

# JETCC Training Catalog

SPRING 2009



DATE	TOPIC	LOCATION
February 4	Hands-On Applications to Minimize Pump & Facility Maintenance.....	Kennebunkport*
February 12	Instrumentation Measurement & Control with Use of SCADA for Process Efficiency <i>with NEIWPCC</i> .....	Bangor*
February 24	Chemical Handling, Reporting & Emergency Preparedness .....	Lewiston*
February 26	Confined Space Entry .....	South Berwick*
February 26	Chemical Handling, Reporting & Emergency Preparedness .....	Presque Isle*
March 3	Asset Management Applications .....	Yarmouth*
March 4	BOD & TSS Review.....	Fairfield
March 12	PVC Valves, Connections & Joining .....	Orono*
March 18	DEP Issues Briefing.....	Augusta*
March 19	Hands-On Applications to Minimize Pump & Facility Maintenance.....	Jay*
March 24	BOD & TSS Review.....	Wells
March 25	Activated Sludge Process Control for Grade 3-5 Exam Preparation .....	Fairfield
Mar 31-May 5	Basic Wastewater Treatment (6 sessions).....	Biddeford
April 16	Using PowerPoint to Make Your Point .....	Portland
April 28	FOG Management Overview-Controlling Collection System Impacts & Disposal Options <i>with NEIWPCC</i> .....	Augusta

Programs listed here are approved by ME DEP for Wastewater Operator certification renewal credits.  
 \*Programs are approved by ME DHHS for Drinking Water Operator certification

MAINE JETCC

JETCC, P.O. Box 487, Scarborough, Maine 04070-0487

# Hands-On Applications to Minimize Pump & Facility Maintenance

This workshop is designed for water and wastewater personnel who are responsible for pump maintenance and reliability. In addition to receiving instruction in maintenance techniques, participants will learn how to solve common failures and improve pump efficiency.

The instructor will utilize a cutaway pump to explain common pump problems. Students will learn how attention during pump assembly and installation affects the long-term efficiency and reliability of pump components such as the bearing frame and housing, lubrication system, frame adapter, gland assembly, and pump casing. Drawing on his extensive experience in pump repairs, the instructor will review how normal pump use impacts bearing frame oil seepage, casing/impeller wear, keyway/key stock, coupling, pump base mounting, and pump base grouting.

There will also be a review of hands-on applications for fasteners, retaining products, and Magna-Crete concrete repair.

**Instructor:** Jim Hallene - Loctite/Henkel Corporation

**Wednesday, Feb. 4  
or  
Thursday  
March 19**

**February 4  
Kennebunkport  
Fire Station**  
32 North Street  
**Kennebunkport, ME**  
Tel: 207/967-2245  
**Course # J0924**  
Registration Deadline:  
January 28, 2009

**March 19  
LaFleur's Restaurant**  
Route 4  
**Jay, ME**  
Tel: 207/897-2117  
**Course # J0932**  
Registration Deadline:  
March 12, 2009

**Both Locations:**  
6 Hours  
8:30 a.m. to 3:30 p.m.  
Sign-in begins at 8:00 a.m.  
**Cost: \$95**

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# Instrumentation Measurement & Control with Use of SCADA for Process Efficiency *with NEIWPC*

Producing high-quality water and wastewater effluents requires O&M personnel to have a thorough knowledge of in-line instrumentation and SCADA for process efficiency. This one-day course discusses the theory, application, and control of instrumentation used in the operation of wastewater treatment plants. The interface of instrumentation with SCADA systems, and the security of these programs against outside intrusions will also be discussed. Use of meters for level, flow, pressure and automated process control will be covered.

The instructors will discuss:

- Magnetic and ultrasonic flow meters.
- Bellows, diaphragms, and strain gauges.
- Capacitance, conductance and resistance level control.
- Pressure measurement and electrical elements.
- Manometers and bourdon tubes.
- SCADA system elements, operation and client/server architecture.
- PIF loops.

**Instructors:** Don Kennedy - NEIWPC and Jeff Murray - Control Point, Inc.

**Thursday  
February 12**

**Bangor WWTF**  
760 Main Street  
**Bangor, ME**  
Tel: 207/992-4474

**Course # ETC 0944**  
6 Hours

8:30 a.m. to 3:30 p.m.  
Sign-in begins at 8:00 a.m.

