation.

There are many areas in which the Commission has anticipated needs and exerted a leadership role in the field of pollution abatement. In 1957, the Commission developed a treatment unit for marine toilets. This innovation protected water conditions in recreational waters. Other early efforts led to designated no-discharge zones for boat sewage in the Northeast.

In 1961, the Commission published its **first technical guide for the design of sewerage works** with emphasis on treatment plants. This guide today is one of NEIWPCC's most updated and published reports.

Other examples include establishing (1969) a school in southern Maine to train wastewater plant operators from across the region. While the campus closed in 1999, NEIWPCC continues to train water quality professionals across the Northeast on environmental issues. These include water and wastewater treatment, underground storage tanks, non-point source pollution, wetlands, and stormwater.

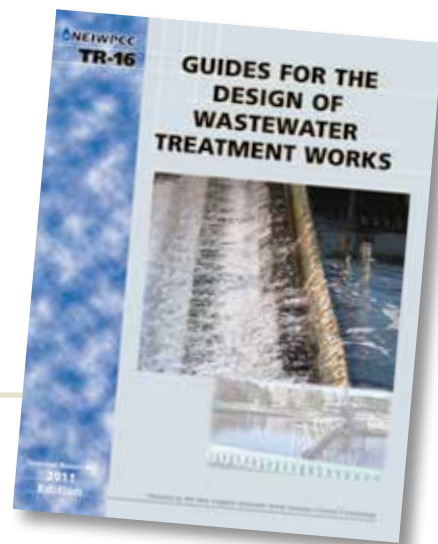
The task ahead is considerable. News from Cape Town, South Africa, and Flint, Michigan have highlighted the complicated nature of water, especially related to how clean water may not be available to those who cannot afford it.

In the future, I envision NEIWPCC continuing to serve its member states in a proactive manner. I intend for us to rededicate ourselves to continued progress in all areas of water resource protection, control, and preservation.

NEIWPCC expresses its deep appreciation for the assistance rendered by the many agencies and organizations concerned with the protection of water and abatement of water pollution. The Commission is particularly grateful for support from the Northeast Governors, legislators, and administrative officials of our member states. Special thanks go to our **2017 leadership**: Ron Poltak, Executive Director; Mick Kuhns, Chair; Doug Fine, Vice Chair; and Dick Kotelly, Treasurer. I look forward to the years ahead.

Very Truly Yours,

Susan J. Sullivan  
Executive Director







“Cha-cha-cha-changes.” While the writer of that song passed on in 2016, it could be the mantra for 2017, which saw several significant events occur for the Interstate. With the input and assistance of the member states and the staff at NEIWPCC, we made it through the challenging year.



In 2017, we saw a step forward with the first full year of a new Program Director for the Lake Champlain Basin Program. The Narragansett Bay Estuary Program put the finishing touches on a landmark report, and NEIWPCC provided critical assistance to strengthen the IEC (Interstate Environmental Commission) as they began to “reboot” their operations. It took time, but there was a well thought out plan to help the IEC regain their footing.

Among other items, 2017 also brought us a new website and a **new magazine** (*Interstate Waters*), both refreshing updates.

The year also saw something that many people didn’t expect: the **new administration** in Washington. Of course, we knew there would be a new President, but I think many of us are still adjusting to the unique style of the current Oval Office. Every day seems to bring a new turn, but NEIWPCC has demonstrated the ability and flexibility to keep on top of these events.

Probably the most prominent event of 2017 was a task that has not been needed at NEIWPCC in over three decades: to find a new Executive Director. When Ron first revealed his plans to retire, we immediately recognized the huge importance of this task, but also realized that an established process for finding a new Executive Director didn’t exist. We had to build one.

Fortunately, we had time and very helpful members of the Executive Committee to move the process forward. NEIWPCC’s Human Resources Director, Selene Lehmann, was invaluable. After many meetings, phone calls, and interviews, we were delighted that Susan Sullivan accepted our offer to become the new Executive Director.

Finally, in 2017 NEIWPCC celebrated seventy years of working to improve and protect the waters of our member states. The challenges of 1947, already large, have shifted and expanded. NEIWPCC has adapted and grown to meet them. As these changes continue, NEIWPCC proves every day that it is more relevant than ever. It was an honor to serve as the Chair of the Commission and the NEIWPCC Executive Committee.

A handwritten signature in blue ink that reads "Michael Kuhns".

Michael Kuhns  
Commission Chair



# 70 Years of NEIWPCC

## Taking Stock of the Watersheds 1947–1965

*NEIWPCC begins its work.*



### Mapping the Issues

Three states send representatives to NEIWPCC's founding meeting in November of 1947. Four more join by 1955. At left, commissioners from Vermont and Connecticut.



### Setting Standards

Through its Technical Advisory Board, NEIWPCC assesses and sets standards for water bodies throughout the Northeast. This careful evaluation is the foundation for decades of progress.

## Federal Partnership 1965–1980

*Emboldened by a spirit of can-do optimism, the federal government teams up with the states to clean up water bodies.*

### Building Clean Water

Federal grants build new wastewater plants, train plant operators, and even build classrooms to house NEIWPCC's wastewater-training school in South Portland.

### Federal Support

President Nixon creates the EPA in 1970. In 1972, Congress passes the Clean Water Act. Below: William Ruckelshaus becomes the first EPA administrator in 1970.



### Birth of a Profession

NEIWPCC begins its training programs for wastewater operators. The first classes meet in 1968.



## Agents for Change 1980–1995

*The federal government's retreat thrusts the states and NEIWPCC into leadership roles.*



### A Broadening Portfolio

NEIWPCC's mission grows to include groundwater and atmospheric deposition of acid rain and other contaminants.

### Federal Retreat

Federal funding is slashed. Construction grants are replaced by the much-more-limited State Revolving Fund for wastewater plants.



### Public Policy

Hired in 1983, the Commission's Executive Director, Ron Poltak, adds policy to NEIWPCC's mission.

## Filling the Gaps 1995–Present

*The Commission supports and manages programs in the states and around the region.*

### Helping Everywhere

NEIWPCC becomes the fiscal agent for the new Lake Champlain Basin Program in 1992. Many similar relationships follow. At right: Pulling invasive water chestnuts on Lake Champlain.



### A National Role

The federal government taps NEIWPCC's expertise to run national events on underground storage tanks and training related to nonpoint source pollution. The next tanks conference is planned for 2018. Left: The 2015 National Tanks Conference in Phoenix.

### Turf Management Report

Working with stakeholders from across the region, NEIWPCC in 2014 publishes guidelines for managing turf fertilizers to reduce nutrient pollution and protect water quality.



