Assisting its member states individually and collectively by providing coordination, public education, training and leadership in the management and protection of water quality in the New York and New England Region.

Annual Report 2001
Connecticut • Maine • Massachusetts • New Hampshire • New York • Rhode Island • Vermont
Dear Friends,

This report reflects the many water quality issues and projects the Commission and member states have been involved with over the last year. As one can see, this has been a very active time replete with many complicated and diverse issues. Perhaps the successful completion of the “Ethanol Report” best illustrates the true value of our Commission. This was not only a joint effort among the member states, but also a joint effort including our sister organizations, NESCIAUM, NEWMOA, and other northeastern states. Through NEIWPCC’s leadership and the participants’ mutual cooperation, the study and report were done well and timely. It was presented to the Commissioners and has been accepted by the governors as the basis for a regional position on gasoline additives necessary for air quality management.

As we look ahead, we see that water quality management only becomes more complicated and diverse as time goes on. We states struggle more than ever to respond to our local issues and to new or continuing federal mandates. Additionally, the public demands professional, courteous, and instant response from the state water quality management agencies, while at the same time we struggle to run our programs with less funding. Furthermore, EPA continues to present additional challenges to us, such as Phase II Stormwater permits and TMDLs for nonpoint source problems. Meanwhile, some of our more serious problems, such as mercury in fish tissue, enrichment of marine waters, and gasoline additives, are more complex than ever. Many of these are multimedia and regional or national in nature. While the challenges that lay before us in 1972 when the Federal Clean Water Act was passed appeared overwhelming, the challenges that lie before us now are probably even more difficult still.

With this in mind the New England states and New York need NEIWPCC more than ever. Many of the problems that we need to tackle require regional or even national coordination. Additionally, many of our individual problems, such as managing coastal septic systems, can be more readily resolved once we understand the experiences of our neighboring states. Luckily, I believe NEIWPCC is in a better position to provide this valuable service than ever before. We have excellent representation from all the states, as well as knowledgeable and active non-agency commissioners—perhaps the best group ever! In addition, our new EPA Regional Administrator, a past Commissioner from New Hampshire, has actively participated at our meetings in the past and understands and appreciates the work of the Commission. Our relationship with EPA is critically important and it only seems to get stronger with time. We continue to have very close ties to ASIWP, which is critical to our regional ability to participate in national issues. Finally, we have a strong staff at NEIWPCC ready and willing to tackle the most difficult problems. Collectively, we need to have a very powerful voice; through NEIWPCC we are able to express that voice.

On behalf of our most capable executive director, the excellent NEIWPCC staff, and myself, we enter the new year with a strong commitment to promote regional cooperation and assistance and to continue to make significant improvements in the environment and in the protection of public health.

Sincerely,

Robert Smith
Chairman
NEIWPC Mission

The New England Interstate Water Pollution Control Commission (NEIWPC), a non-profit interstate agency established by an Act of Congress, serves and assists its member states individually and collectively by providing coordination, public education, training and leadership in the management and protection of water quality in the New York and New England Region.

NEIWPC Vision

The NEIWPC will, in consultation with the states, take a proactive leadership role on regional and national issues while developing and implementing water programs complementary to and supportive of Member State, EPA and other federal statutes, goals and programs. Relative to:

Water Quality High levels of water quality will have been established and member states are achieving the goals of all relevant statutes in balance with a healthy economy.

Coordination Strong coordination among those with water quality, public health and environmental interests will be regularly accepted as commonplace.

Communication All concerned will recognize that NEIWPC provides a perspective on national and regional issues that individual states cannot easily obtain and in which they can have confidence in their collective best interest.

Relationships States, EPA and other organizations will recognize NEIWPC as being complementary to state programs, value NEIWPC for what it is and accomplishes and solicit NEIWPC participation in their initiatives.

Staff NEIWPC staff will be universally recognized and respected by their peers and the public as being professional, knowledgeable, committed, articulate and responsive.

Training Programs NEIWPC will regularly conduct a full range of broad-based training programs that add value for participants and their employers.

Core Values

At NEIWPC we seek to accomplish our mission with an intense focus on three functional areas regional coordination: service to our member states, training, education and public information. We base all of our decisions and day-to-day work on the following core values:

Regional Coordination We believe the benefits from coordination among our member states are significant and accrue to the states both collectively and individually. We conduct activities that enhance opportunities for communication and coordination among our member states, EPA and other federal, state and local entities.

Serve and Assist Member States The Commission's very reason for existence is to serve and assist its member states in their work of protecting and enhancing their waters. We seek to do this proactively rather than merely reactively. We maintain an extensive communication network with our states and with others who impact their programs in order to assure that we accurately assess, anticipate and respond to state needs.

Training, Education, Public Information We believe that our mission is most effectively accomplished by delivering, supporting and encouraging training, education and public information.
WATER PROGRAMS

Interstate programmatic activities are organized by NEIWPCCC staff in workgroup format for three primary reasons:

- To provide a structured forum for the exchange of information and ideas
- To encourage a cooperative approach to addressing issues of regional importance
- To develop recommendations for regional policies. NEIWPCCC personnel provide staff support, coordinate meetings, and serve as an information clearinghouse for these workgroups.

DRINKING WATER

Water supply and water quality issues go hand-in-hand in terms of protecting the public health. In New England, drinking water issues and implementation of the Safe Drinking Water Act (SDWA) are regionally addressed by the states through coordination with the NEIWPCCC Drinking Water Program.

Funded by the six New England states, the Drinking Water Program brings state administrators together through workgroup sessions. In these sessions issues such as the needs of small water systems, emergency planning and preparedness, operator training programs, and state laboratory capacity issues are discussed.

Drinking Water Program priorities for FY-01 included tracking the Bush Administration’s evaluation of the arsenic standard, preparing an operations manual for very small systems, interpreting the results of the New England Groundwater Viral Study, and coordinating the New England states’ discussion on the issues surrounding removal of radionuclides from drinking water and the subsequent subsurface disposal problems.

NEIWPCCC drinking water staff also participated in various conferences and meetings. These included the annual conference of the Association of State Drinking Water Administrators, the New Hampshire Drinking Water Expo, the Massachusetts Drinking Water Education Partnership meetings in preparation for Drinking Water Week, the monthly meetings of the New England Water Works Association (NEWWA) Filtration Committee, the NEWWA Surface Water Committee meetings, the New England Radon Committee meetings, the policy and annual meetings of the Groundwater Protection Council, and the NEWWA Annual Conference in Cambridge, Massachusetts.

Specific FY-01 initiatives and projects overseen by the program included:

NEW ENGLAND GROUNDWATER VIRAL STUDY: NEIWPCCC continued its coordination of the New England Groundwater Viral Study. This study was initiated in 1997 to examine microbial pathogens and viral indicators in New England groundwater sources. Results will be used to identify characteristics of groundwater sources that could be used to assess the vulnerability of groundwater to fecal contamination. NEIWPCCC provided monthly progress updates on the study to the states. The final results will be published in 2002.
RADIONUCLIDES TREATMENT AND DISPOSAL: The Vermont Department of Environmental Conservation Drinking Water program has become increasingly concerned by current practices for disposing drinking water treatment process wastes containing radionuclides. Solutions for proper disposal methods were discussed among Vermont agencies and with the New England State Drinking Water Administrators, without conclusion. Of particular concern to Vermont, are the fate, transport, and concentration of radionuclides discharged to septic systems and leaching fields and whether concentrated wastes result in health hazards. To assist Vermont NEIWPC, prepared a draft workplan that outlines steps needed to initiate a research study. In September, NEIWPC sponsored a regional meeting that brought industry experts to the table to review this important issue. NEIWPC will assist Vermont as staff further develops study objectives.

SMALL SYSTEMS: Small systems are plagued by compliance problems, limited funds, and lack of appropriately trained operators. They are also a difficult audience for regulators to reach, rarely attending training sessions. For these reasons, EPA, the states and various water supply industry contacts have embarked on a Small Systems Initiative. In May, NEIWPC participated in a meeting to jumpstart this effort. In response to identified needs, NEIWPC agreed to support the initiative by participating on a regional advisory board focused on small systems, developing an operations manual for small systems, and preparing a fact sheet for campgrounds with their own drinking water supply.

NEW ENGLAND DRINKING WATER ADVISORY BOARD: The New England states, NEIWPC, EPA, and the University of New Hampshire have formed a regional Drinking Water Advisory Board to advance drinking water technologies available for small systems, as well as to promote technical exchange among the drinking water community. The first advisory board meeting was held in June at NEIWPC's office. States shared their technology needs and revised the proposed mission statement: "To serve as a forum for identifying the needs of small and very small drinking water systems as defined by the EPA and to identify, review, and recommend new and existing treatment technologies for New England in response to the SDWA regulations."