**Cost: \$120**  
Registration Deadline:  
February 5, 2009

# Chemical Handling, Reporting and Emergency Preparedness

Many chemicals and substances in water and wastewater facilities are considered hazardous, and hence there are thorough safety, storage, and reporting procedures that must be followed. But deciphering the rules, guidelines, and documentation can be difficult. In the morning session of this course, the instructors will review what chemicals need to be reported and why, as well as explain EPCRA, CERCLA, the List of Lists, other associated tools, and the roles of various state agencies.

The afternoon session will outline other issues that water and wastewater facilities should consider given their role as part of our nation's critical infrastructure. Since 2001, EPA has been working with water distribution and treatment facilities offering them tools to help prepare for and respond to all hazards, such as natural disaster or terrorism. By educating them as first responders, getting training in ICS, working on vulnerability assessments and emergency response plans for their facilities, EPA has helped involve many water and wastewater operators in the emergency planning for their communities. One important achievement has been the launch of Water and Wastewater Agency Response Networks (WARNs) or mutual aid programs in each state. Other topics include preparedness issues related to the availability and operability of emergency generators and the need for prioritizing the delivery of drinking water and wastewater chemicals during a disaster.

**Instructors:** Robert Gardner - Maine Emergency Management Agency;  
Jim Gaffey - US EPA New England

**Tuesday, Feb. 24  
or  
Thursday  
Feb. 26**

**February 24  
Ramada Inn**  
490 Pleasant Street  
**Lewiston, ME**  
Tel: 207/784-2331  
**Course # J0925**  
Registration Deadline:  
February 17, 2009

**February 26  
Presque Isle Inn &  
Convention Center**  
US Route One  
**Presque Isle, ME**  
Tel: 207/764-3321  
**Course # J0927**  
Registration Deadline:  
February 19, 2009

**Both Locations:**  
6 Hours  
8:30 a.m. to 3:30 p.m.  
Sign-in begins at 8:00 a.m.  
**Cost: \$95**

# Confined Space Entry

Working in confined spaces can expose employees to potentially lethal conditions. Too often, employees do not follow proper management and rescue procedures to safeguard against the hazards of confined spaces. Understanding the risks and how to manage them could save lives.

This workshop includes an overview of OSHA regulations and NIOSH recommendations, as well as instruction in the identification of areas considered confined spaces as per the regulations and permit requirements. We will discuss written CSE programs along with the entry permit; roles and responsibilities; required training; and monitoring, protective, and rescue equipment. The instructor will also touch upon general Lock-Out/Tag-Out procedures while identifying some often overlooked sources of dangerous stored energy.

This course is designed for those who are seeking an introduction to CSE requirements or who wish to refresh safety skills.

**Instructor:** Bob Moody - E. J. Prescott

**Thursday  
February 26**

**South Berwick Town Hall**  
180 Main Street  
**South Berwick, ME**  
Tel: 207/383-3300

**Course # J0926**  
6 Hours  
8:30 a.m. to 3:30 p.m.  
Sign-in begins at 8:00 a.m.

**Cost: \$95**  
Registration Deadline:  
February 19, 2009

# Asset Management Applications

This six-hour class will expose utility leaders to a systematic process for managing their infrastructure. The instructor will cover how to document information and how that documentation may ensure ongoing, cost-effective delivery of services, and future improvement planning. Relationships of asset management to emergency response planning, vulnerability assessment, GASB 34, and the Water/Wastewater Agency Response Network (WARN) will be emphasized. Various software tools will be reviewed and the use of CUPSS will be detailed. All participants will receive a copy of the CUPSS software.

This course will benefit system trustees, operators, municipal officials, technical assistance providers, and regulators.

**Instructor:** Art Astarita - RCAP Solutions

**Tuesday  
March 3**

**Yarmouth Town Hall**  
200 Main Street  
**Yarmouth, ME**  
Tel: 207/846-2415

**Course # J0928**  
6 Hours

8:30 a.m. to 3:30 p.m.  
Sign-in begins at 8:00 a.m.