## Looking Ahead

**F**or 2018 and beyond, expect steady but slow progress by the states, and uncertainty in Washington. The good news: a year into the Trump Administration, Congress has continued to fund clean-water programs at their historic levels, some with modest increases.

The states continue to contend with longstanding and emerging water issues, from wastewater to perfluorinated compounds. NEIWPCC looks forward to hiring its first bioextraction coordinator, and to helping the Interstate

Environmental Commission to complete its transition back to an autonomous interstate compact in 2018.

Finally, the Commission's wastewater operator training program will celebrate its fiftieth consecutive year of operation in 2018. The construction and operation of wastewater treatment plants has been the single most effective instrument of progress for clean water in the Northeast since the creation of NEIWPCC. We are proud to support these vital environmental professionals.

# Research Quality

All the environmental data that NEIWPCC and its contractors collect are subject to a quality assurance project plan, or QAPP, that is created before a project begins. QAPPs require staff and contractors to collect project data in ways that are scientific, consistent, and well documented. Many QAPPs cover how project data will be collected, how tools are to be used, how often data will be collected, and study location details.

NEIWPCC helps contractors to write their QAPPs. NEIWPCC's quality-assurance program manager performs multiple quality-related site visits each year.

## Contracts by the Numbers

The Commission's talented staff oversaw **215** contracts in fiscal 2017 related directly to specialized research, monitoring, outreach, and other tasks to assist NEIWPCC in achieving its goals.

The **131** different organizations that worked on these projects include universities, watershed alliances and other nonprofits, municipalities, conservation districts, and agencies such as the U.S. Geological Survey.

These groups received grants through NEIWPCC or won bids for technical projects that the Commission coordinated. The contracts total **\$8,797,655** over their multi-year lives.

## Most Contracts Span Multiple Years

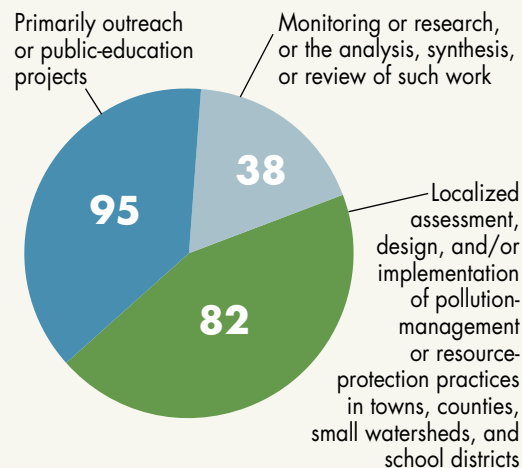
**76** ongoing contracts ended in fiscal 2017. **70** contracts began during the year and continued past the year's end. **3** began and ended last year. **66** both began before and continued after fiscal 2017.

## A Broad Portfolio

**63** contracts addressed stormwater, flooding, or erosion. **41** included work on nutrient management; **12** of those related to agriculture. **25** contracts tackled aquatic invasive species. **10** had a fish passage or fish-habitat-protection component. **7** focused on aquatic trash prevention and **2** addressed road-salt pollution.

**85** contracts required quality assurance project plans under NEIWPCC's Quality Management Plan.

### Program Contracts



## Wastewater Treatment and Onsite Systems

East Bridgewater, Massachusetts, faces multiple wastewater and onsite challenges. East Bridgewater High School's wastewater treatment facility was designed for a maximum daily flow of 30,000 gallons per day. However, it is underutilized during school vacations and at some other times. Meanwhile, some nearby properties have underperforming onsite treatment systems. Other properties in the densely developed town center use septic systems but could be connected to a sewer.

During the fiscal year the Town finished a feasibility study to assess the ability of the school's plant to accept additional flows and to recommend sewerage options. Eliminating some underperforming onsite systems would result in reduced nitrogen and phosphorus loading to currently impaired water bodies. The study was funded with a 2016 grant from NEIWPCC's Narragansett Bay Estuary Program.

**The QAPP:** The plan for the East Bridgewater study describes the existing data that would be used in the study. These include discharge reports for the school's plant, flow volumes of privately owned treatment facilities, and records of septic system failures. For each data source, the QAPP includes a description of the quality standards to which each was subject when data were collected.





*Students and a staff member from the Bronx River Alliance gather trash to be sorted by material and type. The project had a QAPP.*

## Water Resource Assessment and Protection

During fiscal 2017, NEIWPCC's Lake Champlain Basin Program funded the operation and maintenance of three meteorological stations on Lake Champlain. Two stations are on islands and one is on a navigational light tower in the lake. Maintained by the University of Vermont Monitoring Cooperative, the three stations measure air and water temperature, wind speed and direction, barometric pressure, and other variables. The data are available in near real-time on the cooperative's website.

The QAPP: The plan for the project describes the instruments used for each variable. It also describes frequency of sensor calibration, automated detection

of errant and missing values, and how the project staff handles such measurements.

## Nonpoint Source Pollution Prevention

In a project coordinated by the Bronx River Alliance, over fifteen months 1,315 students, teachers, and volunteers characterized floating trash at booms and other accumulation points in a six-mile section of the Bronx River. A main objective of the project was to use the findings to inform a public outreach campaign by students directed at other students and local businesses.

The QAPP: The Bronx River project's plan describes how project coordinators agreed to minimize discrepancies in trash characterization by more than a

thousand students and volunteers. The plan describes volunteer training and a detailed data-collection sheet with multiple choices and size references. For example, the data sheet lists more than twenty ways to characterize a piece of plastic trash, including water bottle, juice or soda bottle, bottle cap, black plastic bag, and Styrofoam in the form of take-out container, cup, packing pellet, or piece. A section for measuring the size of a piece of Styrofoam has the options "large (> iphone 4), middle, and tiny ( $\leq$  a dime)."

The project was one of seven conducted in the fiscal year that centered on aquatic trash prevention in New York and New Jersey. They were all funded by NEIWPCC with resources from EPA Region 2.





1968

The newest innovation in wastewater training would be familiar to NEIWPCC trainees from the 1960s and 70s. Increasingly across the region, training programs are reorganizing themselves into classes or cohorts by year.

The return to the cohort model, in which groups are graduated from a defined course of study together, is an alternative to the more autonomous system in which students choose classes individually, on their own schedules.

The cohort system returned in 2007, when Rhode Island's Wastewater Boot Camp graduated its first management training class. In Maine, NEIWPCC's JETCC program followed suit in 2009 with its Management Candidate School.