OPERATIONS MANUAL FOR VERY SMALL SYSTEMS: In collaboration with the New Hampshire Department of Environmental Services (NH DES), NEIPWCC is developing a self-help operator's manual targeted to groundwater systems serving less than 200 persons. Often, these systems are mobile home parks or housing development clusters and are monitored/maintained by a residential appointee with little knowledge of water treatment and regulations. The manual is designed to help these individuals better understand, maintain, and operate their systems. A draft manual will be distributed at the NH DES Drinking Water Expo on November 14, 2001.

DRINKING WATER FACT SHEET FOR CAMPGROUNDS: Providing safe drinking water is not only an essential part of offering an enjoyable experience for campers, but a requirement of the SDWA. Under the SDWA, campgrounds that serve water to an average of twenty-five people for at least sixty days of the year are classified as Transient Non-Community Water Systems. Campground owners have the responsibility of maintaining a safe water supply, but are not in business to supply water. As a result, owners may not be informed of the steps required to comply with state and federal regulations. To provide some basic operational tips and regulatory information to these systems, NEIWPC developed a four-page fact sheet.

ARSENIC RULE: In May, EPA, under the new Bush Administration, undertook two important actions on the arsenic rule, promulgated on January 22, 2001. First, EPA extended the effective date of the rule to February 22, 2002. Second, EPA initiated three individual reviews of the health risks, benefits, and costs as outlined in the regulation. NEIWPC monitored these reviews.

PRIVATE WELL INITIATIVE: EPA Region 1 has embarked on a regional "Private Well Initiative" to educate the public on testing private drinking water wells. To assist in building a partnership between the states and EPA, NEIWPC compiled data on current state recommendations and regulations regarding private wells. The information will be used to help ensure that the initiative
does not conflict with current state practices. As the initiative moves forward, NEIWPCG will continue to work with the states on developing joint public education brochures and announcements.

MAINE DRINKING WATER PROGRAM: NEIWPCG staff assisted the Maine Department of Human Services Drinking Water Program in various aspects of Maine's Public Water Supply System program, the State Revolving Loan Fund program, and other areas of need as required by the recent amendments to the Safe Drinking Water Act.

GROUNDWATER & SOURCE WATER PROTECTION

Increasing incidents of contaminated groundwater and source water have alerted the nation's policymakers that this irreplaceable resource has to be protected.

Through the workgroup medium, NEIWPCG works with state and EPA groundwater staff to facilitate the exchange of technical information and the discussion of groundwater management strategies. Topics of workgroup meetings in FY-01 included the Groundwater Rule, Source Water Assessment Program (SWAP) development and implementation, the National Source Protection Strategy, Consumer Confidence Reports, Underground Injection Control/Class V Regulations, and arsenic in groundwater.

SWAP INTERSTATE DATA GATHERING GRANT: NEIWPCG received an EPA grant to assist the New England states and New York with assessments of interstate source waters by gathering information on various aspects of their SWAPs. Last fiscal year, NEIWPCG moved forward with the development of a document summarizing the New England states' wellhead protection programs. NEIWPCG also compiled information on local efforts to protect interstate sources of drinking water. Both documents are meant to serve as handy guides for state source protection coordinators to understand and compare state and local source protection efforts. These documents were finalized and distributed in the summer of 2001.

NATIONAL SOURCE WATER PROTECTION LIST SERVER: Last fiscal year, NEIWPCG launched the National Source Water Protection List Server, a forum dedicated to facilitating communication and technical information exchange concerning drinking water source protection. As states implement their SWAP and focus on source water protection, the sharing of information among states and between state programs becomes critical. This list server attempts to enhance these lines of communication and promote cooperation among key players influencing source protection nationwide. To date there are over 180 subscribers representing state and EPA staff from across the country. Each week, subscribers request for information or response to a request is posted where other members can respond to the request through the list server or directly to the author. Also, a weekly news brief highlights useful information for subscribers from a variety of national and state sources.

NEIWPCG, having received positive feedback on the list from current subscribers in FY-02, will increase the subscriber base to include other non-state agencies directly involved in source water protection. This project is funded through a grant from EPA.

MA DEP SCHOOL GRANT: NEIWPCG partnered with the Massachusetts Department of Environmental Protection (MA DEP) to promote source protection in high schools that use groundwater from their own property as their primary water supply. The original goal was to target four schools where in-depth source assessments would be conducted and source water protection best management practices recommended. This was done successfully at one school. NEIWPCG and MA DEP decided to reach a greater audience by developing a curriculum that can be incorporated at the school's convenience. Some of the concepts the students will explore include water cycle, groundwater/hydrogeology, pollution, and wellhead protection. The activities will be based on That Magnificent Ground Water Connection. The curriculum will be distributed to all high schools identified as public water supply systems.

MICROBIAL FACT SHEET: In FY-01, NEIWPCG worked with MA DEP and New England states to develop an informational brochure titled What You Need to Know About Microbial Contamination. The brochure describes what microorganisms are and how they are a threat to human health. The
brochure offers methods people can implement to prevent and control microbial contamination. These methods include identifying such sources of contamination as sewage disposal systems, agriculture, stormwater run-off, and wildlife. Additional sources of information are also provided in the brochure.

**NATIONAL SOURCE PROTECTION MEASURES:** The National Source Protection Measures is an effort by EPA to evaluate current Source Water Protection Programs on a nationwide basis to determine whether source prevention efforts are making a difference in public health. The measures require states to collect valuable data to support these efforts and will be used to potentially increase future source protection funding from Congress. NEIWPCCC coordinated state comments on the strategy and submitted them to EPA in January 2001.

**NONPOINT SOURCE**

According to the EPA, nonpoint source (NPS) pollution is the nation's largest contributor to water quality problems. NPS pollution causes beach closures, fish kills, habitat degradation, and unsafe drinking water. Nonpoint source pollutants can include nutrients, bacteria, sediments, toxic chemicals, and heavy metals. Unlike point sources of pollution (e.g., discharge pipes from facilities), nonpoint sources are diffuse, making them difficult to trace and control.

Nonpoint source pollution occurs when precipitation runoff (rain or snowmelt) moves over the land picking up pollutants and sediments, and then deposits them into lakes, rivers, coastal waters, and even groundwater. There are many opportunities for runoff to pick up contaminants as it runs off driveways, lawns, crops, industrial sites, or malfunctioning septic systems. An additional pathway for nonpoint source pollution is atmospheric deposition. Contaminants can come from the air itself as airborne particles get captured in precipitation, fall to earth, and flow into surface waters.

Everyone contributes to nonpoint source pollution in one way or another. Land uses such as agriculture, forestry, construction, and septic systems are all potential sources of nonpoint contaminants. Household contributors include pet waste, lawn fertilizer, paints, and motor oil. Automobiles, factories, wood stoves, and power plants emit airborne contaminants that return to the earth in the form of rain or snow. The rate at which these contaminants reach water sources is accelerated by impermeable surfaces like roofs and pavement, which keep the soil from naturally filtering the pollutants and sediments in runoff.

NEIWPCCC's NPS Workgroup is comprised of NPS program managers from the New England states, New York, New Jersey and EPA Regions 1 and 2. The workgroup was established with the objective of assisting, coordinating, and strengthening NPS protection efforts throughout the region. The workgroup acts as a forum on national policy issues, a clearinghouse for information, and a coordinating body to develop nonpoint source related programs and workshops of regional and local interest.

In FY-01, the workgroup met four times to discuss pertinent topics and to plan upcoming events. Workgroup topics included the Clean Water Needs Survey; Gap Analysis training; monitoring proposals, the Grants Reporting and Tracking System, EPA/State NPS partnerships, Annual Meeting and Technology Transfer Workshop planning, WRAS requirements, FY-02 Supplemental Guidelines, the national NPS meeting, atmospheric deposition, and the FY-02 NPS workplan and supplemental projects. NEIWPCCC kept workgroup members apprised of numerous guidelines issued by EPA directly related to Section 319 program implementation and other guidelines that indirectly affected program operations. NEIWPCCC submitted comments to EPA on behalf of its member states on two of the Section 319 program guidances.

To aid in the dissemination of information on nonpoint source pollution, NEIWPCCC staff created a brochure called *What Do You Know About ... Nonpoint Source Pollution?* This brochure contains
basic information on NPS pollution such as where it comes from, the laws that regulate it, what individuals can do to prevent NPS pollution, and sources for additional information.