**Cost: \$95**  
Registration Deadline:  
February 24, 2009

# BOD & TSS Review

The objective for this course is simple: to help operators learn everything they ever wanted to know about five-day biochemical oxygen demand. BOD is a chemical procedure for determining how fast biological organisms use up oxygen in a body of water, and it is used in water quality management and assessment, ecology, and environmental science. It is also used as a gauge of the effectiveness of wastewater treatment plants. The BOD test is used to evaluate waste loadings and the BOD-removal efficiency of the treatment process, as well as for compliance reporting purposes. Operators will learn how to correctly conduct BOD testing, a frequently confusing procedure, and be guided through the correct way to calculate the BOD seed correction and analytical results. The most common errors made when conducting the BOD test will be explained, and pointers for avoiding these errors will be provided. Operators will also be given useful checklists to use when conducting self-audits of BOD procedures.

In the Total Suspended Solids portion of the course, we will review the TSS procedure. Solid materials in wastewater can consist of organic and inorganic materials and microorganisms. These solids can increase BOD when discharged to receiving waters and provide places for microorganisms to escape disinfection. This class will help operators learn techniques to get better data from a test that seems deceptively simple.

**Instructor:** Matthew Sica - Maine Department of Health & Human Services

**Wednesday, March 4  
or  
Tuesday  
March 24**

**March 4**  
**John E. Dority Safety & Performance Training Center, Maine DOT**  
10 Mountain Ave  
**Fairfield, ME**  
Tel: 207/453-7377  
**Course # J0929**  
Registration Deadline:  
February 25, 2009

**March 24**  
**Mather Auditorium, Laudholm Farm, Wells Reserve**  
342 Laudholm Farm Road  
**Wells, ME**  
Tel: 207/646-1555  
**Course # J0933**  
Registration Deadline:  
March 17, 2009

**Both Locations:**  
6 Hours  
8:30 a.m. to 3:30 p.m.  
Sign-in begins at 8:00 a.m.  
**Cost: \$95**

# PVC Valves, Connections & Joining

This interactive training session covers the use of polyvinyl chloride—better known as PVC—from initial installation to repairs in the field. The specific focus will be on PVC valves, connections, and joining. Optimize your use of this durable and versatile material by increasing your understanding of the principles of its construction and application.

Through hands-on activities and discussion, the morning session will explain PVC valves and installation procedures. The afternoon session will focus on joining. Chemical resistance issues, safety and proper preparation, and handling of PVC and CPVC will be discussed.

Other topics include material considerations, types of valves, valve applications, advantages and limitations of PVC and CPVC, and pipe joining methods for sodium hypochlorite.

**\*Lunch is sponsored by Spears Manufacturing**

**Instructor:** Charles Jennings - Spears Manufacturing

**Thursday  
March 12**

**Orono Municipal Building**  
59 Main Street  
**Orono, ME**  
Tel: 207/866-2556

**Course # J0930**  
6 Hours

8:30 a.m. to 3:30 p.m.  
Sign-in begins at 8:00 a.m.

**Cost: \$95**  
Registration Deadline:  
March 5, 2009

# DEP Issues Briefing

This session provides a forum for Maine DEP Division of Land and Water Quality Management staff and water pollution control professionals from throughout the state to meet and discuss timely topics.

This forum is an ideal opportunity to get up-to-date on DEP matters and the issues that affect the day-to-day operation of Maine's water pollution control facilities.

Topics include:

- Legislative Issues
- Sustainable Infrastructure Funding
- Federal Stimulus Update
- Phosphorus Rulemaking
- New Stormwater Requirements for Existing Development
- Multi-Sector Stormwater Program
- Status of Licensed Dischargers
- Regional Mercury TMDL and 319 Petition
- Atlantic Salmon Listing
- Sourcewater Protection
- Compliance Issues.

**Instructors:** Staff from Maine Department of Environmental Protection and Maine Department of Health and Human Services

**Wednesday  
March 18**

**State Fire Marshal's  
Training Room  
Florian Hall**  
45 Commerce Drive  
**Augusta, ME**  
Tel: 207/626-3875

**Course # J0931**  
6 Hours

8:30 a.m. to 3:30 p.m.  
Sign-in begins at 8:00 a.m.