Connecticut has run its management school in this format since 2012. Massachusetts tried the format in 2010 and returned to it in 2017. Vermont and New Hampshire have offered similar programs during this period, though not currently.

In 2017, JETCC offered the Maine Wastewater Operator School, which adapted an introductory curriculum to the cohort model. This six-month, twelve-session course is designed for beginning and intermediate wastewater candidates.

Will other states follow that lead? JETCC will offer the program again in 2018.

### Training in Every Member State

During the fiscal year, NEIWPCC provided 2,782 participants with a multitude of training opportunities. 27,310 credit hours were awarded to operators attending one or more of the 159 training classes across the region.

NEIWPCC also offered specialized training, including an "Extreme Weather in the Forecast: Is Your Facility Prepared?" course, held at the Field's Point Water Pollution Control Facility in Providence, Rhode Island, last year.



Wastewater operator training in Maine.





2017

## Operator Certification

NEIWPCC's staff manages the certification and recertification processes for the states of Maine and Massachusetts. Renewing wastewater operators must satisfy a continuing education requirement. The work is cyclical and, for 2017, the NEIWPCC South Portland office staff recertified 268 applicants and issued 32 new certifications. There were 802 active licensed operators in 2017 and 88 licensed as inactive.

In Massachusetts, 5,547 licensed operators received renewal reminders in September. Approximately 600 operators renewed by the end of the fiscal year on September 30. The others were reminded to renew by the December 31 deadline. 453 individuals became first-time licensed operators in fiscal 2017.

## Massachusetts Onsite Professionals

NEIWPCC has been training and certifying Massachusetts System Inspectors and Soil Evaluators in accordance with Title 5 of state law since 2004. This year, 83 candidates took the Soil Evaluator certification exam. In addition, 82 candidates sat for the System Inspector certification exam.

## Storms and Stormwater

NEIWPCC's Wastewater and Onsite Systems Division continues to support ongoing work to recover from Hurricane Sandy. NEIWPCC employees also serve as independent monitors in a court-mandated upgrade of combined-sewer-overflow systems in New York City.

## Training by the Numbers

**27,310** . . . Total number of training hours awarded

**2,782** . . . Total number of participants

**159** . . . . . Total number of classes

**802** . . . . . Total number of licensed operators in the state of Maine

**268** . . . . . Total number of Maine re-certifications

**32** . . . . . Total number of newly licensed operators in Maine

**5,547** . . . Total number of letters mailed to Massachusetts wastewater operators

**453** . . . . . Total number of newly licensed wastewater operators in Massachusetts

**28** . . . . . Massachusetts Wastewater Management Candidates

**19** . . . . . Maine Wastewater Management Candidates School graduates

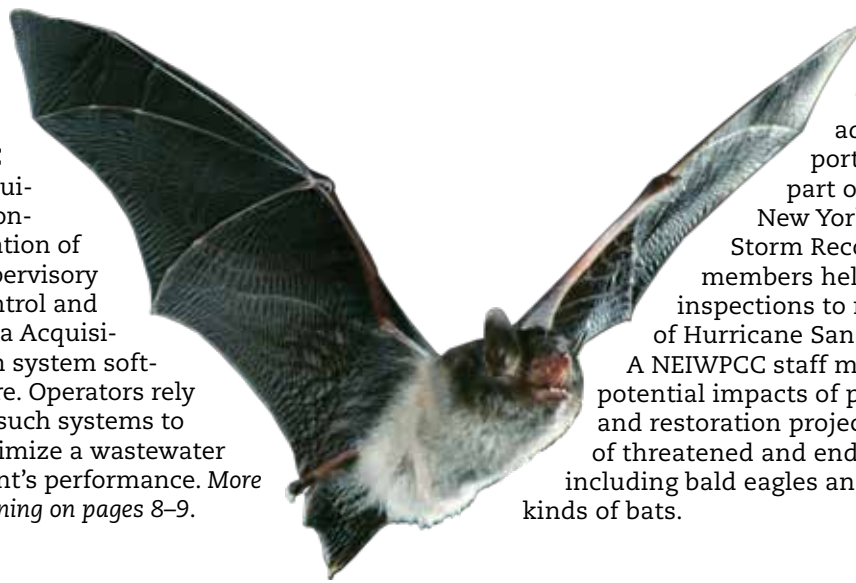
**21** . . . . . Maine Wastewater Operator School graduates

## 1. Wastewater Training

New Hampshire Department of Environmental Services' Franklin Training Center was the location for a class from NEIWPCC to explore industrial controls and data acquisition. The class featured a hands-on demon-



stration of Supervisory Control and Data Acquisition system software. Operators rely on such systems to optimize a wastewater plant's performance. More training on pages 8–9.