In November, NEIWPCC assisted Massachusetts with the Erosion and Sediment Control Tradeshows in Randolph, Massachusetts. Our assistance included managing registration, assisting with logistics, and preparing handout materials for the tradeshows.

In March, NEIWPCC developed and hosted a Communications Workshop, which was attended by 35 people from state agencies and local watershed groups. The workshop included training by a communications professional, information exchange between outreach programs, and a roundtable discussion on communication challenges and activities.

The Workgroup’s 12th Annual Nonpoint Source Meeting was held in May in Madison, Connecticut. Over 135 people attended this meeting, titled “Getting Results: A Decade of Nonpoint Source Management under Section 319 of the Clean Water Act.” The event commenced with a memorable keynote address, delivered by renowned author and speaker James H. Kunstler, on the plight of suburban sprawl. The meeting featured presentations and panel discussions on NPS implementation and management tools, habitat restoration approaches, best management practices, and watershed management. Field trips showcased a variety of Connecticut’s successful restoration projects.

NEIWPCC began development of a brochure to help both air and water program staff understand the multimedia problems of atmospheric deposition, including both technical and management aspects. The brochure will describe the effects of atmospheric deposition of pollutants on water quality: implications for TMDLs; and modeling, monitoring, and controlling air emissions and deposition rates. It is anticipated the brochure will be completed in early FY-02.

NEIWPCC, in cooperation with New York State Department of Environmental Conservation, planned its annual fall workshop, held in October 2001 in West Point, New York. The two-day Watershed Planning and Assessment Techniques for Local Officials and Organizations workshop provided information on successful NPS pollution assessment techniques, controls, and management strategies and their role in watershed protection. The first day of the workshop provided helpful tools and strategies for NPS management. The second day featured smaller breakout sessions on successfully implemented best management practices and on computer tools available for watershed management.

**ON-SITE WASTEWATER**

Nearly one-quarter of the nation’s population is served by septic systems. Each year these systems discharge about one trillion gallons of water into the nation’s soils and groundwater. Besides the important role they play in household sanitation, septic systems also influence community growth and economic development.

Improperly designed, installed, or maintained on-site sewage disposal systems, however, are often the root of serious environmental and public health concerns. Poorly treated or untreated effluent can contaminate groundwater and surface water—often important drinking water sources and/or
recreational resources. Too often, this contaminated water has been responsible for water-related disease outbreaks.

NEIWPC's On-site Wastewater Task Force, comprised of state on-site wastewater disposal directors, was formed to identify and respond to the need for more effective on-site wastewater programs at the state level.

Workgroup meetings covered topics such as the Annual Small Flow's Clearing House's National Regulators conference, the proposed EPA Management Guidelines, the Innovative/Alternative Technology Review Project, the Buzzards Bay Alternative Technology Test Center, and the development of the Spring 2002 Northeast On-site Wastewater Short Course.

**INNOVATIVE/ALTERNATIVE ON-SITE WASTEWATER TECHNOLOGIES:**

In FY-97, NEIWPC began the Interstate Regulatory Cooperation Project for the Evaluation of Innovative/Alternative On-site Wastewater Technologies. The goal of the project is to assist in the evaluation of technologies for individual state approval of innovative/alternative on-site wastewater technologies.

The Interstate Regulatory Cooperation Project brings together the interests of federal and state regulators with potential end users of the technologies to facilitate independent verification of technology performance. A Technical Review Committee consisting of New England state regulators and advisors judge each technology based on performance data and render an advisory opinion. This provides state regulatory staff with the information they need to review a new technology application.

In FY-01, NEIWPC continued communicating with vendor applicants to the Interstate Regulatory Cooperation Project and issued advisory opinions for the second round of the project. The advisory opinions were also posted on NEIWPC's web site.

**RESIDUALS**

NEIWPC's Residuals Workgroup was created to enhance interstate communication on issues associated with residuals generated by municipal wastewater treatment, on-site wastewater systems, and drinking water treatment. NEIWPC has worked to promote compatibility among state and federal sludge and septage management programs. It has done so by acting as a forum for interstate discussions, as a clearinghouse for information, and as a distributor of Sludge Fact Sheets. Workgroup meetings included discussions on current and proposed state and federal regulations, public acceptance and education, and the National Biosolids Partnership.

In FY-01, the Residuals Workgroup established a risk assessment subcommittee to review the issues and regional impact associated with proposed changes to the federal regulations governing the land application of biosolids containing dioxin and dioxin-like compounds. This effort commenced with a kick-off meeting on January 24, 2001, attended by member-state biosolids coordinators and public health agency personnel. The review effort is expected to take approximately eighteen months. It is being conducted in parallel with EPA's promulgation of the final changes to the federal rule governing the disposal of dioxin-containing biosolids.

FY-01 represented the first year of a three-year NEIWPC commitment to chair the New England Water Environment Association (NEWA) Residuals Management Committee. As part of this commitment, NEIWPC personnel assisted with the planning and implementation of the November 2000 NEWA Residuals Specialty Seminar held in Nashua, New Hampshire, and also with the planning for the 2001 Residuals Specialty Seminar to be held in Worcester, Massachusetts.

In conjunction with the Vermont Department of Environmental Conservation, NEIWPC planned and organized a one-day Biosolids Land Application workshop. In October 2000, the workshop, attended by approximately forty participants, was held in White River Junction, Vermont. NEIWPC also assisted the New Hampshire Department of Environmental Services plan and organize a Septage Land Application Training workshop. In February 2001, the one-day workshop, attended by approximately twenty-five participants, was held in Franklin, New Hampshire.
UNDERGROUND STORAGE TANKS / LEAKING UNDERGROUND STORAGE TANKS

The 1984 Hazardous and Solid Waste Amendments to the federal Resource Conservation and Recovery Act directed EPA to initiate a program to regulate the underground storage of petroleum products and hazardous waste substances. For more than a year prior to this federal mandate, NEIWPCC had begun coordinating meetings for its member states to exchange information and experiences pertaining to underground storage tank issues. With the help of these Underground Storage Tanks/Leaking Underground Storage Tanks (UST/LUST) Workgroup meetings, the Northeast states have developed strong UST/LUST programs that have set many national precedents.

Over the years, UST-related issues have evolved from developing regulations to finding better ways to implement regulations and administer programs. In the face of burgeoning numbers of UST sites and dwindling funding for support staff, concepts of "streamlining" and risk-based corrective action have had appeal at both state and federal regulatory levels.

One UST-related issue in the forefront lately is the problem of MtBE contamination. NEIWPCC undertook a comprehensive evaluation of the occurrence and remediation of MtBE in the United States. The evaluation centered on the development of a survey designed to ascertain the magnitude of the MtBE problem and the effectiveness of various technologies used to remediate MtBE-contaminated groundwater and surface water.

The survey gathered from each state the following information: total number of MtBE-impacted sites, number of MtBE remediation sites, and types of technology used at the sites. The responses from all fifty states were made available in FY-01.

With increasing concern being raised over the risks MtBE poses to the region's water supply, replacing MtBE with ethanol as a gasoline additive in the northeast becomes more likely. To prepare for this change, the New England Governors Committee on the Environment requested NEIWPCC to prepare a focused evaluation of the potential environmental effects of the release of ethanol and ethanol-blended gasoline. The report would be part of the Northeast States for Coordinated Air Use Management's overall effort to determine an environmentally compatible regional fuel alternative to MtBE.

The resulting three-volume report, *Health, Environmental, and Economic Impacts of Adding Ethanol to Gasoline in the Northeast States*, provides information on the health effects, aquatic effects, storage and handling issues, and environmental impacts resulting from the use of ethanol. Detailed summaries of recommendations and key findings are also provided.

At NEIWPCC's four UST/LUST Workgroup meetings (co-chaired with EPA Region I) in FY-01, state program directors had the opportunity to discuss and exchange information on a host of UST, LUST, and state cleanup fund issues. Topics included enforcement and compliance issues, EPA OUST initiatives, the MtBE survey, operator training and exams, technical troubleshooting, and progress reports of updated tanks.

In FY-01, NEIWPCC also organized a regional UST Inspector Training program in Waterford, Connecticut. NEIWPCC also co-sponsored forty-one conferences and meetings across the nation. NEIWPCC staff attended and participated in the State Fund Administrator's Conference in Portland, Maine, and the UST/LUST National Meeting in Albuquerque, New Mexico. In addition, NEIWPCC published three issues of *L.U.S.T.Line*.