**Cost: \$95**  
Registration Deadline:  
March 11, 2009

# Activated Sludge Process Control for Grade 3-5 Exam Preparation

The activated sludge process can successfully be controlled using a minimum number of tests. These include sludge settleability, sludge concentration, oxygen uptake, microscopic examination, and clarifier blanket depth. The results obtained from these tests help the operator know the quality and quantity of activated sludge in the system. In this course, participants will learn how to apply the results of the various tests to determine aeration levels and rates for sludge return and wasting.

The morning session will include descriptions of the tests and how to use the results to determine process control changes. In the afternoon, actual demonstrations of the tests will show participants how the tests are properly conducted and applied. There will be demonstrations of new testing equipment that simplifies some of the tests and provides faster results for process control decisions.

The following tests will be demonstrated, with an explanation of how to use the results:

- Settleometer
- Determination of Sludge Concentration
- Oxygen Uptake Rate (OUR) and Specific Oxygen Uptake Rate (SOUR)
- Clarifier Blanket Depth and Sludge Concentration
- Microscopic Examination and Sludge Quality
- Oxidation-Reduction Potential (ORP)

**Instructors:** Dick Darling, P.E., Ken Jones and Don Albert - Maine Department of Environmental Protection

**Wednesday  
March 25**

**John E. Dority Safety & Performance Training Center, Maine DOT**

10 Mountain Avenue  
**Fairfield, ME**

Tel: 207/453-7377

**Course # J0934**

6 Hours

8:30 a.m. to 3:30 p.m.  
Sign-in begins at 8:00 a.m.

**Cost: \$95**

Registration Deadline:  
March 18, 2009

## Basic Wastewater Treatment (6 Sessions)

This course provides thorough instruction in how to safely and effectively operate and maintain a wastewater treatment plant, and is an excellent means of preparing for the Maine Wastewater Operator I & 2 Exam. Through a combination of classroom presentations and tours of the treatment facilities in southern Maine, a wide variety of topics will be covered, including the reasons why waste must be treated, the roles and responsibilities of a treatment plant operator, the use of safe practices and procedures, and the equipment and processes used in wastewater facilities. Participants will learn how to operate and maintain racks, screens, comminutors, sedimentation tanks, trickling filters, rotating biological contactors, package activated sludge plants, oxidation ditches, ponds, and chlorination facilities. Other subjects to be covered include how to analyze and solve operational problems and how to perform mathematical calculations relating to wastewater treatment process control.

All participants will receive *Operation of Wastewater Treatment Plants (Volume I)*, prepared by California State University, Sacramento.

**Instructors:** Staff from Maine Department of Environmental Protection, local water pollution control facilities and industry consultants

**Tuesday afternoons  
March 31  
April 7, 14,  
21, 28  
May 5**

**North Dam Mill**

2 Main Street

**Biddeford, ME**

Tel: 207/286-4928

**Course # J0935**

24 Hours

12:30 p.m. to 4:30 p.m.  
Sign-in begins at 12:00 noon

**Cost: \$250**

Registration Deadline:  
March 24, 2009

# Using PowerPoint to Make Your Point

This class will start with an explanation of basic presentation skills and the use of PowerPoint to deliver effective presentations. We will discuss the layout of the PowerPoint screen and the function of each section of the screen. Participants will learn how to develop a presentation using headers, bulleted text, pictures, charts, and tables. We will discuss editing and proofing text, formatting presentation text, and formatting bullets and numbers.

The instructor will explain how to customize presentations by editing the presentation master, changing the background colors, and adding pictures or graphics as the background for one or more slides. Participants will learn how to make and edit notes and create and print handouts.

If time permits, the instructor will discuss adding special effects, setting up a self-showing slide presentation, and using multiple monitors to show notes on the laptop screen while projecting the PowerPoint show to the audience.

Participants should be familiar with Microsoft Windows and the use of both a mouse and keyboard to navigate around a computer screen.

**Instructor:** Richard Darling, P.E. - Maine Department of Environmental Protection

**Thursday  
April 16**

**Jeff Nixon Training Center  
Portland Water District**  
225 Douglas Street  
**Portland, ME**  
Tel: 207/774-5961

**Course # J0936**  
6 Hours

8:30 a.m. to 3:30 p.m.  
Sign-in begins at 8:00 a.m.