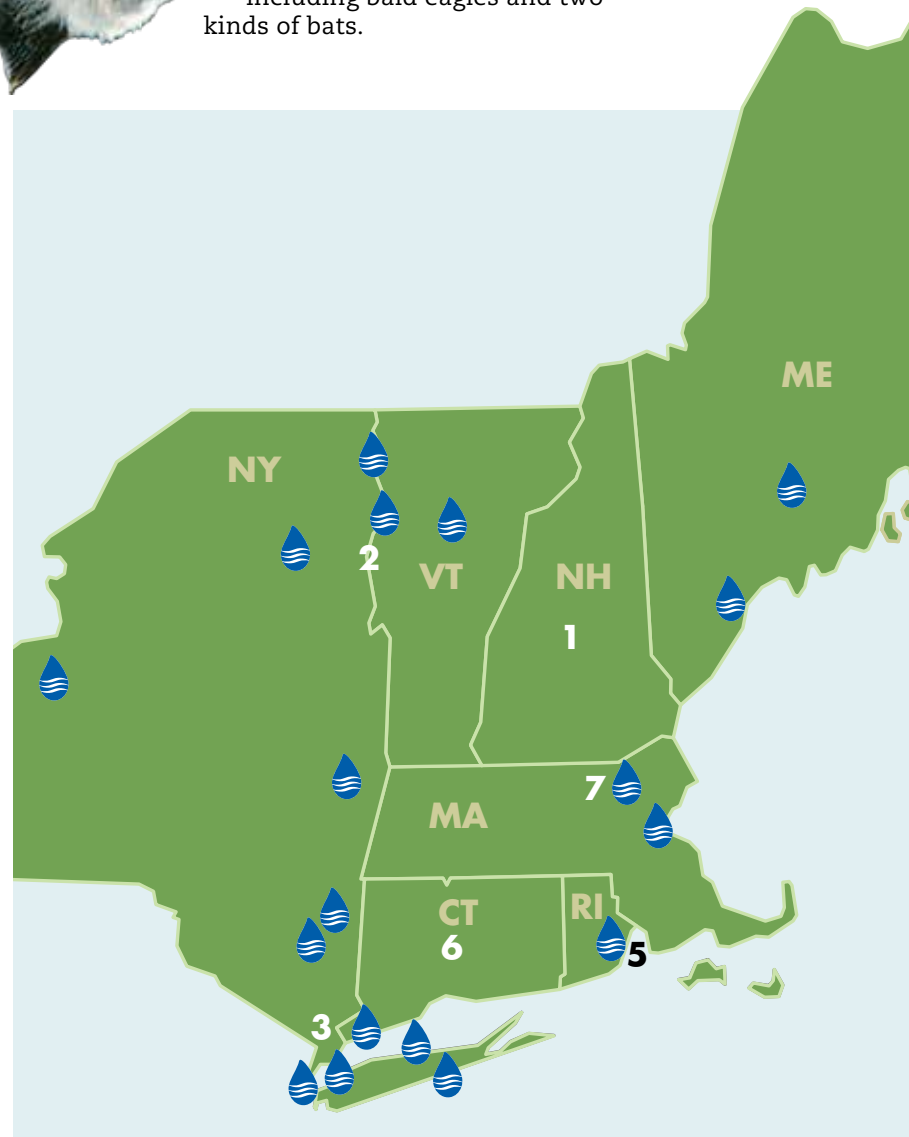


## 3. Bats

The Commission added bats to its portfolio this year, as part of its staffing of the New York Governor's Office of Storm Recovery. NEIWPCC staff members help with permitting and inspections to rebuild in the wake of Hurricane Sandy and other storms. A NEIWPCC staff member assesses potential impacts of proposed development and restoration projects on the habitats of threatened and endangered species, including bald eagles and two kinds of bats.

## 2. A Plan for Lake Champlain

Last summer *Opportunities for Action*, the blueprint that has guided efforts to protect and improve Lake Champlain since 1996, was revised for a third time. Governor Phil Scott and other officials from Vermont, New York, and Québec signed the document on July 19 in a ceremony at Crown Point on the lake's New York shoreline. The plan seeks to meet four broad goals: clean water, healthy ecosystems, thriving communities, and an informed and involved public.





#### 4. North Country Convention

To reach all ends of Maine, NEIWPC's Joint Environmental Training Coordinating Committee organizes a biennial North Country Convention in Presque Isle. This two-day educational event offers a range of services and training opportunities to wastewater professionals in the North Country. Last year's event, held on April 26 and 27, drew more than 150 attendees from the far corners of the state.



#### 5. Narragansett Estuary Challenges

The Narragansett Bay Estuary Program and its partners in 2017 wrote the most comprehensive scientific assessment of the estuary's health to date. The *State of Narragansett Bay and Its Watershed* combines the work of many research partners in Massachusetts and Rhode Island.



#### 6. Connecticut State Water Plan

Connecticut was wrapping up an ambitious statewide water plan at the end of fiscal 2017. NEIWPC retained and supervised an engineering consultant to write the plan, and advised the Connecticut Water Planning Council, the agency charged with delivering the report to the Legislature. The consultants held eleven public meetings and workshops around the state during the year.

#### 7. Statewide Training



NEIWPC handles training and certification for wastewater operators, soil evaluators, and system inspectors in Massachusetts. It performs similar services for Maine's wastewater operators.

#### Where We Served in 2017

NEIWPC had employees in six of the seven Northeast states in fiscal 2017. Some worked directly with state agencies, providing such services as data management, inspections, and permitting, while some supported geographically oriented programs. Two staff members comprised NEIWPC's office in South Portland, and thirty-three were based at our Lowell headquarters.

**Maine DHHS Drinking Water Program** (Augusta 6) • **Massachusetts DEP Drinking Water Program** (Boston 7) • **New York Independent Environmental Monitors** (Albany 1, Long Island City 2) • **New York State DEC: Division of Water** (Albany 4, Syracuse 1), **Governor's Office of Storm Recovery** (Albany 2, New Paltz 1, Long Island City 4, Stony Brook 5), **Long Island Nitrogen Action Plan** (Stony Brook 1), **Onondaga Lake Watershed** (Syracuse 1) • **Rhode Island DEM** (Providence 2)

**Hudson River Estuary Program** (Albany 4, New Paltz 4, Staatsburg 3) • **Hudson River National Estuarine Research Reserve** (Staatsburg 6) • **Interstate Environmental Commission** (Staten Island 5) • **Lake Champlain Basin Program** (Burlington 2, Grand Isle 10, Montpelier 1, Ray Brook 1) • **Long Island Sound Study** (Stamford 2, East Setauket 1) • **Narragansett Bay Estuary Program** (Providence 4), **Peconic Estuary Program** (Yaphank 1, East Setauket 1)



## Hudson River Eels and Education on the Hudson

Last spring, tiny transparent eels born in the Sargasso Sea finished their salt-water migration in the tributaries of the Hudson River. Then, for the tenth year in a row, hundreds of scientists, educators, and others captured, counted, and released them, sometimes upstream of dams, waterfalls, and other barriers.

The count is part of a long-term monitoring and education effort organized by the Hudson River National Estuarine Research Reserve and the Hudson River Estuary Program. The two programs of the New York Department of Environmental Conservation are partially staffed by NEIWPCC.

The Hudson River Eel Project began in 2008 with two sites, the Fall Kill in Poughkeepsie and Furnace Brook in Cortlandt. By

2017, the project had expanded to fourteen sites, from New York City to Troy, with more than 750 volunteers helping and learning. Over its lifetime, the Eel Project has caught, counted, and released more than 550,000 glass eels, helping these animals access better habitat.

Also at the Reserve, a NEIWPCC staff member coordinates an ongoing catch-and-release study about the growth and maturation of the eels. For four summers, she has trained high school, college, and adult volunteers to assist her with the field work, which occurs on six days over three months.

In a tributary of the Hudson River, this team measures eels' eyes and pectoral fins. Both parts undergo changes as eels reach sexual maturity and prepare for their second ocean migration. The team uses electronic tags to track individual eels in the stream over time.

The Estuary Program, Reserve, and NEIWPCC join with others to stage "A Day in the Life of the Hudson" every October. Thousands of students collect scientific information to create



*A Day in the Life of the Hudson.*



snapshots of the river at eighty-five locations. Then they share their data online to understand how each piece of the river fits into the larger Hudson estuary ecosystem.