WASTEWATER

Our ability to handle wastewater in a safe and sanitary manner has had a direct bearing on the human health, economic, and environmental well-being of many communities—benefit that
many of us take for granted. Indeed, as people in homes and businesses avail themselves of the carefree flush, many are unaware that what they've flushed or rinsed down the drain ends up at an expensive and highly sophisticated mechanical and biochemical complex that operates 24 hours a day, 365 days a year to clean the water before it can be discharged back into the environment.

These facilities must meet stringent state and federal water quality standards. Through its wastewater programs, NEIWPCC ensures that wastewater facilities have at their disposal the training, technical assistance, and research necessary to meet and exceed those standards.

NEIWPCC staff attended the National 104(g) Operation and Maintenance (O&M) Conference in Philadelphia, Pennsylvania, the Regional 104(g) Meeting in Waterbury, Connecticut, and the Annual Water Environment Federation Conference in New Orleans, Louisiana.

**MERCURY SAMPLING:** In June 2001, NEIWPCC entered into a contract with the Massachusetts Department of Environmental Protection (MA DEP) for the collection of wastewater and sludge samples from several wastewater treatment plants in Massachusetts. This project was conducted as part of a MA DEP scoping study designed to improve data on mercury release attributable to publicly-owned treatment works (POTWs) in Massachusetts. MA DEP listed the scoping study goals as improving the overall database of mercury levels in influent, effluent, and sludge; identifying characteristics of POTW systems and their corresponding mercury discharge levels; and gathering information on mercury discharge levels for the future evaluation of impacts on receiving waters in conjunction with total maximum daily load (TMDL) development.

MA DEP personnel selected several communities to be sampled in each of the four MA DEP regions. Sampling locations were identified at each plant for the collection of raw influent, effluent, chlorinated/de-chlorinated effluent, and sludge samples.

During four days of sample collection, NEIWPCC personnel visited ten wastewater treatment plants and collected approximately 120 samples. These samples were then transported to the MA DEP's Wall Experiment Station in Lawrence, Massachusetts, where they received low-level mercury analysis.

MA DEP concluded that mercury levels in the effluent samples were generally below detection limits and that future studies would require the use of more sensitive analytical methods. Data obtained from the influent and sludge samples indicated that mercury concentrations were very variable and frequently above detection limits.

**RHODE ISLAND OPERATOR TRAINING/TECHNICAL ASSISTANCE:** In FY-01, NEIWPCC supported a technical assistance consultant for the Rhode Island Department of Environmental Management to assist Rhode Island Publicly-owned Treatment Works (POTWs) with nutrient removal. NEIWPCC also subsidized through a grant Rhode Island operator training.

NEIWPCC also received a grant to assist the Rhode Island Department of Environmental Management perform on-site technical assistance at six plants in Rhode Island (Warwick, West Warwick, East Greenwich, Cranston, Fields Point, Providence). The programs focused on the ability and efforts of the plants to achieve and maintain compliance. NEIWPCC also contracted for on-site technical services to evaluate and propose nitrogen removal upgrade strategies at the Warwick plant.

**POTW_PAS:** NEIWPCC continued the development of Phase II of the Publicly Owned Treatment Works Performance Analysis System (POTW_PAS) software package. Phase Two will sport new features and reporting items such as process control calculations not featured in Version 1.

In FY-01, the contractor continued his work based on input from NEIWPCC and the National Advisory Workgroup (NAW). NEIWPCC coordinated NAW meetings in October and June to review the status of the software development. A "Beta" workshop trial was conducted in Florida in August to obtain input from POTW operators. Future Beta workshops are proposed for FY-02.
WATER QUALITY

NEIWPC's Water Quality Workgroup provides a forum for states to discuss issues involving water quality standards, wet weather standards and programs, monitoring and assessment, invasive species, the Clean Water Act, and national policy and regulation.

Workgroup discussions in FY-01 covered a range of issues, including the draft chapters of the Consolidated Assessment and Listing Methodology (CALM), the federal EPA Combined Sewer Overflow strategy, implementation of Phase II of the stormwater program, water quality standards regulation changes, maintenance of the water quality docket, and review of monitoring strategy key elements. In addition, NEIWPC staff participated in the formation of the Northeast Panel on Aquatic Nuisance Species, which will address regional approaches for invasive species management and control.

Water quality activities NEIWPC participated in during FY-01 included:

305(B)/CONSOLIDATED ASSESSMENT AND LISTING METHODOLOGY:
Through a review of the member states' 305(b) reports and state and NEIWPC participation in CALM stakeholder meetings around the country, the 305(b) coordinators have had an opportunity to learn about each state's approach to water quality assessment, the CALM strategy, and the intent for its use.

AMBIENT NUTRIENT CRITERIA: As part of the strategy described in Former Vice President Gore's Clean Water Action Plan, NEIWPC in conjunction with EPA maintained waterbody-specific assessment teams in order to coordinate the development of regional nutrient criteria. ENSR, the contractor for the collection and evaluation of nutrient data, has worked closely with NEIWPC staff, EPA, and the states in the development of a 305(b) Linkage Report and a Periphyton Literature Survey Report. NEIWPC coordinated meetings of the regional technical assistance groups to keep states informed of the continuing work performed by ENSR as well as of the development of technical guidance documents and other materials produced by EPA.

NEIWPC staff, with input and assistance from both ENSR and EPA, has prepared and presented the regional strategy for the development of nutrient criteria at several national and regional conferences.

AQUATIC INVASIVE SPECIES: NEIWPC participated in the formation and planning of the Northeast Panel on Aquatic Nuisance Species in FY-01. This regional panel was recognized by the National Task Force on Aquatic Nuisance Species (ANS) at its July 2001 meeting. The formation and national recognition of the panel enables the region to receive limited financial support for administrative aspects of the panel and to influence the National Taskforce's priorities and workscope. The formation of the panel also will help increase the visibility of ANS problems in the Northeast and facilitate funding and grant awards to the region.

NEIWPC helped coordinate its member states' participation in meetings and conference calls throughout 2001. NEIWPC hosted a meeting of the panel planners in June to discuss the panel's structure, membership, mission, and host agency. NEIWPC will continue its involvement with the panel through participation on subcommittees addressing outreach, research and monitoring, and policy and legislation, and through involvement with the panel's first project: to develop a regional ANS database and Panel Website.
**BIOCRITERIA:** During FY-01, NEIWPCC completed an effort to assist New Hampshire to improve and refine its biological data management system and to continue development towards biological criteria. Towards this end, NEIWPCC provided support to fulfill the Geographic Information System needs of the biological monitoring program. Work was also conducted delineating ecological sub-regions and classifying the various stream types found within the state. These efforts provided a more efficient methodology for targeting monitoring sites, selecting areas most representative of reference conditions, and establishing those waterbodies most sensitive to surrounding land-use practices and associated pollution inputs.

To assist Rhode Island's efforts to enhance its bioassessment program and to facilitate the development of biocriteria, NEIWPCC contracted with TetraTech to modify the Ecological Database Application System to manage and manipulate Rhode Island Department of Environmental Management's biological data sets. In addition, NEIWPCC hired the Aquatic Resources Center (ARC) to identify macroinvertebrates collected in Rhode Island.

On a regional level, NEIWPCC also hired ARC to review and provide quality assurance editing of the existing taxonomic list of freshwater macroinvertebrates for the New England states and New York. In addition, ARC coordinated with the states to update the taxonomic list to show actual occurrence/distribution of each taxon by state.

NEIWPCC is assisting the New England states and EPA on a three year, two-phase project that will encompass the design and implementation of a biological and chemical monitoring project. The project, entitled "Designing and Implementing a Program to Evaluate New England's Wadeable Streams," utilizes a probabilistic stratified random sampling approach, subsequently providing unbiased assessments of wadeable streams chosen from watersheds throughout New England. Select methodologies and established protocols will be used to determine the environmental health of shallow streams and to provide a base of data for future trend analyses. The project will provide the region and participating states with reliable tools that can be used to reflect regional and/or statewide water quality and biological conditions with a high level of statistical confidence.

Forty randomly selected monitoring stations will be surveyed in the first year of the project period. The second year will consist of thirty new randomly selected stations with a 20% re-draw of the original forty to account for temporal variability. Each year duplicate samples will be collected at 10% of the stations. Approximately seventy stations will be monitored over the two-year sampling period. These stations will be sampled for invertebrates, fish, and water chemistry. In-stream and riparian habitats at each of the sites will also be assessed.