**Cost: \$95**  
Registration Deadline:  
April 9, 2009

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## FOG Management Overview- Controlling Collection System Impacts & Disposal Options *with NEIWPCC*

Fats, oil, and grease (FOG), primarily generated by restaurants and other institutional food service establishments, are major contributors to municipal wastewater collection system and onsite treatment system (septic system) blockages and overflows. As the environmental community moves to more stringently manage FOG, it is essential that there be adequate treatment capacity to manage the material removed from these wastewater systems.

This class will examine FOG impacts on collection systems, best management practices to prevent these impacts, and options for treatment and disposal of grease trap waste.

The course includes a tour of the Pat Jackson, Inc., private dewatering and in-vessel composting operation in Belgrade, Maine. Transportation to the facility tour will not be provided.

**Instructor:** Michael Jennings - New England Interstate Water Pollution Control Commission

**Tuesday  
April 28**

**Le Club Calumet**  
334 Northern Avenue  
**Augusta, ME**  
Tel: 207/623-8211

**Course # ETC0945**  
6 Hours

8:30 a.m. to 3:30 p.m.  
Sign-in begins at 8:00 a.m.

**Cost: \$120**  
Registration Deadline:  
April 21, 2009

**Maine Wastewater Operator Exam: May 13, 2009**

**Applications must be received by March 27, 2009**  
**For more information visit [www.jetcc.org](http://www.jetcc.org)**

**We would like to acknowledge the following host facilities and businesses for covering the cost of program refreshments during the Spring & Fall 2008 training schedule.**

**JETCC sends a most grateful thank you to:**

City of Ellsworth  
Wells Sanitary District  
Brewer Water Pollution Control Facility  
McCain Foods  
South Portland Water Resource Authority  
Yarmouth Wastewater Treatment Facility  
Boothbay Harbor Sewer District  
Orono Water Pollution Control Facility  
Bangor Wastewater Treatment Facility  
Kennebunkport Wastewater Treatment Facility  
Kennebec Water District  
Spears Manufacturing  
Augusta Sanitary District  
Hydro International

**Thank you also to:**

Maine Department of Environmental Protection  
Maine Department of Health and Human Services  
Maine Wastewater Control Association  
and  
Maine Water Utilities Association  
**for continued support through partnership**

### **Sponsor a JETCC Lunch!**

#### **Help Your Organization, Support Training in Maine.**

Due to cuts in state funding, Maine's Joint Environmental Training Coordinating Committee is looking to cut costs so we can continue to provide superior training at reasonable prices.

Eliminating the lunches JETCC offers at programs would help, but the courses are often held in remote areas with few if any lunch options, and the lunch break provides an important networking opportunity. To maintain the lunches, JETCC has opened them up to sponsorship.

This cuts costs while providing the sponsor with invaluable exposure. Lunch sponsors are acknowledged with credit on the course materials as well as on the JETCC web site.

JETCC offers a variety of lunch sponsorship opportunities.

You may choose from these options:

- Lunch for a one-day training program
- Lunch for a multi-day training program
- Lunches for multiple programs

**If you are interested in any sponsorship opportunities, please contact JETCC at 207/253-8020 or by email at [jetcc@maine.rr.com](mailto:jetcc@maine.rr.com).**

# Registration Form for 2009 JETCC Courses

MAIL TO: JETCC, P.O. Box 487, Scarborough, ME 04070-0487 • Phone: 207/253-8020, FAX: 207/771-9028

Course Title \_\_\_\_\_ Course Code\* \_\_\_\_\_

\*Note: For Joint NEIWPCC Courses, mail form to NEIWPCC at the address below.

Location \_\_\_\_\_ Date \_\_\_\_\_, 2009

Name \_\_\_\_\_ Company \_\_\_\_\_

Street Address \_\_\_\_\_

City/Town \_\_\_\_\_ State \_\_\_\_\_ ZIP \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_ E-mail \_\_\_\_\_

Please indicate: Purchase Order # \_\_\_\_\_ Check # \_\_\_\_\_ Amount \_\_\_\_\_

WW Operator \_\_\_\_\_ DW Operator \_\_\_\_\_ Topics of Interest \_\_\_\_\_

CREDIT  
CARD  
FORM

Credit Card \_\_\_\_\_ 3-digit code (Visa only) \_\_\_\_\_  
indicate Visa, Mastercard or Discover located on back of card