NEIWPCC also staffs educational programs at the Reserve's Norrie Point Environmental Center in Staatsburg. Hundreds of students sixth grade and older visit Norrie Point each year for field-based programs. These include fish identification and biology, seining (a method of catching fish), water chemistry, and, for high school students, canoeing and marsh ecology. A NEIWPCC staff member at the Estuary Program makes classroom visits in the Hudson Valley and develops Hudson-related curriculums for schools.

The Lake Champlain Basin Program, the Long Island Sound Study, and the Peconic Estuary Program also offer and fund regular education and outreach programs.

## Lake Champlain Boat Launch Stewards

The Lake Champlain Basin Program employed nine seasonal boat launch stewards in fiscal 2017: seven in Vermont and two in New York. The stewards reduced the spread of aquatic invasive species by identifying high-risk boats for courtesy inspection and providing information about how to prevent the spread of invasive species.

The LCBP also trained two stewards who worked at boat launches on Missisquoi Bay, a section of Lake Champlain that extends into Canada. The stewards were employed by a Missisquoi Bay watershed group, with funding from the Great Lakes Fishery Commission. The LCBP staff also translated sandwich boards, t-shirts, and rack cards into French in preparation of the expansion of the steward program into Canada.

The Lake Champlain Basin Program runs and funds research, monitoring, mitigation, and public outreach programs that protect the lake. NEIWPCC supports the LCBP by managing its personnel, contracts, and grant and budget tasks, and by providing advice on the program's activities through interaction with the LCBP Steering and Executive Committees.

## Long Island Dam Removal

Dam removal, as an alternative to fishway installation, was the focus of a seminar Hofstra University on Long Island in October of 2016.

America's dams block the movement of migratory fish and have resulted in declines in fish populations. Many dams no longer serve their original purposes such as harnessing water power. Seminar participants discussed the benefits of dam removal, and gained insight into New York State regulations and

how they influence dam-removal projects.

The workshop and afternoon field trip were coordinated by four partners including the Peconic Estuary Program and Long Island Sound Study.

The Peconic Estuary Program sponsors monitoring, guides research, runs education and outreach programs, and promotes its comprehensive management plan for the estuary at the eastern end of Long Island.

## Tri-State Area Interstate Environmental Commission

This year a strengthened Interstate Environmental Commission started to emerge from a five-year relationship with NEIWPCC. The IEC, which serves the New York-Connecticut-New Jersey tri-state area, is one of the oldest interstate compacts in the Northeast. It used its time under NEIWPCC's umbrella to build partnerships and tailor its work plan to meet regional needs.

Today, the four-person staff conducts permit-compliance inspections and operates a nationally accredited laboratory on Staten Island. It also continues to monitor environmental indicators in western Long Island Sound, taking measurements of water temperature, salinity, dissolved oxygen, pH, water clarity, nutrients, biochemical oxygen demand, and chlorophyll *a*.

NEIWPCC conducts, oversees, and otherwise supports monitoring of water quality, wetlands, invasive species, and aquatic habitats elsewhere in the Northeast.



Sampling at a compliance inspection in Connecticut.

## Lake Champlain Pollution Prevention

**T**he Winooski Natural Resources Conservation District will use a \$20,000 grant from the Lake Champlain Basin Program to replace three culverts on the Texas Hill Tributary. The LCBP awarded \$357,669 in thirteen pollution-prevention grants through its Local Implementation Grant Program.

The culverts will address repetitive storm failings that have caused washouts, adding phosphorus and sediment to the stream. The new culverts will open three miles of brook trout habitat, provide access to more than ten acres of wetlands, and reduce sediment loading.

In the western basin, the Champlain Watershed Improvement Coalition of New York received \$16,570 to capture roof runoff from school buildings. The pollution-prevention grant funded similar projects at public schools or education centers in each of the five New York counties of the Lake Champlain watershed.

## Coming Together

### Estuaries

In September, 2017, 120 regional estuary researchers, managers, and students gathered in Rhode Island for a daylong workshop on phosphorus and the dynamics of algal blooms in estuaries. Participants in NEIWPCC's second Estuary Research Workshop came to hear Hans Paerl from the University of North Carolina, Robert Howarth of Cornell University, and other leading nutrient and coastal researchers.

### Nonpoint Source

The April, 2017, Nonpoint Source Conference in Northampton, Massachusetts, drew 130 participants to discuss the theme of "Lessons Learned." NEIWPCC organizes this annual event with the EPA and the environmental agency of the host state.

At the start of the fiscal year, in Boston, NEIWPCC convened the first of three annual training sessions for managers of federal, tribal, state, and territorial nonpoint-source programs. The EPA tapped NEIWPCC to run this invitation-only program through 2019.



The Nonpoint Source Pollution Conference in Northampton.

## Long Island Sound Nitrogen Across the Basin

**L**ast year, as the Long Island Sound reached a nitrogen milestone, the Long Island Sound Study and other partners directed a \$17,000 grant to a town in Massachusetts. The Town of Amherst will use the funds to install a permanent effluent flow monitor in its wastewater treatment plant discharge pipe, which discharges into the Connecticut River.

Last year was the first time that the Long Island Sound Futures Fund, established by LISS in 2005, considered projects in Massachusetts and the rest of the upper Connecticut River basin. Another \$65,000 will allow the Connecticut River Conservancy to develop a watershed monitoring plan to support the Long Island Sound Nitrogen Reduction Strategy in Massachusetts, New Hampshire, and Vermont.

Also in 2017, Connecticut and New York met a fifteen-year goal to reduce by 58.5% nitrogen inputs from wastewater plants in the lower watershed.