For Phase Two of this project, NEIWPCC, EPA New England, and EPA's Office of Research and Development's Atlantic Ecology Division are inviting state participation. This joint effort will permit, for the first time, a statewide comparison of wadeable streams in individual states and across New England. The intention is to create partnerships with states for the sampling and analyses. Using a probability design and a common set of indicators, each state would conduct a survey and assess the condition of its wadeable streams independently. The intent is to evaluate all of the assessed waters for each state using biological indicators for satisfying the individual state's 305(b) reporting requirements. These efforts can then be aggregated to assess conditions of wadeable streams for all of New England.

These collaborative monitoring efforts are consistent with existing initiatives NEIWPCC has ongoing. NEIWPCC works closely with the New England states and New York in their efforts to share information regarding interstate monitoring projects, 305(b)-assessment comparability, water quality standards, and 303(d) listing methodologies.

**MARINE ENGINES:** The Marine Engines Workgroup held their final meeting in FY-01. Topics for this meeting included the National Marine Manufacturers Association update, state efforts, and monitoring projects.
**MONITORING:** The goal of the Clean Water Act is to restore and maintain the chemical, physical, and biological integrity of the nation’s waters. This means that the water quality of a waterbody is determined by the combination of all of its physical, chemical, and biological characteristics. Monitoring is a way of gathering information about the health of a waterbody by observing, collecting, and analyzing information about its parts. The components chosen to be measured are called water quality indicators.

Ambient monitoring, surveillance of a waterbody’s environmental condition, is important for many reasons. It is an excellent way to assess how healthy a waterbody is and to understand the impacts of human activities. In addition, monitoring is an essential tool for making good watershed management decisions and for evaluating the effects of these decisions.

The report, *An Overview of Surface Water Monitoring Programs in New England and New York: Recommendations for Improving States’ Volunteer Monitoring Efforts*, was completed by NEIWPCCC in September. Increasingly, state, local, and federal agencies are finding that volunteers can be valuable participants in surface water monitoring programs. This report provides an understanding and assessment of tools available for states to use to expand their freshwater monitoring programs, specifically with the incorporation of volunteers. It also features a summary of the core surface water monitoring programs in each of the New England states, as well as New York. Additionally, the report provides recommendations for utilizing volunteers in state freshwater monitoring programs, as well as ways to improve the states’ current use of volunteers and volunteer programs.

**STORMWATER:** In FY-01, NEIWPCCC convened three meetings of its Stormwater Workgroup to discuss administrative and programmatic aspects of the Phase II Program for Stormwater. This workgroup had minimal activity in previous years, but with Phase II regulations approaching, interest and participation in this workgroup was very strong. The meetings were opportunities for states to learn of activities and approaches to help them implement their programs, including identifying and designating entities and activities to be regulated; developing any state-specific permit requirements beyond the minimum program requirements outlined by the regulations; issuing, inspecting, and enforcing permits; and providing to regulated entities compliance assistance on the six minimum control measures required by permits.

The information exchange component of workgroup meetings was very valuable. States benefited from hearing how others are implementing various program activities and from learning of resources already available, or soon to be available, that can be utilized in their programs. Workgroup members shared information on the current status of their programs; strategies for incorporating Phase II activities with other water quality programs; workshops and training programs for municipalities and other target groups; ideas and materials for outreach activities; and administrative, financial, and regulatory updates affecting stormwater programs. Additionally, states learned about upcoming workshops, outreach activities, and assistance EPA is providing through its “Phase II Tool Box.”

NEIWPCCC has worked with the Vermont Department of Environmental Conservation to encourage municipal governments to utilize existing regulations and planning authority to implement improved stormwater management. It has done so by providing technical assistance, training, research, and coordination with respect to stormwater management technology; by preparing and distributing a model local stormwater management ordinance; and by promoting public education about cost-effective and innovative measures to reduce stormwater discharges to the waters of Vermont.

Work with municipalities has included encouraging them to begin planning for, or implementing, actions consistent with the six minimum measures required under the 1999 EPA Phase II Stormwater regulations. In addition, during FY-01 work continued with urban/suburban municipal zoning and public works departments in Chittenden County to improve stormwater management activities and to incorporate sound stormwater management practices in town plans and policy.

**TMDL:** Total Maximum Daily Load (TMDL) activities by NEIWPCCC in FY-01 include participating in the national Consolidated Assessment and Listing Methodology effort, assisting EPA in the
development of lake TMDL guidance, and continuing development of a regional 303(d) listing/305(b) assessment methodology.

NEIWPCCC continues to provide technical support to the (TMDL) programs at EPA New England and the six New England States through the support of a contractor.

In March, NEIWPCCC and EPA coordinated with William Walker to prepare Quantifying Uncertainty in Phosphorus TMDLs for Lakes. This report illustrates sensitivity and error analysis concepts as one means of considering the “Margin of Safety” term in the TMDL equation.

NEIWPCCC and its contractor, Numeric Environmental, are providing technical assistance to the Massachusetts Department of Environmental Protection (MA DEP) in the development of the Nashua River TMDL. A final project report was completed in July 2001.

The Kickamuit Reservoir serves as the raw water source for the Bristol County Water Authority. Bristol, Rhode Island. It is a small impoundment (42.2 acres) that is heavily impacted by eutrophication. Both the reservoir and the Kickamuit River are listed for pathogens; additionally the Upper Kickamuit River is listed as having biodiversity impacts.

NEIWPCCC, through Numeric Environmental, is assisting the Rhode Island Department of Environmental Management (RI DEM) in the preparation of a technical report that will serve as the basis for the nutrient and bacteria TMDLs for the Kickamuit Reservoir. The technical report was prepared in May 2001. RI DEM will be able to utilize this report for development of appropriate allocations among sources.

The Sunapee and Newport wastewater treatment facilities (WWTFs), as well as the Door Woolen Company WWTE discharge to the upper portion of the Sugar River. In 1993, a Wasteload Allocation Study was completed concluding that advanced treatment for these facilities was not needed to meet water quality standards for dissolved oxygen (DO).

The New Hampshire Department of Environmental Services (NH DES) recently discovered, however, that the actual 7Q10 (flow) is significantly less (about one-half) than that used in the 1993 model. Consequently, because there is less dilution than previously thought, advanced treatment may be necessary at some, or all, of the facilities in order to meet DO standards.

To determine appropriate effluent limits for the three facilities, and any required reductions in nonpoint source loadings, a TMDL study for dissolved oxygen is being conducted for this segment of the river. To assist NH DES, NEIWPCCC has hired a contractor to oversee sampling, perform the modeling, and prepare the TMDL report. During the summer of 2001, water quality samples were collected for analysis.

NEIWPCCC is working with United States Geological Survey in the development of the SPARROW (Spatially Referenced Regressions on Watershed Attributes) model using New England specific data. The SPARROW model, along with other capabilities, evaluates the linkage of air emissions to water-quality (e.g., nutrient) impacts at a regional level, which is one of the goals of the TMDL program.

In June 2001, NEIWPCCC assisted in the coordination of Multi-Media Workshop: Understanding and Controlling the Impacts of Air Deposition on Water Quality. At that workshop, air and water state regulatory staff from the Northeast and federal agencies began a dialogue to share information and develop ways of working together. The following actions were identified as necessary next steps:

- Establish a better understanding of reasonable reductions and potential solutions (what tools are available and at what cost).
Maintain ongoing communication between air and water people.

Develop education materials on atmospheric deposition.

Initiate a regional and/or national approach for atmospheric deposition.

NEIWPCG, in cooperation with MA DEP and EPA Region I, are working with the Merrimack River Watershed Council in continuing and completing the TMDL to address aquatic life impairments resulting from stormwater runoff for the Shawsheen River Headwaters. A quality assurance project plan was completed during FY-01; development continues on completion of the TMDL.

In cooperation with MA DEP, NEIWPCG and EPA Region I are developing a TMDL for Nitrogen for the Acushnet River Estuary. A comprehensive flushing analysis to assess the residence time of water entering the estuary is required. This will help determine target load allocations for the various nonpoint sources of pollution, as well as for the two point sources—the Fairhaven Wastewater Treatment Plant and Combined Sewer Overflows from the City of New Bedford. During FY-01 a contractor was selected and sampling was initiated.

WETLANDS

Wetlands are vital to the environmental and economic health of New England. These ecologically unique areas provide habitat essential to our fish and wildlife populations. Wetlands also purify water through the uptake and control of sediment and pollutants, protect lives and property by controlling floods, and buffer coastal areas from storm damage and erosion.

Wetlands help to maintain stream and river flows during dry periods, thereby replenishing water supplies and maintaining aquatic habitat. Some of our most popular recreational activities, such as hunting, canoeing and fishing, occur in wetlands. Moreover, wetlands provide open space, an important but increasingly scarce commodity in New England.