Credit Card # \_\_\_\_\_

Name on card \_\_\_\_\_ Expiration \_\_\_\_\_  
month/year

Signature \_\_\_\_\_ Date \_\_\_\_\_

For joint JETCC/NEIWPCC courses, please check:

\_\_\_\_\_ **ETC0944 Instrumentation Measurement**  
February 12, Bangor, ME

\_\_\_\_\_ **ETC0945 FOG Management Overview**  
April 28, Augusta, ME

Mail payment for joint courses to:

**NEIWPCC**  
**116 John Street**  
**Lowell, MA 01852-1124**  
**Tel: 978/323-7929 • Fax: 978/323-7919**

## Registration Instructions

- **Copy the form above to submit your registration.**
- **Use one registration form for each course.**
- **For NEIWPCC courses only, please mail form to NEIWPCC office.**
- **Include all of the requested information.**
- **Non-Maine registrants add \$20 per registration for JETCC - only programs.**
- **Out-of-Country registrants please add \$20 per registration. Please make payment in U.S. dollars.**
- **Return completed form as designated.**

Courses and dates of courses are subject to change due to unavoidable scheduling conflicts.

Courses may be canceled by JETCC due to insufficient enrollment.

Program fees include lunch unless otherwise noted.

**Late Registrations:** Registration forms received after registration deadlines will incur an additional \$15 charge for full-day programs and \$10 for half-day programs. **Note:** There is a \$15 fee for checks returned due to insufficient funds.

**Cancellation Policy:** If you must cancel, four working days notice is required. Cancellations received after this date will incur a cancellation fee of \$20 for full-day programs and \$10 for half-day programs. If you do not cancel and do not attend, you are liable for the entire registration fee.

**In Case of Inclement Weather:** Please call host facility on the day of class to verify any schedule change. For joint NEIWPCC course cancellations call the NEIWPCC 24-Hour Training and Events Hotline at 866/824-9656.

NEIWPCC /JETCC  
PO Box 487  
Scarborough, ME 04070-0487

Non-Profit Org.  
U.S. Postage  
PAID  
Portland, ME  
Permit No.518



## JETCC Maine's Environmental Training Resource

The Joint Environmental Training Coordinating Committee (JETCC) was established in 1985 to coordinate environmental training to meet the needs of Maine's environmental professionals. JETCC continues to meet this goal by networking the training needs of the environmental work force with the best instructional and technical support available.

JETCC organizes and coordinates training in water pollution control and water quality protection. To ensure that training meets the needs of the environmental work force, JETCC uses focus groups to address issues and direction for training in specific environmental topics.

Where training is needed and not provided by other agencies or organizations, JETCC offers it. We take pride in our close working relationship with the Maine DEP, other regulatory agencies and related professional associations and training organizations. For issues dealing with water pollution control, JETCC works closely with the Maine Wastewater Control Association (MWWCA).

Our instructors are professional trainers, water pollution control professionals, water pollution control equipment and supply manufacturers' representatives, Maine DEP staff, regulatory agencies, municipal leaders and officials, engineering and consulting firms, and other qualified interested parties.

JETCC's training certificates are based on training hours that are awarded upon successful completion of each training program. These programs are approved by Maine DEP for initial, upgrade and renewal training credits toward the Maine DEP Wastewater Treatment Plant Operator Certification Program. Some of our programs are also approved by Maine Department of Human Services for Drinking Water Operator Certification and they are endorsed by Maine Water Utilities Association.

To offer more training in locations throughout the state, JETCC utilizes a local host system whereby interested individuals or organizations facilitate the program in localities where training will be offered.

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**BOARD OF DIRECTORS** — Leonard Blanchette - Brunswick Sewer District - Board Chairman; Dennis Thayer - Wells Sanitary District - Vice Chairman; Brian Kavanah, Richard Darling & William Laflamme - Maine Department of Environmental Protection; Darold Wooley - Lincoln Sanitary District; Dana Peck - Peck Environmental Associates; John Hart - City of Saco WTP; Dan Welch - General Dynamics ATP; Nancy Beardsley - Maine Department of Health & Human Services

**STAFF** - Leeann L. Hanson - JETCC Coordinator

Tom Groves - NEIWPCC Liaison

Debbie Merrill - Administrative Assistant