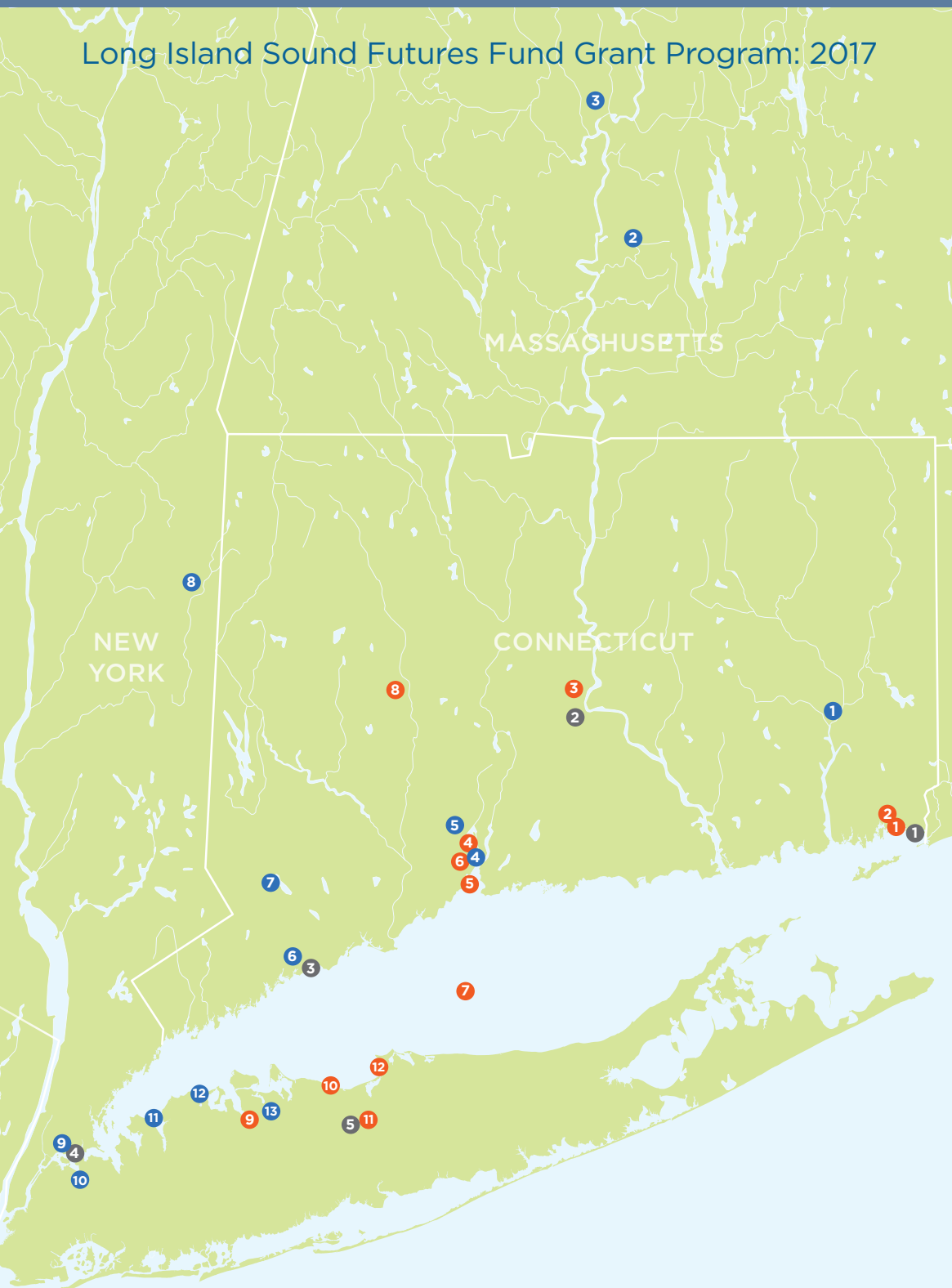
Nitrogen feeds plankton and algae blooms that can lead to hypoxia, a state of low dissolved oxygen. There has been a 34% reduction in the average area of hypoxia compared to the pre-reductions baseline.

The Futures Fund awards grants for watershed health, outreach and education, and wildlife habitat conservation. Most recipients are located in Connecticut and New York. All together in fiscal 2017, the Futures Fund grants helped pay for water-quality projects that will treat 439,000 gallons of water runoff, reduce more than 15,600 pounds of nitrogen, and collect 2,800 pounds of floating trash. Education grants will reach more than 870,000 residents.

The Hudson River Estuary Program, the Narragansett Bay Estuary Program, and the Lake Champlain Basin Program administer similar grant programs.



## Long Island Sound Futures Fund Grant Program: 2017



### Clean Water + Healthy Watersheds

1. Rain Gardens and Rain Barrels for Eastern Connecticut (CT)
2. Using Flow Meters to Remove Nitrogen at the Amherst Wastewater Treatment Plant (MA)
3. A Watershed Monitoring Strategy to Support the Long Island Sound Nitrogen Strategy (MA, NH, VT)
4. Promoting Green Infrastructure through Monitoring & Evaluation of Bioswales (CT)
5. Rapid Action Plans to Deliver Green Infrastructure in Coastal Connecticut Communities (CT)
6. The Unified Water Study Equipment Loan Program: Collaboration in Embayment Monitoring (NY, CT)
7. Partnering for Pollution Prevention: Water quality monitoring of Impaired Waterways (CT)
8. Collaborative Watershed Planning for the Ten Mile River (CT, NY)
9. Project WASTE (Waterway and Street Trash Elimination) (NY)
10. Unified Water Study: Long Island Sound Embayment Monitoring (CT, NY)
11. Hempstead Harbor 2018 Water Quality Monitoring Program (NY)
12. Planting for Clean Water Communities (NY)
13. Building Clean Water: Demonstrating Sewage Treatment and Water Conservation Strategies (NY)

### Educating + Engaging Sustainable and Resilient Communities

1. Sound Spirit Week (CT)
2. Connections to Long Island Sound (CT)
3. From the Schoolyard to the Sound: Engaging Communities through Schoolyard Habitats (CT)
4. Long Island Sound Summit and Video Project (CT)
5. Audubon Wildlife Guards: A Coastal Youth Conservation Program (CT)
6. Storm Water Management Education for Residents (CT)
7. Identifying Ecologically Significant Areas for the Blue Plan (CT, NY)
8. Healthy Connecticut Towns for a Healthy Long Island Sound (CT)
9. SOUNDoff Event! Creating Long Island Sound Stewards-III (NY)
10. Be a Good Egg- II (NY)
11. Septic Change-Out Education Program (NY)
12. Sound Gardening: Why Your Grass Choice Matters (NY)

### Thriving Habitats + Abundant Wildlife

1. Resilience Management Planning and Restoration at Dodge Paddock/Beal Preserve (CT)
2. Planning for Fish Passage at the Starr Mill Pond Dam (CT)
3. H. Smith Richardson Wildlife Preserve Restoration Project (CT)
4. Coastal Wetland and Forest Restoration Planning Project (NY)
5. Phillips Mill Fish Passage Project (NY)

## The Commission in 2017

Chair: **Michael Kuhns** • Vice Chair: **Douglas Fine** • Treasurer: **Richard Kotelly**

### Connecticut

**Robert Klee**, Commissioner, Department of Energy and Environmental Protection

Representing Mr. Klee: **Yvonne Bolton**, Chief of the Bureau of Materials Management and Compliance Assurance

Representing Mr. Klee: **Denise Ruzicka**, Director of the Water Planning and Management Division