Unfortunately, throughout past years extensive development has resulted in the degradation of a significant percentage of our nation’s wetland resources, including many rare or commercially important species.

NEIWPCG Wetlands Workgroup: The Wetlands Workgroup provides a forum for member states to exchange information on wetland protection strategies, regulatory policies/procedures, research, and technical issues. Workgroup members from EPA provide updates on federal regulations and regional issues.

Workgroup discussion and information sharing in FY-01 included updates on relevant court decisions (Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers and Palazzolo v. Rhode Island), public education and outreach on permit application processes, current events in each of the state wetlands programs, and thoughts on future needs of the group.

NEW ENGLAND BIOLOGICAL ASSESSMENT OF WETLANDS WORKGROUP: The New England Biological Assessment of Wetlands Workgroup (NEBAMWG) focuses on using biological indicators as a method to assess the quality of wetlands systems. In support of this workgroup, NEIWPCG hosted workshops relevant to biological assessment of wetlands, including an annual NEBAMWG meeting held in January in Portland, Maine, and an Intensive Wetland Training for Volunteer Monitoring held in July in Rindge, New Hampshire. In addition, NEIWPCG has sponsored the attendance of state wetland staff to national conferences, including the National BAWWG meeting held in May.
NEIWPC has been working to keep the states abreast of new developments such as the development of a national wetlands monitoring strategy being spear-headed by EPA, the twelve BAWWG modules being developed by participating BAWWG members, and the New England pilot projects associated with the biological assessment of wetlands.

**SALT MARSH RESTORATION:**
NEIWPC has been involved in two salt marsh restoration projects. One site, known as the Ballard Street Salt Marsh, is located in Saugus, Massachusetts. The town had requested assistance from NEIWPC and the Natural Resources Conservation Service (NRCS) to restore the salt marsh by installing a new tide gate and excavating compensatory runoff storage. This work, when complete, will provide for salt marsh restoration that is consistent with the flood protection needs of the town. Since the project’s inception in the early 1990s, NEIWPC has maintained close coordination among the Massachusetts Executive Office of Environmental Affairs Wetlands Restoration and Banking Program, EPA, the Town of Saugus, NRCS, and other necessary contractors for restoration of the salt marsh.

Plans have been established for NEIWPC to oversee the Northeast Massachusetts Mosquito Control and Wetlands Management District salt marsh restoration project on a section of the Oak Island Marsh in Revere, Massachusetts. This project is in association with the installation of a new self-regulating tide gate to be installed under a Massachusetts Bay Transportation Authority railroad embankment.

**NEIWPC WETLANDS “FIELD” STAFF:** In addition to the on-going projects discussed, NEIWPC has hired a Volunteer Wetland Monitoring Coordinator, who works throughout the region on the following initiatives:

- Support volunteer citizens in collecting useful wetland data
- Facilitate and help train volunteer (including student) groups to monitor wetlands
- Increase the ability of local decision-makers to take into account the wetland information gathered and presented by trained volunteers

NEIWPC has also hired a staff member to contribute to the Rhode Island Department of Environmental Management in the areas of public education and outreach in the freshwater wetlands program.
Throughout the year, NEIWPCCC addressed specific concerns and needs of the watersheds of member states. This role entailed managing various projects as well as providing technical assistance. In addition, NEIWPCCC provided information to the public regarding their local watersheds. Information on watershed-related projects is made available on NEIWPCCC’s Web site.

BLACKSTONE RIVER

The Blackstone River flows from Worcester, Massachusetts, to the Seekonk River in Pawtucket, Rhode Island. The river is the second largest freshwater tributary to the Narragansett Bay. Its watershed encompasses 24 communities and more than 350,000 acres. In 1986, Congress established the Blackstone River Valley National Heritage Corridor along portions of the river in both Massachusetts and Rhode Island. In FY-01, NEIWPCCC assisted in the completion and distribution of the final Blackstone River Initiative Report.

CHARLES RIVER

The Charles River is a resource of great recreational and ecological value to the Boston Metropolitan Region and to the Commonwealth of Massachusetts. It is also a priority waterbody for EPA Region I and a focus of EPA’s Clean Charles 2005 Task Force, which aims to achieve “fishable and swimmable” conditions in the lower Charles River. In FY-01, NEIWPCCC continued its involvement with Massachusetts and EPA Region I on two projects to assess and improve water quality for the metropolitan Boston area’s lower Charles River Basin.

The first project in which NEIWPCCC has been involved is an assessment of the distribution of sediment contaminants in the lower Charles River. The study complements a 1996 study of Charles River sediment and water column quality, as well as the ongoing water column monitoring efforts of the Massachusetts Water Resources Authority and Charles River Watershed Association. As part of the current study, the United States Geological Survey (USGS) conducted an extensive sediment study to determine the presence and potential impacts of contaminants. The study involved water depth and sediment thickness measurements, surficial and core sediment sampling, and laboratory analysis of samples. USGS’s recently released report, Distribution and Potential for Adverse Biological Effects of Inorganic Elements and Organic Compounds in Bottom Sediment, Lower Charles River, Massachusetts, describes the work performed and findings. The report will assist agencies involved in restoring the habitats and water quality of the Charles River.

The second project is a technology demonstration exploring the ability of a filter device to clean the water in a section of the Charles River to a level that meets swimming standards. NEIWPCCC, in cooperation with EPA, hired Gunderboom, Inc. to test its Gunderboom Beach Protection System (BPS)™ technology. The BPS™ is a full-length fabric curtain boom that extends from the water surface to the river bottom around the area to be “cleaned,” serving as a filter barrier to control migration of particulates and associated microbes. The demonstration was conducted during the summer of 2000 over two three-day periods at the Magazine Beach section of the Charles River, during which time water sampling occurred at half hour intervals over an approximate four-hour period. Samples were collected for laboratory analysis of many parameters including total suspended solids (TSS), fecal coliform bacteria, and Enterococcus bacteria, and ambient measurements were taken for turbidity and secchi disk clarity.

Results from the demonstration are inconclusive but encouraging. An unforeseen difficulty in maintaining an effective bottom seal with the boom affected the deployment and results, but when a seal was maintained, water quality appeared to improve for several of the parameters including turbidity, TSS, and clarity. Future deployments with a configuration that controls for factors that affected the boom’s bottom seal are required to truly test this technology’s ability to achieve “swimmable” conditions in the lower Charles River. Additional testing of the technology is planned for the spring or summer of 2002.
CONNECTICUT RIVER

The Connecticut River, known as “the backbone of New England,” begins near the Canadian border in the Connecticut Lakes region of New Hampshire, forms the border between New Hampshire and Vermont, flows through Massachusetts and Connecticut, and finally empties into Long Island Sound. It drains an area of 11,560 square miles.

Comprised of representatives from NEIWPCC, Vermont, New Hampshire, Massachusetts, Connecticut, EPA, and watershed groups, the Connecticut River Forum has been working since 1993 to restore water quality in the Connecticut River watershed. NEIWPCC was involved in several FY-01 initiatives aimed at assessing and improving the water quality of the river.

Last fiscal year, NEIWPCC conducted a fish tissue study on the Connecticut River. The study was done in cooperation with EPA, Connecticut Department of Environmental Protection, Massachusetts Department of Environmental Protection, New Hampshire Department of Environmental Services, Vermont Department of Environmental Conservation, the Environmental Research Institute at the University of Connecticut, and the US Fish and Wildlife Service.

The objective of the study was to perform a watershed-wide fish tissue monitoring program with regard to contaminant concentrations of representative fishes from the mainstream of the Connecticut River. The program allows for subsequent sampling at regular intervals to monitor trends in Connecticut River fish tissue contaminant concentrations. In addition, necessary information will be obtained to revise human health risk assessments for the Connecticut River.

Fish collection continued through August. NEIWPCC has been establishing the data analyses the states require and the data validation needs and expectations of the group. The next and final steps relevant to the fish tissue study on the Connecticut River are being established. The Environmental Research Institute at the University of Connecticut has completed a raw data report and the quality assurance report for mercury. From these reports it has been determined that health agency involvement is a crucial component of the final decision making process. A final report is anticipated for release before the end of the calendar year.

NEIWPCC also was, and remains, involved with a project to assess nitrogen loading to the Connecticut River along its Vermont, New Hampshire, and Massachusetts reaches. This project will aid with the Long Island Sound Total maximum Daily Load (TMDL) for hypoxia. Early phases of the TMDL address pollutant sources in Connecticut (point source and nonpoint source); Phase 4 addresses the out-of-state sources.

The project involves assessing potential sources of nitrogen and phosphorous along the river and its tributaries. In FY-01, the project plan and scope were developed. Various existing data on water quality, pollutant discharge locations, flow, gaging station and sampling locations, and National Pollution Discharge Elimination System permits have been compiled and reviewed. Sampling is being planned and will be conducted beginning in 2002 to fill in information gaps on potential sources and measurements of nutrients. Water quality data, flow data, land use data, and other data will be used in a model that will calculate potential loads from point and nonpoint sources along the river and their relative contributions to the hypoxia problems experienced in the Long Island Sound. This information will be useful to EPA in its allocation of load reductions for the states north of Connecticut.

LAKE CHAMPLAIN

In 1991, as mandated by Congress, EPA convened the Lake Champlain Management Conference (LCMC) for the purpose of developing a comprehensive pollution prevention, control, and
restoration plan for the lake and its 8,234-square mile basin, which includes portions of New York and Vermont. NEIWPCCC assisted EPA in organizing the convening of the LCMC, supports staff in the Lake Champlain Basin Program (LCBP) and serves as fiscal agent for the program.

Under the LCBP, NEIWPCCC manages a comprehensive plan for restoring and protecting the beautiful natural resource of Lake Champlain and its basin. Not only does the program provide for scientific analysis, but it also keeps the public informed and involved in the process through its web page and publications.

It's been five years since the Lake Champlain Basin Program released *Opportunities for Action: An Evolving Plan for the Future of the Lake Champlain Basin*. During FY-01, a comprehensive update of the management plan was performed. Anticipated release of the revised draft plan is in October 2001.

**HUDSON RIVER**

The Hudson River extends from The Battery on Manhattan Island to Lake Tear of the Clouds in the High Peaks Region of the Adirondacks. As both a freshwater and estuarine environment, this American Heritage River is host to a range of native plants and animals that have become threatened by pollution and development.

In FY-01, the second year of partnership between New York State Department of Environmental Conservation's Hudson River Estuary Program and NEIWPCCC, NEIWPCCC staff supported the implementation of the Hudson River Estuary Action Plan.

Since its release by Governor George E. Pataki in May 1996, The Hudson River Estuary Action Plan has served as a blueprint for New York State Department of Environmental Conservation and partnering agencies' implementation of management actions along the estuary. The Hudson River Estuary Action Program is a unique regional partnership leading the restoration of the Hudson River. The principal purposes are to protect and conserve natural resources and ecosystem health, clean up pollution, and promote public use and enjoyment of the river.

The Hudson River Estuary Program was established in 1987 under the Hudson River Estuary Management Act, Section 11-0306 of the Environmental Conservation Law. The law directs the New York State Department of Environmental Conservation to develop a management program for the Hudson River Estuarine District and its associated shorelands: the estuary from the Troy Dam south to the Verrazano Narrows, including tidal portions of tributaries.

NEIWPCCC actively supports the management objectives defined in the Estuary Action Plan in a variety of fields: water quality monitoring, coordinating river bottom (benthic) mapping, education and interpretation, administrative support, contract management, tidal wetland mapping, fisheries research, and habitat restoration. In addition, contractual support for the Hudson River Almanac and an interpretive signage project are also underway.

**LONG ISLAND SOUND**

The Long Island Sound Study (LISS) is one of the National Estuary Programs funded by EPA under $320 of the Clean Water Act. Long Island Sound serves the commercial and recreational needs of thousands of New York and Connecticut residents every year. Involving the public in protecting and restoring this important resource is one of the main goals of NEIWPCCC's participation in the study.
The study began in 1985 and by 1994 the LISS Comprehensive Conservation and Management Plan was completed. NEIWPCC continues to serve as fiscal agent for portions of the LISS and provides outreach coordination.

During FY-01, NEIWPCC developed two new promotional items—plastic rulers and fish-shaped jar grips—that will carry target LISS messages and be handed out at meetings and special events. Multiple press release were issued including:

- “The State of the Sound and Long Island Sound Reserve Concept Focus of Eleventh Annual Long Island Sound Summit” announced a two-day Long Island Sound Watershed Alliance conference at the New York Botanical Garden in Bronx, New York. The conference was co-sponsored by LISS and the EPA Long Island Sound Office among others.
- “EPA Takes Action to Control Nitrogen Pollution in Long Island Sound” announced EPA approval of a TMDL for nitrogen that the Sound can handle.
- “Long Island Sound Study Report Highlights Improvements in the Health of Long Island Sound” announced the publication of Sound Health 2001: Status and Trends in the Health of Long Island Sound, a 16-page report characterizing the health of Long Island Sound using environmental indicators. In April, the report was inserted into more than 460,000 Sunday newspapers in coastal Long Island Sound. Copies were also distributed to museums, nature centers, libraries, marine educators, marine trade associations, and others as part of the LISS outreach effort. A comprehensive version was also made available on the LISS website.

Development also began of a brochure intended to serve as a general promotional piece about the work of the LISS.

**NARRAGANSETT BAY**

Involving the public in the protection and restoration of the Narragansett Bay Estuary is an essential step in reaching water quality goals for this region. Toward this end, NEIWPCC continued to assist the outreach efforts of the Narragansett Bay Estuary Program (NBEP).

In FY-01, Narragansett Bay Outreach activities included:

- Coordinating meetings of the interagency Rhode Island Coastal Habitat Restoration Team
- Coordinating Rhode Island Department of Environmental Management activities related to the Blackstone Valley National Heritage Corridor Commission
- Commencing work on a grant from Rhode Island Aquafund for a fisheries restoration plan on the Blackstone River
- Maintaining the Narragansett Bay Estuary Program web page (www.nbep.org)

NEIWPCC also maintained support for NBEP to attend and present at national meetings.

**QUINEBAUG RIVER**

The Quinebaug River flows from Massachusetts through Connecticut’s rural areas. NEIWPCC is assisting the states of Connecticut and Massachusetts, EPA Region I, and Millennium Power Partners with the Quinebaug Instream Flow Studies proposal. This study is part of mitigation measures to satisfy the procedural and substantive requirements of Section 401(a)(2) of the Clean Water Act as it relates to the Millennium Power Plant project located in Charlton, Massachusetts.
OPERATOR TRAINING & TECHNICAL ASSISTANCE

Since 1969, NEIWPCG has provided wastewater operator training to help communities meet their water pollution control goals by providing on-site training for personnel. NEIWPCG staff travels to locations throughout New England and New York, presenting a variety of courses for water pollution control professionals who would otherwise be unable to enroll in off-site training programs. While NEIWPCG courses primarily cover water pollution control topics, the programs are expanding into other environmental disciplines. Training schedules are published in the Fall and the Winter/Spring Catalogs, as well as on NEIWPCG's website (www.neiwpcg.org/training.html).

NEIWPCG offers annual courses and workshops on various aspects of wastewater, drinking water, and hazardous materials/waste technologies at locations throughout New England and New York. NEIWPCG also offers symposiums on an as-needed basis to create information exchange forums and to introduce the environmental workforce to new or changing pollution prevention technologies, operations and maintenance practices, and laws and regulations.

Over 1,200 people attended the 41 catalog courses and 14 contract courses offered by the Training Center in FY-01. New courses offered included Emerging Wet Weather Flow Issues, Using ORP for Process Control, Safety First, and Energy Savings at Your Wastewater Treatment Plant.

CUSTOMIZED TRAINING

NEIWPCG offers customized training programs for water pollution control facilities, business/industry, communities, and government agencies to meet the specific needs of the region's environmental workforce. These programs can include process-specific issues, Train-the-Trainer, certification preparation, industrial pre-treatment, pollution prevention, compliance, and safety. NEIWPCG has worked closely with state environmental agencies and successfully addressed the training needs of industries such as pulp and paper, metal finishing, and electronics.

In FY-01, NEIWPCG contracted with the Massachusetts Water Resource Authority to provide collection system O&M training, as well as the other required training programs (i.e., emergency generators). NEIWPCG also contracted with the New York City Department of Environmental Protection to provide various training needs.

MAINE JOINT ENVIRONMENTAL TRAINING COORDINATING COMMITTEE

The Joint Environmental Training Coordinating Committee (JETCC) was established in 1985, using a grant from the Maine Department of Environmental Protection (ME DEP), to coordinate the environmental training needs of Maine's environmental professionals. JETCC operates under the guidance of a board of directors appointed by the commissioner of the ME DEP. The board is made up of municipal and industrial wastewater treatment plant personnel, members of the Maine Wastewater Control Association, and local government representatives.