**Dr. Raul Pino**, Commissioner, Department of Public Health

Representing Dr. Pino: **Suzanne Blancaflor**, Section Chief of the Environmental Health Section

Direct Appointment of the Governor: **Arnold Bevins**  
**Mark Zessin**

### Maine

**Paul Mercer**, Commissioner, Department of Environmental Protection

Representing Mr. Mercer: **Michael Kuhns**, Director of the Bureau of Water Quality

**Ricker Hamilton**, Commissioner, Department of Health and Human Services

Representing Mr. Hamilton:

**Nancy Beardsley**, Director of the Division of Environmental Health

Direct Appointment of the Governor: **Travis Noyes**  
**Brian Tarbuck**  
**David Van Slyke**

### Massachusetts

**Martin Suuberg**, Commissioner, Department of Environmental Protection

Representing Mr. Suuberg: **Douglas Fine**, Assistant Commissioner of the Bureau of Water Resources

**Dr. Monica Bharel**, Commissioner, Department of Public Health

Representing Dr. Bharel: **Jana Ferguson**, Director of the Bureau of Environmental Health

Direct Appointment of the Governor: **Paul Hogan**  
**John Sullivan**  
**F. Adam Yanulis**

### New Hampshire

**Robert Scott**, Commissioner, Department of Environmental Services

Representing Mr. Scott: **Eugene Forbes**, Director of the Water Division  
Direct Appointment of the Governor:

**Thomas Ballestero**  
**Frederick McNeill**  
**Nelson Thibault**  
**Robert Varney**

### New York

**Basil Seggos**, Commissioner, Department of Environmental Conservation

Representing Mr. Seggos: **Mark Klotz**, Director of the Division of Water

**Dr. Howard Zucker**, Commissioner, Department of Health

Representing Dr. Zucker: **Dr. Roger Sokol**, Director of the Bureau of Water Supply Protection

Direct Appointment of the Governor: **Robert Breault**  
**Richard Lyons**

### Rhode Island

**Janet Coit**, Director, Department of Environmental Management

Representing Ms. Coit: **Alicia Good**, Assistant Director of the Office of Water Resources

**Dr. Nicole Alexander-Scott**, Director, Department of Health

Representing Dr. Alexander-Scott: **June Swallow**, Chief of the Office of Drinking Water Quality

Direct Appointment of the Governor: **Russell Chateaufneuf**  
**Janine Burke-Wells**

### Vermont

**Emily Boedecker**, Commissioner, Department of Environmental Conservation

Representing Ms. Boedecker:

**Peter LaFlamme**, Director of the Watershed Management Division

**Dr. Mark Levine**, Commissioner, Department of Health

Direct Appointment of the Governor: **David Deen**  
**James Ehlers**  
**Dennis Lutz**

Membership as of September 30, 2017. Mary Mayhew (Maine), Clark Freise (New Hampshire), and Harry Chen and Allyssa Schuren (Vermont) also served on the Commission in fiscal 2017.

## Workgroups

### Climate Change Workgroup

**Purpose:** provides opportunities for state personnel to learn about and discuss regional initiatives on resiliency and climate change, and to update each other on related work in their respective states.

**Discussion highlights from fiscal 2017:** resiliency initiatives by NOAA and EPA Region 1.

### Contaminants of Emerging Concern Workgroup

**Purpose:** promotes discussion among state staff members on shared challenges related to unregulated pollutants.

**Discussion highlights from fiscal 2017:** research and EPA guidance on the presence of PFOA and PFOS (a subset of perfluoroalkyl substances) in drinking water.

### Groundwater and Source Water Protection Workgroup

**Purpose:** fosters communication among state personnel and others who coordinate protection of underground and aboveground sources of drinking water.

**Discussion highlights from fiscal 2017:** revisions to *Protecting Drinking Water Sources in Your Community: Tools for Municipal Officials*. NEIWPCC published this guide in 2004.

### Massachusetts Wastewater Training Advisory Committee

**Purpose:** steers the Massachusetts Wastewater Operator Training Program. The Committee comprises representatives of eight entities: NEIWPCC, the Massachusetts Water Pollution Control Association, the New England Water Environment Association, the Massachusetts Rural Water Association, Mass. DEP, EPA Region 1, the Massachusetts Board of Operator Certification, and the Upper Blackstone Water Pollution Abatement District.

**Discussion highlights from fiscal 2017:** the Massachusetts Wastewater Management Training Program; new courses.

### National Pollutant Discharge Elimination System (NPDES) Workgroup

**Purpose:** supports communication among the state personnel who write and enforce NPDES permits, and their counterparts at the EPA.

**Discussion highlight from fiscal 2017:** limits for aluminum, which is sometimes added during wastewater treatment to remove excess phosphorus.

### New England Biological Assessment of Wetlands Workgroup

**Purpose:** promotes collaboration and communication among state and federal personnel who use and develop monitoring and assessment tools.



**Discussion highlights from fiscal 2017:** measuring climate-related changes in wetland health; Vermont's new process for classifying wetlands.

### Nonpoint Source Pollution Workgroup

**Purpose:** coordinates sharing of best practices and lessons learned among state managers of nonpoint source pollution programs.

**Discussion highlights from fiscal 2017:** a new web application for developing watershed-based plans in Massachusetts; a new online system from the EPA for tracking use of federal funds for efforts that manage NPS pollution.

### Onsite Wastewater Workgroup

**Purpose:** promotes communication among state personnel on the regulation of decentralized wastewater treatment systems, including septic systems.

**Discussion highlights from fiscal 2017:** design standards for onsite treatment of accessory dwelling units (residential living units that are within or attached to a single-family dwelling); advances in septic-system design that optimize the removal of pathogens and nitrogen.

### Residuals Workgroup

**Purpose:** promotes compatibility among state and federal programs for managing wastewater sludge and septage.

**Discussion highlights from fiscal 2017:** beneficial reuses of residuals; sampling residuals for per- and polyfluoroalkyl substances.

### Stormwater Workgroup

**Purpose:** fosters information-sharing among state and EPA personnel who develop and implement stormwater permits.

**Discussion highlights from fiscal 2017:** new and forthcoming statewide permits for municipal separate storm sewer systems (MS4s); storage of road salt.

### Underground Storage Tanks Workgroup

**Purpose:** provides a forum for communication on the prevention and remediation of leaks from underground storage tanks. The workgroup comprises personnel from state agencies, EPA regional offices, and EPA's Office of Underground Storage Tanks.

**Discussion highlights from fiscal 2017:** site remediation; leak detection; outreach to tank owners.

NEIWPPC's governing Commission took to the streets of Boston for a green-infrastructure tour in September of 2017. The Commission met three times in fiscal 2017, and its Executive Committee met five times.