Historically, JETCC's focus has been to provide continuing education opportunities for Maine's wastewater treatment community. Increasingly, however, JETCC is being contracted by a variety of state agencies and environmental groups to assist with the coordination and delivery of environmental training programs targeted at a more diverse audience. This more diverse audience includes emergency response personnel, air pollution control observers, excavating contractors, and hazardous materials handlers among others.

JETCC meets the training needs of its clients by matching them with the best instructional and technical support available, by conducting annual training needs surveys, and by maintaining a large volunteer network of local hosts. JETCC's training programs in FY-01 reached 1,569 participants, as detailed below:

- JETCC delivered seventeen training seminars on wastewater and drinking water to 446 participants. Among those seminars was the two-day North Country Convention featuring...
thirty product representatives, a variety of short concurrent training sessions, and Maine State Senator John Martin as a guest speaker.

- Three additional training sessions, offered jointly with NEIWPCCC, reached an additional 86 participants, bringing the entire wastewater audience to 532.

- Along with Maine’s County Soil & Water Conservation Districts, the Department of Human Services, the Maine State Planning Office, the Casco Bay Estuary Project, and ME DEP, JETCC co-sponsored seven On-site Wastewater System Installers workshops. The target audience for those programs included contractors, septic system installers, Code Enforcement Officers, and Plumbing Inspectors. Over four hundred people participated. Credits for these classes also served the continuing education requirements for wastewater treatment plant operators in Maine.

- JETCC assisted the ME DEP Hazardous Waste & Remediation Bureau, the US Coast Guard, and a number of emergency response professionals by coordinating and delivering a two-day Disaster Stress Management Seminar attended by 132 participants.

- JETCC coordinated the efforts of the Maine Emergency Management Agency, the State Emergency Response Commission, ME DEP, and a number of hazardous materials transporters in organizing three Tank Rollover classes for 216 fireman, truck drivers, and emergency responders.

- JETCC coordinated two more in a series of Visible Emissions Observer training sessions for the ME DEP Air Bureau. Each of the two “Smoke Schools” was exceptionally well attended with participation from over 116 smoke observers in October and 147 in April. These participants represented personnel working in a variety of industries from Maine and Atlantic Canada.

- JETCC partnered with the Cumberland County Soil & Water Conservation District, the Pine Tree Chapter Soil & Water Conservation Society, the Maine Department of Transportation, the USDA Natural Resources Conservation Service, and ME DEP’s Nonpoint Source Training Center to present a series of multi-week training programs for engineers and landscape designers. These programs included two six-week Stormwater Instructional modules for 35 participants, one four-week Advanced Hydrology course for 27 participants, and a one-day HydroCAD workshop for 24 participants. Credits for these classes were also suitable to meet the continuing education requirements for wastewater treatment plant operators in Maine.

**GREEN CAMPUS PROJECT**

The focus of this “pilot project” is to develop a protocol for two-year community/technical colleges for promoting and conducting business on campus in an environmentally safe, “green” manner. This will be done by training college faculty and students in two selected Northeast Partnership for Environmental Technology Education (NE PETE) member colleges in the art of pollution prevention (toxics use reduction), alternative methods and options, P-2 audits, and green campus strategies. This will involve all aspects of a college campus: administration, business, purchasing, laboratories, maintenance/custodial, technology departments, buildings and grounds, and general education.

The concept is to utilize the faculty and students within the “environmental technology department” for this project. By training their students, faculty and staff in environmental regulatory compliance, the college can become both a community resource for P-2 information and a good neighbor.

The two NE PETE Lead Colleges selected through the application process to participate in this project are Gateway Community Technical College in North Haven, Connecticut, and Southern Maine Technical College in South Portland, Maine. NE PETE contacted ME DEP and Connecticut Department of Environmental Protection, as well as EPA Region I and NEIWPCCC training staff, to provide technical assistance on both campuses.
North Haven, Connecticut, High School was selected as a mentoring school by Gateway Community Technical College. As part of the program, North Haven’s electrical usage was evaluated, low voltage lighting was installed where appropriate, paper recycling was re-instituted, and the water used in the building and found on campus was tested. Gateway Community Technical College also instituted some changes on its own campus, including the addition of recycling containers and storage drums for hazardous chemicals.

Last December, this project culminated with the printing of a brochure and a report summarizing the efforts and results of the program and its participants. Both the brochure and report are available for download at www.neiwpcc.org.

**EDUCATION AND OUTREACH**

Education plays a key role in bringing about change, and NEIWPC's has been reaching out to educate and inform people for many years. NEIWPC's develops, produces, and distributes an array of environmental information for the regulated community, environmental professionals, educators, and the general public. In addition, NEIWPC's staff is often called upon to give presentations at workshops, conferences, and meetings on a variety of water-related issues.

**PUBLICATIONS**

**ANNUAL REPORT:** The annual report summarizes activities for the fiscal year and keeps government agencies and the general public up-to-date on NEIWPC's roster of activities.

**INTERSTATE NEWS:** A quarterly in-house newsletter, distributed to NEIWPC's commissioners, employees, and workgroup participants, Interstate News contains updates on NEIWPC's projects, notices of meetings and training programs, and brief summaries of relevant information.

**L.U.S.T.LINE:** A national bulletin on underground storage tanks, L.U.S.T.Line is published three times a year. It is funded with support from EPA's Office of Underground Storage Tanks. The publication helps keep state and federal UST regulators, consultants, contractors, and tank owners informed about UST and LUST activities, cleanup fund issues, spill remediation, and prevention technologies.

**THE NEW ENGLAND INTERSTATE ENVIRONMENTAL INFORMATION CATALOG:** The catalog contains a comprehensive list of NEIWPC's publications, brochures, newsletters, technical reports, curricula, videos, and training materials. The items in the catalog, produced by NEIWPC and other selected sources, span a wide range of water-related topics, including groundwater, surface water, wetlands, underground storage tanks, and wastewater treatment. The catalog, updated every two years, is available free of charge.

**WATER CONNECTION:** A free newsletter, Water Connection keeps subscribers informed of emerging and on-going matters related to water and its interaction with air, land, and living organisms. Each issue focuses on a single topic, exploring a wide range of subjects within that topic.

**WEB PAGE**

NEIWPC's web page (www.neiwpcc.org) continues to grow and change as a resource for both environmental professionals and the public. Bimonthly updates to the Welcome Page describe the latest meetings, events, and job postings. From the Welcome Page, visitors can navigate to
information about NEIWPC's history, the efforts of our workgroups, and our special projects. Training is also a feature: the Training Page includes extensive information about NEIWPC's Environmental Training Center and JETCC, as well as the latest course schedules. From the web site, visitors can download Water Connection, L.U.S.T.Line, the latest training catalog, and many of NEIWPC's publications. In addition, the page includes links to federal, state, and other sites of environmental interest.

**YOUTH IN THE ENVIRONMENT**

This was the twelfth year of the Youth in the Environment Program. Youth in the Environment programs were conducted at the Lowell, Massachusetts, Wastewater Treatment Plant and the Roger Williams Zoo in Providence, Rhode Island. Seven students participated in the programs at the Lowell Treatment Plant. Four days a week the students worked at the job sites; one day a week they went on field trips to learn about career opportunities in the environmental field. Field trip sites included Deer Island Wastewater Treatment Plant, UMass Lowell, Seacoast Science Center, Squam Lake Aqualab, Amoskeag Hydropower Plant, and the Roger Williams Zoo.

NEIWPC's Youth in the Environment program began at the Lowell Wastewater Treatment Plant in 1990 to introduce economically disadvantaged youth to career opportunities in the environmental field by combining summer employment with academic training and hands-on experience. In an effort to expose students to a variety of environmental career opportunities, the program provides a blueprint for establishing youth awareness and training in such fields as water supply, wastewater treatment, recycling, energy, marine environments, hazardous waste, and natural resources protection.

*Below and right top: Interns investigating aquatic life at the Seacoast Science Center.*

*Right center: Joe Manning, Youth Coordinator, and interns conducting water quality tests on Squam Lake, NH.*

*Right bottom: Graduation Ceremony at Roger Williams Zoo*
In Recognition

Congratulations to Linda Agostinelli and Peter H. Stangel for five years of NEIWPCC employment!

NEIWPCC thanks you for your dedication and service.

June Gagnon
Ebrahim Habib
Leann Hanson
Wayne Harmon
William Johnson
Jolene Langlois
Gail Lipfert
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David Wilson
Greg Kenney
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William Howland
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Donald Meals
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Maja Smith
George Springston
Peter Stangel
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NEIWPC Commission tour the Connecticut River during the Fall Commission meeting in Chester, Connecticut.
No man ever steps in the same river twice, for it's not the same river and he's not the same man.

-Heraclitus