### Total Maximum Daily Load (TMDL) Workgroup

**Purpose:** supports state programs that develop and implement pollution budgets for impaired waters.

**Discussion highlights from fiscal 2017:** water pollution from road salt, and training on maintenance practices that use less salt without compromising road safety.

### Wastewater Certification Workgroup

**Purpose:** supports information-sharing and collaborative problem-solving among state personnel who oversee operator-certification programs.

**Discussion highlights from fiscal 2017:** interstate operator-certification reciprocity; guides to the operator-certification processes in each state, which differ by state; recruiting veterans of the U.S. Armed Forces to the wastewater and drinking-water fields.

### Water Quality Standards Workgroup

**Purpose:** fosters communication among states on standards and classifications and interstate water-quality issues.

**Discussion highlights from fiscal 2017:** a model developed by the EPA for determining copper criteria in estuarine waters; integrated reports on the quality of each state's waters that the federal Clean Water Act requires states to submit to the EPA every two years.

### Wetlands Workgroup

**Purpose:** provides a communication forum for state personnel who coordinate programs to protect wetlands to discuss recent developments in state and federal regulatory programs.

**Discussion highlights from fiscal 2017:** comment letters on proposals to recodify and rescind the 2015 Clean Water Rule, which addresses the legal scope of the Clean Water Act.



## NEIWPCC's Staff

**W**hat accomplishment have you been most proud to contribute to? Some NEIWPCC staff members reached significant milestones in fiscal 2017. We inquired about their most noteworthy contributions. Here are some of their responses.

*"I am especially proud of my work managing the Maine Management Candidate School. The program, which started as an experiment with 17 wastewater operators in 2009, has graduated 153 environmental professionals, many of whom now are in leadership positions."*  
 – Leeann Hanson, 25 years

*"...my work encouraging collaboration among Vermonters, New Yorkers, and Québécois to commemorate the four hundredth anniversary of Samuel de Champlain's 1608 establishment of Québec City and his 1609 exploration of Lake Champlain."*  
 – Jim Brangan, 15 years

*"I'm proud of the 2012 Clean Water Act Reauthorization paper I wrote and the subsequent September 2015 Interstate Water Report in-depth special report, 'Modernization of the Clean Water Act is Long Overdue.' The topic continues to be of great interest to me today."*  
 – Heather Radcliffe, 5 years

*"Going from pencil and paper to a fully automated accounting system"*  
 – Linda Agostinelli, NEIWPCC Comptroller, 20 years



Top row (l-r): Gavin Lemley, HREP, 5 years; Elizabeth Lee, LCBP, 5 years. Middle row: Jim Brangan, LCBP, 15 years; Emilie Hauser, HRNERR, 15 years; Becky Thomas, HREP, 15 years. Front row: Linda Agostinelli, Comptroller, 20 years; Leeann Hanson, JETCC, 25 years. Not pictured: Patti Brady, Accountant, 15 years; Heather Radcliffe, Senior Program Manager and Staff Attorney, 5 years.

### Annual Achievement Award

#### Kacie Giuliano

*Hudson River Estuary Program, Habitat Restoration Team*

*"Over the past year, Kacie has demonstrated her ability to combine her personal determination to succeed with innovative thinking and understanding of the value of teamwork to advance several projects."*



### Above and Beyond Award

**Patti Brady, Spring Connolly, Jim LaLiberte, Jean Quigley, Sarah Schaefer**

### Thanks to our Human Resources Staff

In fiscal 2017, NEIWPCC's Human Resources Division evaluated **1,653** applications and conducted **97** interviews. The HR staff then managed the hiring of **31** new employees, who were welcomed at **15** orientations, and assisted the Commission in hiring **1** executive director.



# Financial Highlights

The assets of the Commission exceeded its liabilities at the close of the most recent fiscal year by \$3,997,010. The total net position increased by \$187,082 for the year that ended September 30, 2017.

The Commission continues to receive a sizable portion of our funding from the United States Environmental Protection Agency in the form of grants and cooperative agreements. From our member states, we receive direct financial support in the form of annual dues as well as substantial funding for projects pertaining to specific water bodies.

Among our other sources of revenue are our training and certification programs, including those we conduct for the Commonwealth of Massachusetts and the State of Maine. Fees generated by the Massachusetts and Maine programs are shown on the statement of program activities as separate sources of revenue.

Fiscal 2017 was a relatively good year financially for the Commission, with total revenue exceeding total operating expenses. This resulted in an increase in net assets, which provide a reserve for the organization to draw upon if necessary to support operations temporarily.

Independent auditors perform an audit of the Commission's annual financial statements. The audit is conducted in accordance with U.S. generally accepted auditing standards, issued by the Comptroller General of the United States.

Linda Agostinelli, CPA  
NEIWPCC Comptroller

## NEW ENGLAND INTERSTATE WATER POLLUTION CONTROL COMMISSION

### Year Ended September 30, 2017

#### Revenue

Federal Grants . . . . .	\$7,600,213
Member State Support . . . . .	153,833
Member State Support-IEC . . . . .	74,933
State Contracts . . . . .	3,844,977
Training . . . . .	680,690
Interest Income . . . . .	8,670
Donated Services . . . . .	681,692
Other Income . . . . .	50,202
Other Contracts . . . . .	2,638,140
MA/ME License Renewal Fees . . . . .	96,866
MA/ME Certification Exam Fees . . . . .	26,995

**Total Revenue . . . . . 15,857,211**

**Operating Expenditures . . . . . 15,697,446**

Investment Income . . . . . 27,317

**Change in Net Assets . . . . . \$187,082**

This annual report is a product of the  
**New England Interstate Water Pollution Control Commission**  
650 Suffolk Street, Suite 410, Lowell, MA 01854

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Adam Auster, *communications director* • Anna Meyer, Michelle St. John, *contributing editors*  
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Ayla Fox took the photo of the rainbow trout on our cover for the Narragansett Bay Estuary Program. The Bronx River Alliance provided the photo on page 7. The group photo on page 9 is by Charles Tyler. The Indiana bat on page 10 is copyright ©MerlinTuttle.org. Chris Bowser took the photo on page 12. Lucy Reading-Ikkanda designed and rendered the map on page 15 for the Long Island Sound Study. Jess Best took Kacie Giuliano's photo that appears on page 18. Our back cover, from NEIWPCC's archive, shows the Commission officers for 1962–63. Thank you to the entire NEIWPCC staff and to our partners for assistance with this report.



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